City of Hamilton
HMRF-HWRF PENSION ADMINISTRATION

SUB-COMMITTEE

Meeting #: 18-001
Date: December 18, 2018
Time: 8:30 a.m.
Location: Room 192, 1st Floor
71 Main Street West

Angela McRae, Legislative Coordinator (905) 546-2424 ext. 5987

Pages

1. APPOINTMENT OF CHAIR AND VICE-CHAIR

2. APPROVAL OF AGENDA

(Added Items, if applicable, will be noted with *)

3. DECLARATIONS OF INTEREST

4. APPROVAL OF MINUTES OF PREVIOUS MEETING

4.1 November 30, 2017 — 3

5. COMMUNICATIONS

6. DELEGATION REQUESTS

7. CONSENT ITEMS

8. PUBLIC HEARINGS / DELEGATIONS

9. STAFF PRESENTATIONS

9.1 Hamilton Municipal Retirement Fund (HMRF) December 31, 2017 Valuation (FCS18092) (City Wide) — 7

10. DISCUSSION ITEMS

11. MOTIONS

12. NOTICES OF MOTION

13. GENERAL INFORMATION / OTHER BUSINESS

14. PRIVATE AND CONFIDENTIAL

15. ADJOURNMENT

4.1

HMRF/HWRF PENSION ADMINISTRATION SUB-COMMITTEE

MINUTES 17-001

9:30 a.m.
Thursday, November 30, 2017
Hamilton City Hall, Room 264
71 Main Street West

Present: Councillors M. Pearson (Chair) and L. Ferguson
HMRF Members: D. Skarratt (Co-Vice Chair) and D. Alford
HWRF Members: J. Garchinski (Co-Vice Chair), H. Hicks and R. Slack

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THE FOLLOWING ITEMS WERE REFERRED TO THE AUDIT, FINANCE & ADMINISTRATION COMMITTEE FOR CONSIDERATION:

1. **HMRF/HWRF/HSR Pension Plans – Investigation of Transfer to OMERS (FCS17096) (City Wide) (Item 4.1)**

   (Ferguson/Skarratt)
   That Report FCS17096 respecting HMRF/HWRF/HSR Pension Plans – Investigation of Transfer to OMERS (FCS17096) (City Wide), be received.

   CARRIED

2. **Financial Statements of the Hamilton Municipal Retirement Fund Pension Plan and Financial Statements of the Hamilton Wentworth Retirement Fund Pension Plan (Added Item 4.2)**

   (Alford/Skarratt)
   That the Financial Statements of the Hamilton Municipal Retirement Fund Pension Plan and Financial Statements of the Hamilton Wentworth Retirement Fund Pension Plan, be received.

   CARRIED

3. Hamilton-Wentworth Retirement Fund (HWRF) Valuation at December 31, 2016 (FCS17095) (City Wide) (Item 5.1)

(Garchinski/Alford)
That Report FCS17095 respecting the Hamilton-Wentworth Retirement Fund (HWRF) Valuation at December 31, 2016 (FCS17095) (City Wide), be received.

CARRIED

4. 2017 Master Trust Pension Statement of Investment Policies and Procedures (FCS17079) (City Wide) (Item 6.1)

(Alford/Ferguson/)

(a) That the 2016 Master Trust Statement of Investment Policies and Procedures be deleted and replaced with the 2017 Master Trust Statement of Investment Policies and Procedures, attached as Appendix “A” to Report FCS17079;

(b) That the 2017 Master Trust Statement of Investment Policies and Procedures, attached as Appendix “A” to Report FCS17079, be forwarded to the Hamilton Street Railway Pension Advisory Committee for their information.

CARRIED

5. Master Trust Pension Investment Performance Report June 30, 2017 (FCS17088) (City Wide) (Item 6.2)

(Slack/Ferguson)
That Report FCS17088 respecting the Master Trust Pension Investment Performance, June 30, 2017, be received.

CARRIED

6. Master Trust Pension Investment Performance Report December 31, 2016 (FCS16060(a)) (City Wide) (Item 6.3)

(Garchinski/Hicks)
That Report FCS16060(a) respecting the Master Trust Pension Investment Performance, December 31, 2016, be received.

CARRIED

FOR INFORMATION:

(a) APPROVAL OF AGENDA (Item 1)

The Committee Clerk advised of the following change to the agenda:

1. ADDED CONSENT ITEM (Item 4)

4.2 Financial Statements of the Hamilton Municipal Retirement Fund Pension Plan and Financial Statements of the Hamilton Wentworth Retirement Fund Pension Plan

(Ferguson/Alford)
That the agenda for the December 1, 2016 meeting of the HMRF/HWRF Pension Administration Sub-committee be approved, as amended.

CARRIED

(b) DECLARATIONS OF INTEREST (Item 2)

There were no declarations of interest.

(c) APPROVAL OF MINUTES OF PREVIOUS MEETING (Item 3)

(i) December 1, 2016 (Item 3.1)

(Skarratt/Garchinski)
That the December 1, 2016 minutes of the HMRF / HWRF Pension Administration Sub-Committee meeting, be approved, as presented.

CARRIED

(d) STAFF PRESENTATIONS (Item 5)

(i) Hamilton-Wentworth Retirement Fund (HWRF) Valuation at December 31, 2016 (FCS17095) (City Wide) (Item 5.1)

Mr. Mark Pearson from AON Hewitt made a presentation to the Committee about the Valuation of the Hamilton-Wentworth Retirement Fund as of December 31, 2016. Mr. Pearson highlighted items contained in the Appendix to Report FCS17095 and answered questions from the Committee.

(Skarratt/Garchinski)
That the presentation from Mark Pearson with AON Hewitt, respecting the Valuation of the Hamilton-Wentworth Retirement Fund as of December 31, 2016, be received.

CARRIED

For disposition of this matter, please refer to Item 3.

(e) ADJOURNMENT (Item 13)

(Ferguson/Slack)
That there being no further business, the HMRF/HWRF Pension Administration Sub-Committee be adjourned at 10:43 a.m.

CARRIED

Respectfully submitted,

Councillor M. Pearson, Chair
HMRF/HWRF Pension Administration
Sub-Committee

Lauri Leduc
Legislative Coordinator
Office of the City Clerk

CITY OF HAMILTON
CORPORATE SERVICES
Financial Services and Taxation

TO:	Chair and Members HMRF/HWRF Pension Administration Sub-Committee
COMMITTEE DATE:	December 18, 2018
SUBJECT/REPORT NO:	Hamilton Municipal Retirement Fund (HMRF) December 31, 2017 Valuation (FCS18092) (City Wide)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Barb Howe (905) 546-2424 Ext. 5599
SUBMITTED BY: **SIGNATURE:**	Rick Male Director, Financial Services, Taxation and Corporate Controller Corporate Services Department

RECOMMENDATION

That the December 31,2017 actuarial valuation for the Hamilton Municipal Retirement Fund (HMRF) per Appendix “A” to Report FCS18092 be received for information.

EXECUTIVE SUMMARY

The December 31, 2017 valuation indicates that the plan has a $3.7 million surplus on a going concern basis compared to a $4.3 million surplus at December 31, 2014. The decrease is due to the losses arising from actuarial assumption changes exceeding the gains in plan experience.

On a solvency basis, the plan currently has a surplus of $13.8 million compared to a $5.4 million surplus at December 31, 2014. Since the solvency ratio is currently 1.22 (1.07 – 2014) there are no solvency concerns and consequently no funding is required.

The *Pension Benefit Act* (PBA) requires that, when the solvency ratio is less than 0.85 then actuarial valuations must be completed annually. Since, the solvency ratio at December 31, 2017 was 1.22, the next valuation will not be required until December 31, 2020.

Alternatives for Consideration –Not Applicable

FINANCIAL – STAFFING – LEGAL IMPLICATIONS

Financial: The HMRF plan has no solvency issues, consequently no special funding payments are required and therefore there are no financial implications to the City at this time.

Legal: None.

Staffing: None.

HISTORICAL BACKGROUND

Under Provincial legislation, the administrator is required to file an actuarial valuation at least every three years and within nine months of the valuation date. The last valuation filed was at December 31, 2014; consequently, the current valuation should be filed by September 30, 2018. However due to the pension funding rule changes recently introduced, plan administrators have been granted a filing extension to November 30, 2018.

Each valuation requires the plan to be valued using three different methods:

(i) Going Concern Basis – this valuation assumes that the plan will continue indefinitely. Consequently, to calculate funding requirements, an actuary selects an interest rate for the pension fund based on an assumed long-term average return. Any funding deficiencies must be eliminated through payments made over a period of 10 years.

(ii) Solvency basis – is intended to calculate the funding required to pay for all benefits if the plan were to wind up on the valuation date. To determine solvency funding requirements, an actuary selects a rate that is an approximation of the annuity purchase rate. Any funding deficiencies of less than 85% must be eliminated through payments made over a period of 5 years. Under current legislation, post retirement indexation can be excluded from the solvency valuation.

(iii) Wind-up Basis – similar to the solvency basis, this valuation assumes that the plan would be wound up at the valuation date, but includes all benefit obligations, such as post-retirement indexing.

POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS

This valuation is the first valuation filed based on the new funding rules recently introduced by the Province. On May 19, 2017 the Ministry of Finance announced proposed reforms to the funding framework for defined benefit pension plans. On April

20, 2018 the final regulations were released, and any valuation dated on or after December 31, 2017 must reflect the new funding rules which came into effect on May 1, 2018.

Key changes to the funding rules include:

Effective Date: The new funding rules apply to actuarial valuation reports dated on or after December 31, 2017. Under the PBA, a plan administrator generally has nine months after the plan valuation date in which to file a valuation report. To give plan administrators and actuaries time to understand the new rules, under the amended legislation, a valuation report dated on or after December 31, 2017 can be filed as late as November 30, 2018 without penalty.

Solvency Funding: A pension plan is required to be funded at 85% (previously 100%) on a solvency basis. If the funded level is less than 85%, then solvency special payments are required and must be amortized over a five-year period. In addition, these payments must begin one year after the date of the valuation report.

Going Concern Funding: A pension plan must still be funded at 100% on a going concern basis however now it must include the estimated cost of indexation in the going concern liabilities. In addition, the amortization period has been reduced from 15 years to 10 years with special payments starting one year after the date of the valuation report. Further, the going concern valuation must include a **Provision for Adverse Deviation (PfAD).**

Provision for Adverse Deviation (PfAD). Under Reg. 250/18, the PfAD is a formula that is applied to the going concern liabilities. It is the sum of three percentages:
(a) a fixed percentage depending on whether the plan is a closed plan,
(b) a percentage depending on the asset mix of the plan, as allocated between fixed and non-fixed income in accordance with the plan's Statement of Investment Policies and Procedures (SIPP). For valuation with a date prior to December 31, 2019, the actual asset allocation reported on the financial statements may be used.
(c) a percentage reflecting the excess of the pension plan's going concern discount rate over a benchmark discount rate.
Although the cost of indexation must be included in the going concern liabilities, it may be excluded when determining the value of the PfAD.

Restrictions on Benefit Improvements: Restrictions on plan amendments that would negatively impact the funding of a plan have been introduced. Immediate funding will trigger if the pension plan is not funded at 80% on both a solvency and going concern basis. The additional unfunded liability associated with the benefit improvement must be funded on a going concern basis over 8 years rather than 10 years.

Plan Documents and Member Communications: As a result of the new rules, changes will be required to a number of plan documents, including the Plan Text and Statement of Investment Policies and Procedures (SIPP). Moreover, additional disclosures will need to be made to members and former and retired members in the annual and biennial statements.

RELEVANT CONSULTATION

Willis Towers Watson, the fund's Actuary, prepared the December 31, 2017, actuarial valuation. As required by legislation, the valuation was filed with the Financial Services Commission of Ontario (FSCO) and Canada Revenue Agency (CRA).

ANALYSIS AND RATIONALE FOR RECOMMENDATION

The HMRF plan is a closed plan and is comprised mainly of fire personnel and some non-fire former City of Hamilton employees hired prior to July 1, 1965. The following chart provides a synopsis of the plan position and membership as at December 31, 2017, compared to the December 31, 2014 valuation:

	($ in millions)	
	2017	**2014**
Going Concern Basis		
Valuation Assets	$77.7	$82.2
Less: Accrued Liabilities	$69.7	$77.8
Actuarial Surplus(Deficit) before PfAD	$ 8.0	$ 4.3
Less: Provision for Adverse Deviation (PfAD)	$ 4.2	N/A
Actuarial Surplus(Deficit)	$ 3.7	$ 4.3
Solvency Basis		
Solvency Assets	$77.6	$82.1
Less: Solvency Liabilities	$63.8	$76.6
Solvency Surplus(Deficit)	$13.8	$ 5.4
Solvency Ratio	1.22	1.07
Windup Basis		
Market Value of Assets	$77.6	$ 82.1
Less: Windup Liabilities	$80.0	$ 96.7
Windup Surplus(Deficit)	($ 2.4)	($ 14.6)
Required Annual Special Payment		
Going Concern deficit payment	$0.0	$0.0
Solvency Deficit payment	$0.0	$0.0
# of members	189	222

On a going concern basis, the status of the plan at the valuation date is $3,739,200 compared to the previous surplus of $4,329,000 at the last valuation date. The decrease is the result of the losses in economic assumption changes (discount rate decrease from 5% to 3.75%, improvements in mortality rates, impact of the PfAD) exceeding the gains in plan experience (investment returns exceeding benchmark, pensioners not living as long as plan assumptions, pensioner increases not as high as assumed).

On a solvency basis, the status of the plan at the valuation date is a surplus of $13,795,000 compared to the previous surplus of $5,426,900. On a windup basis, the status of the plan at the valuation date is a deficit of $2,380,700 compared to the deficit of $14,614,000 as of the last valuation. The solvency and windup values are essentially the same except that legislation permits the exclusion of the cost of indexation for solvency valuation purposes.

ALTERNATIVES FOR CONSIDERATION

None. The filing of this valuation is a legislated requirement.

ALIGNMENT TO THE 2016 – 2025 STRATEGIC PLAN

Community Engagement & Participation
Hamilton has an open, transparent and accessible approach to City government that engages with and empowers all citizens to be involved in their community.

Economic Prosperity and Growth
Hamilton has a prosperous and diverse local economy where people have opportunities to grow and develop.

APPENDICES AND SCHEDULES ATTACHED

Appendix “A” to Report FCS18092 – HMRF Actuarial Valuation at December 31, 2017.

BH/dw

THE CORPORATION OF THE CITY OF HAMILTON

HAMILTON MUNICIPAL RETIREMENT FUND

Actuarial Valuation as at December 31, 2017

October 29, 2018

Registration Number: 0275123

WillisTowersWatson

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DISCLAIMERS

This document is an actuarial valuation report of a pension plan. It is technical in nature and the reader should seek expert advice to fully understand it. The actuarial results presented here are based on numerous economic and demographic assumptions as to future events. Emerging experience, differing from the assumptions, will result in gains or losses that will be revealed in future actuarial valuations.

This report is based on the terms of engagement listed in Appendix A.

This report is based on the premise that all the plan's assets, including any letters of credit, are available to meet the plan's liabilities included in this valuation.

This report is based on the premise that the plan remains a going concern. This report does not address the disposition of any surplus assets remaining in the event of plan windup. If an applicable pension regulator or other entity with jurisdiction directs otherwise, certain financial measures contained in this report, including contribution requirements, may be affected.

The results presented in this report have been developed using a particular set of actuarial assumptions. Other results could have been developed by selecting different actuarial assumptions. The results presented in this report are reasonable actuarial results based on actuarial assumptions reflecting our expectation of future events.

Future contribution levels may change as a result of future changes in the actuarial methods and assumptions, the membership data, the plan provisions and the legislative rules, or as a result of future experience gains or losses, none of which have been anticipated at this time.

The results were developed with various data as at the valuation date that were provided to us: plan membership data, plan assets data, plan provisions, funding policy and statement of investment policy. Towers Watson Canada Inc. (“Willis Towers Watson”) has relied on these data after verifying them and assessing their reasonableness. However, Willis Towers Watson has not independently audited these data.

The information contained in this report was prepared for The Corporation of the City of Hamilton, for its internal use and for filing with the Pension authorities, in connection with the actuarial valuation of the plan prepared by Willis Towers Watson. This report is not intended, nor necessarily suitable, for other parties or for other purposes. Furthermore, some results in this report are based on assumptions mandated by legislation. These results may not be appropriate for purposes other than those for which they were prepared. Further distribution of all or part of this report to other parties (except where such distribution is required by applicable legislation) or other use of this report is expressly prohibited without Willis Towers Watson's prior written consent. Willis Towers Watson is available to provide additional information with respect to this report to the above-mentioned intended users upon request.

Definitions:

DB means the defined benefit ("DB") provision of the plan. Refer to the summary of plan provisions in Appendix F for further details.

Pension authorities means the Financial Services Commission of Ontario and the Canada Revenue Agency ("CRA").

Pension legislation means the *Pension Benefits Act (Ontario)* and Regulation thereto and the *Income Tax Act (Canada)* and Regulations thereto ("ITA").

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Introduction

Purpose

This report with respect to the Hamilton Municipal Retirement Fund has been prepared for The Corporation of the City of Hamilton, the plan administrator, and presents the results of the actuarial valuation of the plan as at December 31, 2017.

The principal purposes of the report are:

- to present information on the financial position of the plan on going concern, solvency and hypothetical windup bases;
- to provide the basis for employer contributions.

Significant Events since Previous Actuarial Valuation (December 31, 2014)

There have been no changes to the plan provisions, the legislative and actuarial standards having an impact on the valuation results. Changes to the going concern basis, if any, are described in Appendix C. Changes to the solvency basis are described in Appendix D.

In 2016, the Pension legislation was amended to provide temporary solvency relief. This is the first valuation of the plan on or after December 31, 2015. No relief is exercisable due to the results of the valuation.

On May 19, 2017, the Ontario Ministry of Finance announced proposed reforms to the funding framework for defined benefit pension plans. On April 20, 2018, final regulations were released, and apply to reports with valuation dates on and after December 31, 2017 which are filed after April 30, 2018. As this report has an effective date on or after December 31, 2017 it has been prepared on the basis of the new funding rules.

Effective June 15, 2015, the *Standards of Practice for Pension Commuted Values* published by the Canadian Institute of Actuaries require the use of the CPM2014 mortality rates combined with the mortality improvement scale CPM-B. The updated mortality rates have been reflected for purposes of the solvency and hypothetical windup valuations.

Subsequent Events

We completed this actuarial valuation on October 29, 2018.

To the best of our knowledge and on the basis of our discussions with The Corporation of the City of Hamilton, no events which would have a material financial effect on the actuarial valuation occurred between the actuarial valuation date and the date this actuarial valuation was completed.

Next Valuation

The next actuarial valuation of the plan must be performed with an effective date not later than December 31, 2020.

Section 1: Going Concern Financial Position

1.1 Statement of Financial Position

	December 31, 2017			December 31, 2014
	Fire	Others	Total	Total
Going Concern Value of Assets	$ 72,234,100	$ 5,445,400	$ 77,679,500	$ 82,150,100
Actuarial Liability				
Active members	$ 0	$ 0	$ 0	$ 0
Retired members	40,599,200	1,281,800	41,881,000	50,066,500
Beneficiaries	17,119,800	1,430,400	18,550,200	17,305,300
Terminated vested members	0	126,400	126,400	122,100
Provision for future pension increases	8,873,200	270,500	9,143,700	10,327,200
Total actuarial liability	$ 66,592,200	$ 3,109,100	69,701,300	$ 77,821,100
Actuarial Surplus (Unfunded Actuarial Liability)	$ 5,641,900	$ 2,336,300	$ 7,978,200	$ 4,329,000
Funded Ratio			111.4%	105.6%
Provision for Adverse Deviation (PfAD)	$ 4,040,300	$ 198,700	$ 4,239,000	N/A
Actuarial Surplus (Unfunded Actuarial Liability) After PfAD	$ 1,601,600	$ 2,137,600	$ 3,739,200	$ 4,329,000
Excess Actuarial Surplus[1]			$ 0	$ 0

Notes:

[1] Considered to be nil if there is a hypothetical windup or solvency deficit.

[2] The PfAD was not applied to the provision for future pension increases.

Comment:

- The split of assets between “Fire” and “Other” groups is provided by The Corporation of the City of Hamilton, based on the pension payroll in effect at the valuation date.

1.2 Reconciliation of Financial Position

Actuarial surplus (unfunded actuarial liability) as at December 31, 2014			$	4,329,000
Net special payments				0
Expected interest on:				
■ Actuarial surplus (unfunded actuarial liability)	$	682,400		
■ Net special payments		0		682,400
Plan experience:				
■ Investment gains (losses)	$	3,756,600		
■ Mortality gains (losses)		4,780,300		
■ Pension increases less than 2% per annum assumed		1,094,900		
■ Gains (losses) from miscellaneous sources		(1,700)		9,630,100
Change in actuarial basis:				
■ Demographic assumptions		(547,100)		
■ Economic assumptions		(6,116,200)		(6,663,300)
Impact of PfAD				(4,239,000)
Actuarial surplus (unfunded actuarial liability) as at December 31, 2017			$	3,739,200

1.3 Contributions (Ensuing Year)

There are no current active members in the plan and therefore no contributions required for current service.

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Section 2: Solvency and Hypothetical Windup Financial Position

2.1 Statement of Solvency and Hypothetical Windup Financial Position

	December 31, 2017			December 31, 2014
	Fire	Others	Total	Total
Solvency Value of Assets				
Market value of assets	$ 72,234,100	$ 5,445,400	$ 77,679,500	$ 82,150,100
Provision for plan windup expenses	(93,000)	(7,000)	(100,000)	(100,000)
Total solvency value of assets	$ 72,141,100	$ 5,438,400	$ 77,579,500	$ 82,050,100
Solvency Liability				
Active members	$ 0	$ 0	$ 0	$ 0
Retired members	42,671,700	1,301,200	43,972,900	57,064,800
Beneficiaries	18,194,600	1,490,600	19,685,200	19,436,300
Terminated vested members	0	126,400	126,400	122,100
Total actuarial liability	$ 60,866,300	$ 2,918,200	63,784,500	76,623,200
Solvency Surplus (Unfunded Solvency Liability)	$ 11,274,800	$ 2,520,200	$ 13,795,000	$ 5,426,900
Solvency ratio			Not less than 100%	Not less than 100%
Total hypothetical windup liability	$ 76,573,900	$ 3,386,300	$ 79,960,200	$ 96,664,100
Hypothetical Windup Surplus (Unfunded Hypothetical Windup Liability)	$ (4,432,800)	$ 2,052,100	$ (2,380,700)	$ (14,614,000)
Transfer ratio			97.15%	84.99%

Comments:

- As a result of Ontario Regulation 73/95, coverage under the Pension Benefit Guarantee Fund (PBGF) is exempted and PBGF assessment is not required.
- The solvency actuarial valuation results presented in this report are determined under a scenario where, following a plan windup, the employer continues its operations.
- The split of assets between “Fire” and “Others” groups is provided by The Corporation of the City of Hamilton, based on the pension payroll in effect at the valuation date.
- The hypothetical windup valuation results presented in this report are determined under a scenario where, following a plan windup, the employer continues its operations.
- As the transfer ratio is less than 1.00, transfer deficiencies must be paid over a maximum period of five years unless the cumulative transfer deficiencies are within the limits prescribed by the Pension legislation or the employer remits additional contributions in respect of the transfer deficiencies. Pursuant to Regulations 19(4) or 19(5) to the Pension legislation, approval of the Superintendent will be required to make commuted value transfers if there has been a significant decline in the transfer ratio after the actuarial valuation date.

2.2 Determination of the Statutory Solvency Excess (Deficiency)

In calculating the statutory solvency excess (deficiency), various adjustments can be made to the solvency financial position.

		December 31, 2017		December 31, 2014
Solvency surplus (unfunded solvency liability)	$	13,795,000	$	5,426,900
Adjustments to solvency position:				
■ Present value of existing amortization payments	$	0	$	0
■ Smoothing of asset value		0		0
■ Averaging of liability discount rate		0		0
■ Adjustment to reflect reduced solvency deficiency [1]		9,567,700		n.a.
■ Prior year credit balance		0		0
■ Total	$	9,567,700	$	0
Statutory solvency excess (deficiency)	$	23,362,700	$	5,426,900

Note:

[1] Equals 15% of the solvency liability after averaging of discount rate.

Section 3: Contributions

3.1 Estimated Minimum Employer Contribution (Ensuing Years)

The 2018 minimum employer required contributions under the new funding rules are as follows:

	December 31, 2017	December 31, 2014
Employer Normal actuarial cost (including the PfAD under the new rules)	$ 0	$ 0
Going concern amortization payments	0	0
Solvency amortization payments	0	0
Total	$ 0	$ 0

Based on the above, the the estimated minimum employer contributions for the next three years are as follows:

Year	2018	2019	2020
Employer Normal Actuarial Cost (including the PfAD)	$ 0	$ 0	$ 0
Amortization Payments			
Going concern	$ 0	$ 0	$ 0
Solvency	0	0	0
Sub-total	$ 0	$ 0	$ 0
Application of Prior Year Credit Balance	(0)	(0)	(0)
Available actuarial surplus [1]	$ 0	$ 0	$ 0
Estimated Minimum Employer Contribution	$ 0	$ 0	$ 0

Note:

[1] The available actuarial surplus is the lesser of the going concern actuarial surplus after PfAD and the amount that, if it were deducted from the solvency assets of the plan, would reduce the solvency ratio to 1.05.

3.2 Estimated Maximum Employer Contribution (Ensuing Year)

	December 31, 2017
Employer Normal Actuarial Cost	$ 0
Greater of the Unfunded Actuarial Liability and the Unfunded Hypothetical Windup Liability	2,380,700
Estimated Maximum Employer Contribution	$ 2,380,700

Comment:

- In general terms, the employer can contribute its total normal actuarial cost plus the largest of the going concern and hypothetical windup deficits and accrued interest. This amount shall be reduced by any excess actuarial surplus and any contributions made since the valuation date. The provincial Pension legislation may require that certain minimum contributions be nevertheless remitted.

3.3 Timing of Contributions

Amortization payments: monthly before the end of the month to which they pertain (or replaced by an equivalent letter of credit), if applicable.

Adjustment to contributions made since the valuation date: within 60 days from the date that this report is filed with the Pension authorities.

Section 4: Actuarial Opinion

In our opinion, for the purposes of the going concern, solvency and hypothetical windup valuations:

- the membership data on which the actuarial valuations are based are sufficient and reliable,
- the assumptions are appropriate, and
- the methods employed in the actuarial valuations are appropriate.

This report has been prepared, and our opinion has been given, in accordance with accepted actuarial practice in Canada. The actuarial valuations have been conducted in accordance with our understanding of the funding and solvency standards prescribed by the Pension legislation.

Towers Watson Canada Inc.

Bill Liu
Fellow of the Canadian Institute of Actuaries

Chat Le
Fellow of the Canadian Institute of Actuaries

Toronto, Ontario
October 29, 2018

Appendix A: Significant Terms of Engagement and Certificate of the Plan Administrator

A.1 Significant Terms of Engagement

For purposes of preparing this actuarial valuation report, the plan administrator has directed that:

- The actuarial valuation is to be prepared as at December 31, 2017.
- No margins for adverse deviation are to be used.
- For the purpose of determining the going concern discount rate, the investment policy dated October 2017, which is the most up-to-date version, should be considered. There are no expectations that the target asset class distribution will be modified in the future.
- For purposes of determining the Provision for Adverse Deviation level as at December 31, 2017, the target asset allocation should be that contained in the investment policy statement in effect at October 2017 and funded ratio on a windup basis as at December 31, 2017.
- For purposes of determining the Provision for Adverse Deviation level, the DB provisions of the plan are to be considered closed to new entrants.
- The going concern value of assets is to be determined using the market value of assets described in the Asset Valuation Method section in Appendix C.
- The going concern actuarial cost method to be used is the projected unit credit cost method.
- For purposes of determining the solvency liabilities of the plan, certain benefits are to be excluded without requiring an election from the employer.
- The solvency and hypothetical windup valuation results are to be determined under a scenario where all expenses are paid from the pension fund.
- This report is to be prepared on the basis that the employer is entitled to apply the available actuarial surplus, if any, to meet its contribution requirements under the plan.

Should these directions from the plan administrator be amended or withdrawn, Willis Towers Watson reserves the right to amend or withdraw this report.

A.2 Certificate of the Plan Administrator

I hereby certify that to the best of my knowledge and belief:

- the significant terms of engagement contained in Appendix A of this report are accurate and reflect the plan administrator's judgement of the plan provisions and/or an appropriate basis for the actuarial valuation of the plan;
- the information on plan assets, including the information on the investment policy and intended changes to the asset mix distribution after the valuation date, if any, forwarded to Towers Watson Canada Inc. and summarized in Appendix B of this report is complete and accurate;
- the data forwarded to Towers Watson Canada Inc. and summarized in Appendix E of this report are a complete and accurate description of all persons who are members of the plan, including beneficiaries who are in receipt of a retirement income, in respect of service up to the date of the actuarial valuation;
- the summary of plan provisions contained in Appendix F of this report is accurate; and
- there have been no events which occurred between the actuarial valuation date and the date this actuarial valuation was completed that may have a material financial effect on the actuarial valuation.

	NOV 6, 2018
Signature	Date
RICHARD MALE	DIRECTOR OF FINANCIAL SERVICE & TAXATION
Name	Title

Appendix B: Assets

B.1 Statement of Market Value

		December 31, 2017		December 31, 2014
Invested assets:				
■ Canadian equities	$	30,201,900	$	22,815,300
■ Foreign equities		15,890,900		25,562,600
■ Cash and short-term investments		955,500		1,454,900
■ Fixed income		30,618,600		32,342,000
■ Total invested assets	$	77,666,900	$	82,174,800
Net outstanding amounts:				
■ Investment income receivable		78,500		85,300
■ Expenses and other payables		(65,900)		(110,000)
■ Total net outstanding amounts	$	12,600	$	(24,700)
Total Assets	$	77,679,500	$	82,150,100

Comment:

- The data relating to the invested assets and net outstanding amounts are based on the audited financial statements issued by KPMG.

B.2 Asset Class Distribution

The following table shows the target asset allocation stipulated by the plan's investment policy in respect of major asset classes and the actual asset allocation as at December 31, 2017.

	Target asset allocation	Actual asset allocation as at December 31, 2017
Canadian equities	10%	39%
Foreign equities	10%	20%
Cash and short-term investments	0%	1%
Fixed income	80%	40%
Total	100%	100%

B.3 Reconciliation of Total Assets (Market Value)

Assets as at December 31, 2014			$	82,150,100
Receipts:				
■ Contributions:				
– Employer normal actuarial cost	$	0		
– Employer amortization payments		0		
– Provision for non-investment expenses		0	$	0
■ Investment return				16,087,900
■ Total receipts			$	16,087,900
Disbursements:				
■ Benefit payments:				
– Pension payments	$	(19,637,400)		
– Lump sum settlements		0		
– Other benefit payments		0	$	(19,637,400)
■ Fees				(921,100)
■ Total disbursements			$	(20,558,500)
Assets as at December 31, 2017			$	77,679,500

Comments:

- This reconciliation is based on the financial statements issued by KPMG.
- The rate of return earned on the market value of assets, net of all expenses, from December 31, 2014 to December 31, 2017 is approximately 6.55% per annum.

Appendix C: Actuarial Basis - Going Concern Valuation

C.1 Methods

Asset Valuation Method

The going concern value of assets was calculated as the market value of invested assets at the actuarial valuation date, adjusted for net outstanding amounts.

Actuarial Cost Method

The actuarial liability and the normal actuarial cost were calculated using the projected unit credit cost method.

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C.2 Actuarial Assumptions

	December 31, 2017	December 31, 2014
Economic Assumptions (per annum)		
Liability discount rate	3.75%	5.00%
Rate of inflation	2.00%	2.00%
Post-retirement pension increases	2.00%	2.00%
Demographic Assumptions		
Mortality	2014 Public Sector Canadian Pensioners' Mortality Table (CPM2014Pub), projected generationally using MI-2017	2014 Public Sector Canadian Pensioners' Mortality Table (CPM2014Pub), projected generationally using Scale B
Other		
Years male spouse older than female spouse	3	3
Provision for non-investment expenses	None; return on plan assets is net of all expenses	None; return on plan assets is net of all expenses

C.3 Rationale for Actuarial Assumptions

The rationale for the material actuarial assumptions used in the going concern valuation is summarized below.

The going concern assumptions do not include margins for adverse deviations, as a separate Provision for Adverse Deviations has been applied to the actuarial liability and normal actuarial cost

Liability discount rate

Actuarial valuation economic assumptions used for establishing the liability discount rate have been developed based on Willis Towers Watson's capital market model which simulates economic variables and asset class returns. For purposes of calculating the expected long-term returns for each asset class, it has been assumed that key economic variables (such as price inflation and bond yields) transition over time from initial conditions to long-term normative assumptions. Normative assumptions are established based on a blend of historical capital market data and future expectations and do not change frequently. In current capital market conditions, the normative assumptions reflect the expectation that bond yields will increase in the long-term.

■ Best estimate long term nominal rate of return before adjustments based on the plan target asset allocation (actual and including anticipated changes)	3.94%
■ Adjustment for expenses paid by the plan	(0.30)%
■ Rounding	0.11%
■ Net discount rate	3.75%

Rate of inflation

Estimate of future rates of inflation considering economic and financial market conditions at the valuation date.

Post-retirement pension increases

The assumption has been determined by applying the post-retirement increase provision specified in the plan to the inflation assumption.

Mortality

Base mortality rates from the CPM2014Public table are considered reasonable for the actuarial valuation of the plan given that the mortality experience of the plan membership is insufficient to assess plan-specific experience, and there is no reason to expect the mortality experience of the plan to differ significantly from that of other pension plans. Applying improvement scale MI-2017 generationally provides allowance for improvements in mortality after 2014 and is considered reasonable for projecting mortality experience into the future.

No allowance has been made for mortality prior to retirement with respect to terminated vested members in order to approximate the value of pre-retirement death benefits.

Years male spouse older than female spouse

When provided, the actual data on the spouse were used for retired members. For other members, the assumption is based on surveys of the age difference in the general population and an assessment of future expectations for members of the plan.

Provision for expenses

The liability discount rate is net of all expenses. The assumed level of expenses reflected in the liability discount rate is based on recent experience of the plan and an assessment of future expectations.

Appendix D: Actuarial Basis - Solvency and Hypothetical Windup Valuations

D.1 Methods

Asset Valuation Method

The market value of invested assets, adjusted for net outstanding amounts, has been used for the solvency and hypothetical windup valuations. The resulting value has been reduced by a provision for plan windup expenses.

Liability Calculation Method

The solvency and hypothetical windup liabilities for members were calculated using the unit credit cost method.

Other Considerations

The solvency and hypothetical windup valuations have been prepared on a hypothetical basis. In the event of an actual plan windup, the plan assets may have to be allocated between various classes of plan members or beneficiaries as required by applicable Pension legislation. Such potential allocation has not been performed as part of these solvency and hypothetical windup valuations.

D.2 Solvency Incremental Cost Actuarial Method

To calculate the Solvency Incremental Cost ("SIC"), we used the same method as for the solvency valuation.

No decrements and no new entrants have been considered on the basis that the plan is closed to new entrants. The benefits and members' contributions were projected using the going concern valuation assumptions and the plan provisions.

We assumed that the same settlement method would apply at the end of the projection period as at the valuation date for each plan member.

D.3 Actuarial Assumptions

	December 31, 2017	December 31, 2014
Economic Assumptions (per annum)		
Liability discount rate		
■ Annuity purchase (solvency)	2.80%	2.20%
■ Annuity purchase (windup)	(0.10)%	(0.60)%
Demographic Assumptions		
Mortality	CPM2014 Canadian Pensioners' Mortality Table, projected generationally using Scale CPM-B	1994 Uninsured Pensioner Mortality Table, projected generationally using Scale AA
Other		
Years male spouse older than female spouse	3	3
Provision for expenses		
■ Solvency	$100,000	$100,000
■ Hypothetical windup	$100,000	$100,000

D.4 Rationale for Actuarial Assumptions

The rationale for the material actuarial assumptions used in the solvency and hypothetical windup valuations is summarized below.

The actuarial assumptions used in the solvency and hypothetical windup valuations do not include margins for adverse deviations.

Liability discount rate

Portion of the solvency and hypothetical windup liabilities expected to be settled by a group annuity purchase: based on the CIA annuity purchase guidance applicable at the valuation date which corresponds to an approximation of the annuity purchase rate. The duration of the liabilities assumed to be settled through the purchase of non-indexed annuities is 7.1. As this duration is below the range of durations covered in the guidance, we have extrapolated downwards the spreads from the medium and low durations to determine the approximate annuity purchase rate.

Mortality

For the benefits that are expected to be settled by a group annuity purchase: based on CIA annuity purchase guidance.

For benefits that are expected to be settled by commuted value transfer: determined in accordance with the *Standards of Practice for Pension Commuted Values* in effect at the valuation date. No pre-retirement mortality has been assumed in order to approximate the value of pre-retirement death benefits.

Years male spouse older than female spouse

See rationale for going concern assumptions in Appendix C.

Provision for expenses

Allowance was made for normal administrative, actuarial, legal and other costs which would be incurred if the plan were to be wound up (excluding costs relating to the resolution of surplus or deficit issues). The actuarial valuation is premised on a scenario in which all costs incurred as a result of plan windup were assumed to be paid from the pension fund.

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Appendix E: Membership Data

Active and Disabled Members

There are no remaining active members.

Retired Members

	FIRE December 31, 2017	OTHERS December 31, 2017
■ Number	97	7
■ Average age	81.2	89.9
■ Average Annual Lifetime Pension	$41,080	$30,537

Comment:

The lifetime pension as at December 31, 2017 includes the January 1, 2018 pension increase of 1.49%.

Age Group	Fire		Others	
	December 31, 2017		December 31, 2017	
	Number	Monthly Pension	Number	Monthly Pension
50-54	0	$ 0	0	$ 0
55-59	0	0	0	0
60-64	0	0	0	0
65-69	0	0	0	0
70-74	6	24,816	0	0
75-79	30	97,670	0	0
80+	61	209,578	7	17,813
TOTAL	97	$ 332,064	7	$ 17,813

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Beneficiaries

	FIRE December 31, 2017	OTHERS December 31, 2017
■ Number	66	16
■ Average age	79.5	88.9
■ Average Annual Lifetime Pension	$27,183	$13,887

Comment:

The lifetime pension as at December 31, 2017 includes the January1, 2018 pension increase of 1.49%.

Age Group	Fire		Others	
	December 31, 2017		December 31, 2017	
	Number	Monthly Pension	Number	Monthly Pension
60-64	1	2,142	0	-
65-69	3	8,543	0	-
70-74	9	20,661	0	-
75-79	25	53,810	2	5,698
80+	28	64,349	14	12,818
TOTAL	66	$ 149,505	16	$ 18,516

Terminated Vested Members

	December 31, 2017	December 31, 2014
■ Number	3	3
■ Average age	96.2	93.2
■ Average Annual Pension	$1,239	$1,190
■ Average Accumulated Employee Contributions	$42,119	$40,707

Review of Membership Data

The membership data were supplied by The Corporation of The City of Hamilton as at December 31, 2017.

Elements of the data review included the following:

- ensuring that the data were intelligible (i.e., that an appropriate number of records was obtained, that the appropriate data fields were provided and that the data fields contained valid information);
- preparation and review of membership reconciliations to ascertain whether the complete membership of the plan appeared to be accounted for;
- review of consistency of individual data items and statistical summaries between the current actuarial valuation and the previous actuarial valuation;
- review of reasonableness of individual data items, statistical summaries and changes in such information since the previous actuarial valuation date; and
- comparison of the membership data and the plan’s financial statements for consistency.

However, the tests conducted as part of the membership data review may not have captured certain deficiencies in the data. We have also relied on the certification of the plan administrator as to the quality of the data.

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Membership Reconciliation

	Active	Terminated vested	Retired	Beneficiaries	Total
As at December 31, 2014	0	3	131	88	222
■ New entrants					
■ Non-vested termination					
■ Vested termination					
■ Settlement					
■ Transfer					
■ Retirement					
■ New beneficiaries					
■ Deceased (with beneficiary)			(15)	15	0
■ Deceased (without beneficiary)			(12)		(12)
■ Deceased survivors				(21)	(21)
■ Data correction					
■ Net change	0	0	(27)	(6)	(33)
As at December 31, 2017	0	3	104	82	189

Appendix F: Summary of Plan Provisions

The following is an outline of the principal features of the plan which are of financial significance to valuing the plan benefits. This summary is based on the plan document as at December 31, 2017 including the 2007 amendment with an effective date of January 1, 2006, as provided by The Corporation of the City of Hamilton, and does not make any provisions for the possibility that a change or action (retroactive or otherwise) could be imposed by order of a regulatory body or a court. As the plan consists entirely of pensioners, and deferred vested members, plan provisions relating to active members have not been include. It is not a complete description of the plan terms and should not be relied upon for administration or interpretation of benefits. For detailed description of the benefits, please refer to the plan document.

Normal Retirement Age

Age 60 for Fire employees other than Fire Chief, age 65 for all others.

Amounts of Annual Pension

Normal and Disability Retirement: 2% of average annual earnings in best 5 years before retirement for each year of credited service up to 35 years reduced by 0.675% of the 5 year average earnings up to the average YMPE over the last five years for each year of contributory service after January 1, 1966. Reduction suspended from date of retirement to age 65 for CPP benefit.

Death Benefit

After retirement: Based on election made within range of allowable options.

Withdrawal Benefit

Deferred pensions commence at the normal retirement age.

Inflation Protection

Pension benefits, pensions and deferred pensions shall be indexed beginning on January 1, 2006, by an inflation related adjustment formula equal to the inflation related adjustment formula used to increase pension benefits, pensions and deferred pensions under the Ontario Municipal Employees Retirement Systems Act, 2006, as amended from time to time, subject to the Income Tax Act.

Appendix G: Sensitivity Analysis and Other Disclosures

G.1 Sensitivity Information

Amounts determined with a discount rate 1% lower:

Going concern actuarial liability	$	75,350,600
■ As percent increase		8.13%
Solvency actuarial liability	$	68,673,200
■ As percent increase		7.66%

G.2 Solvency Incremental Cost

Solvency Incremental Cost (up to next valuation date)	$	3,257,000

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G.3 Provision for Adverse Deviation Level

Target Asset Allocation for Fixed Income Assets

The information below as at December 31, 2017 has been used to determine the Provision for Adverse Deviation level. The fixed income investments listed below meet the minimum credit rating prescribed by the Pension legislation.

	Target asset allocation	Fixed income allocation	Non-fixed income allocation	Fixed income weight
Asset classes				
- Canadian Equity	10.0%	0.0%	10.0%	0.0%
- Global Equity	10.0%	0.0%	10.0%	0.0%
- Fixed income	80.0%	80.0%	0.0%	80.0%
Total	100%	80.0%	20.0%	

Benchmark Discount Rate

Components	Rate
CANSIM V39056	2.26%
Risk Premium on Non-Fixed Income Assets[1]	1.00%
Risk Premium on Fixed Income Assets[2]	1.20%
Diversification Allowance	0.50%
Benchmark Discount Rate	4.96%

Note:

[1] 5.00% of the non-fixed proportion of the assets.

[2] 1.50% of the fixed proportion of the assets.

Provision for Adverse Deviation Level

Components	Provision for Adverse Deviation level
Fixed	5.0%
Asset mix based	*2.0%*
Benchmark discount rate based[1]	*0.0%*
Provision for Adverse Deviation Level[2]	7.0%

Note:

[1] Reflects going concern discount rate less benchmark discount rate (subject to a minimum of zero), multiplied by the going concern liabilities duration (refer to sub-section G.1)

[2] The Provision for Adverse Deviation is applied to the going concern actuarial liability and total normal cost, excluding any portion for future indexation.

The Corporation of the City of Hamilton

Hamilton Municipal Retirement Fund

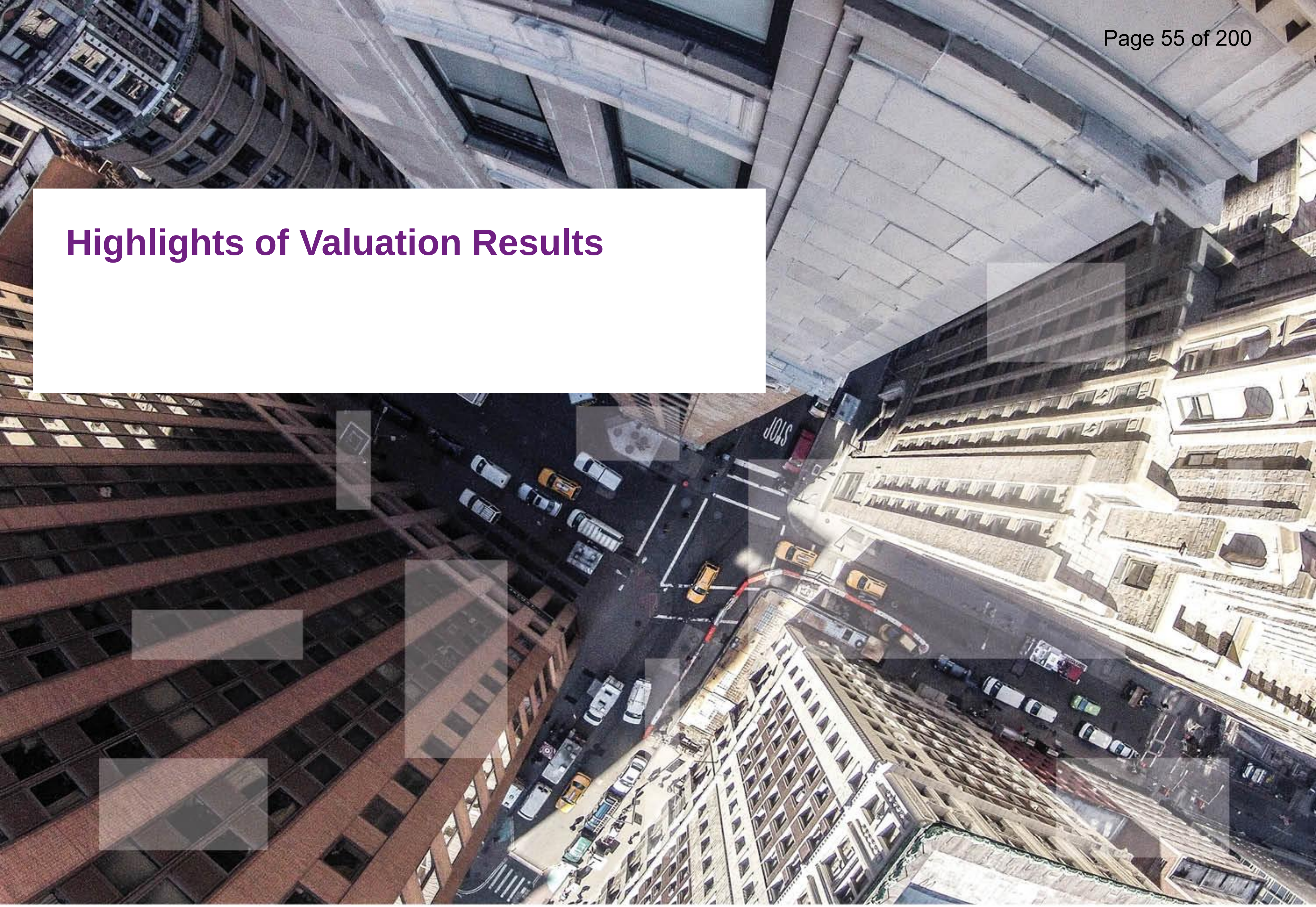
December 31, 2017 Funding Valuation Results

December 18, 2018

Willis Towers Watson

Agenda

- Highlights of the Valuation Results
- Additional Details on the Valuation
- Ontario Funding Reform
- Next Steps



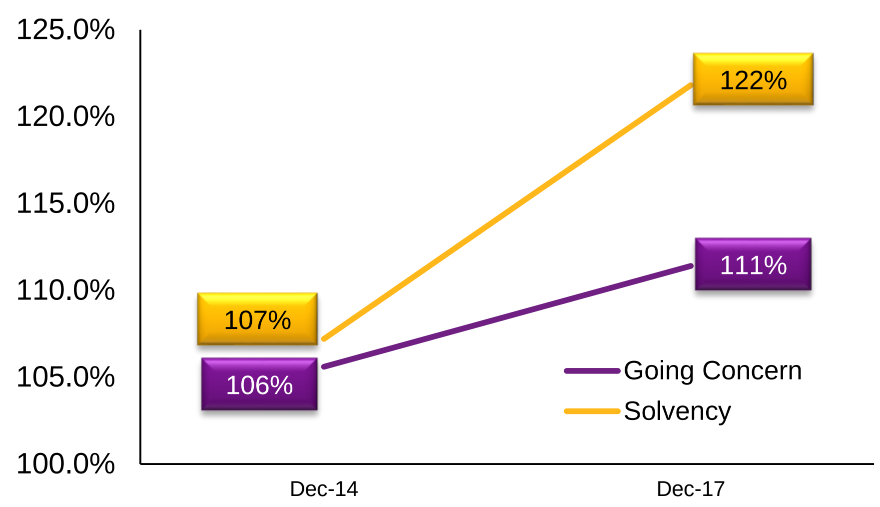
Highlights of Valuation Results

December 31, 2017 Valuation Highlights

Key Results

Key Results	
Solvency Funded Ratio	▲ 14.6%
December 31, 2017	121.8%
December 31, 2014	107.2%
Going Concern Funded Ratio	▲ 5.8%
December 31, 2017	111.4%
December 31, 2014	105.6%
Minimum Required Contributions	**No Change**
December 31, 2017	$ 0
December 31, 2014	$ 0

Funded Ratio



Commentary

- Better than expected asset returns and demographic experience gains have led to an improvement in the going concern and solvency funded status
- Transfer ratio also increased from 85.0% as at December 31, 2014 to 97.2% as at December 31, 2017.

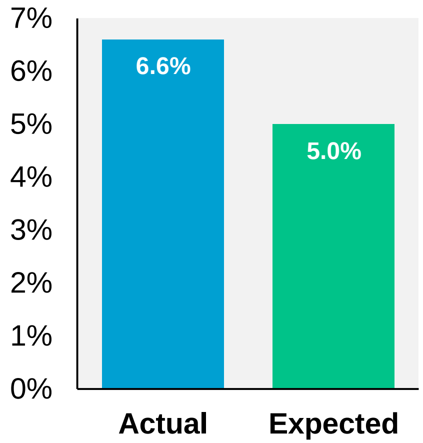
Assets

Reconciliation (Accrued basis)

(in 000's)	2015	2016	2017
As at beginning of year	$ 82,150	$77,226	$77,162
Company contributions	$ 0	$ 0	$ 0
Benefit payments	(6,842)	(6,541)	(6,254)
Investment income, net of all expenses	2,286	6,811	6,990
Expenses	(368)	(334)	(219)
As at end of year	$ 77,226	$77,162	$ 77,679
Rate of return, net of all expenses	**2.4%**	**8.8%**	**9.2%**

Annualized return Jan. 1, 2015 to Dec. 31, 2017

The actual return exceeded the expected return, resulting in an actuarial gain of $3.8 million.



Going concern valuation

Financial position

(in 000's)	December 31, 2017	December 31, 2014
Going concern value of assets		
▪ Market value of invested assets	$ 77,679	$ 82,150
Going concern actuarial liability		
▪ Active members	$ 0	$ 0
▪ Terminated vested members	126	122
▪ Retired members	41,881	50,067
▪ Beneficiaries	18,550	17,305
▪ Provision for future pension increases	9,144	10,327
▪ Total	$ 69,701	$ 77,821
Going concern surplus (deficit)	$ 7,978	$ 4,329
▪ Provision for Adverse Deviations (PfAD) –7.0%	$ 4,239	Not applicable
Going concern surplus (deficit) after PfAD	$ 3,739	Not applicable
Funded ratio	1.114	1.056

Going concern valuation

Reconciliation of financial position

(in 000's)	Plan Experience
Surplus (deficit) as at December 31, 2014	$ 4,329
Special payments towards deficits	0
Interest on deficit and special payments	682
Investment gains (losses), net of all expenses	3,757
Membership experience	
▪ Mortality gains (losses)	4,780
▪ Pension increase gains (losses)	1,095
▪ Other liability gains (losses)	(2)
Change in demographic assumptions	(547)
Change in assumed liability discount rate	(6,116)
Impact of PfAD	(4,239)
Surplus (deficit) as at December 31, 2017	$ 3,739

Solvency / Windup valuation

Financial position

(in 000's)	December 31, 2017	December 31, 2014
Solvency value of assets		
▪ Market value of invested assets	$ 77,679	$ 82,150
▪ Provision for windup expenses	(100)	(100)
▪ Total value of assets	$ 77,579	$ 82,050
Solvency liability		
▪ Active and disabled members	$ 0	$ 0
▪ Terminated vested members	126	122
▪ Retired members	43,973	57,065
▪ Beneficiaries	19,685	19,436
▪ Total	$ 63,784	$ 76,623
Solvency surplus (deficit)	**$ 13,795**	**$ 5,427**
Solvency ratio	1.218	1.072
▪ Provision for future pension increases	$ 16,176	$ 20,041
Transfer ratio	0.972	0.850

Funding requirements

- Minimum funding requirements
  - No contributions required until the next required funding valuation report is filed as at December 31, 2020
- Maximum funding allowed
  - $2,380,700 until the next required funding valuation report is filed as at December 31, 2020

Actuarial certification

The results presented in this presentation are based on the membership data and assumptions included in this presentation and based on the methods, plan provisions and other information outlined in the actuarial valuation report to determine funding requirements for the pension plan prepared as at **December 31, 2017**. Therefore, such information, and the reliances and limitations of the valuation report and its use, should be considered part of this presentation.

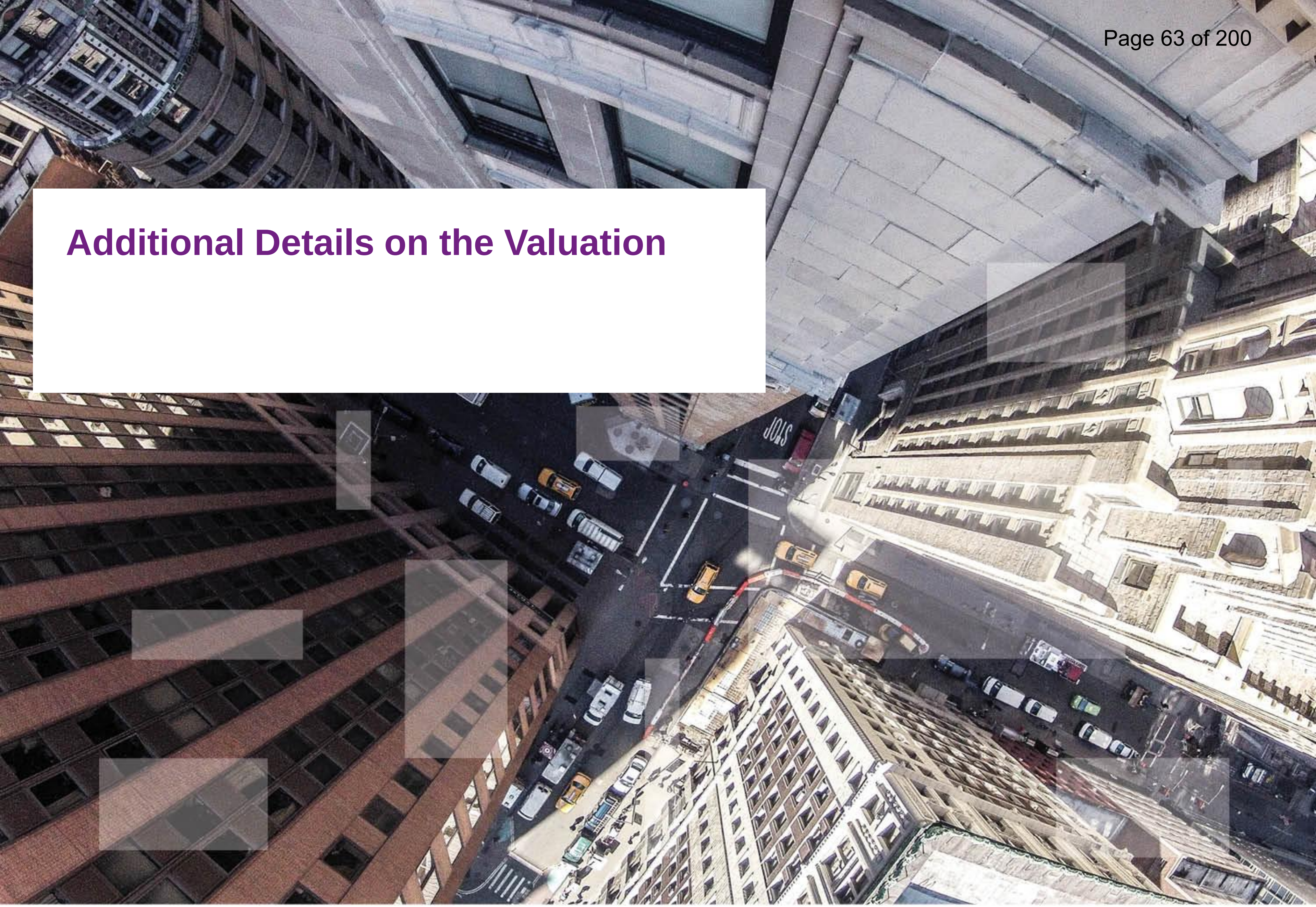
The information provided in this presentation has been prepared solely for the benefit of the Corporation of the City of Hamilton, for its internal use in connection with the actuarial valuations of the plans prepared by Willis Towers Watson. This presentation should not be used for other purposes and we accept no responsibility for any such use. It should not be shared with or relied upon by any other person without Willis Towers Watson's prior written consent.

In our opinion, for the purposes of this presentation , the data are sufficient and reliable, the assumptions are appropriate and the methods employed in the valuation are appropriate. This presentation has been prepared, and our opinion has been given, in accordance with:

- The funding and solvency standards prescribed by the Pension Benefits Standards Act (Ontario) and Regulation thereto;
- The requirements of the Income Tax Act (Canada) and Regulation thereto; and
- Accepted actuarial practice in Canada, except that this presentation has been appropriately abbreviated.

Bill Liu, FSC, FCIA

Chat Le, FSA, FCIA



Additional Details on the Valuation

Hamilton Municipal Retirement Fund

Purpose

- Legislation requires that an actuary conduct a funding valuation of the plan at least every three years
  - The last valuation as of December 31, 2014
  - This valuation has been undertaken as of December 31, 2017
- The Ontario Pension Benefits Act requires an actuarial valuation as part of the requirements to provide benefit security
- The Income Tax Act requires an actuarial valuation to approve tax deductible contributions

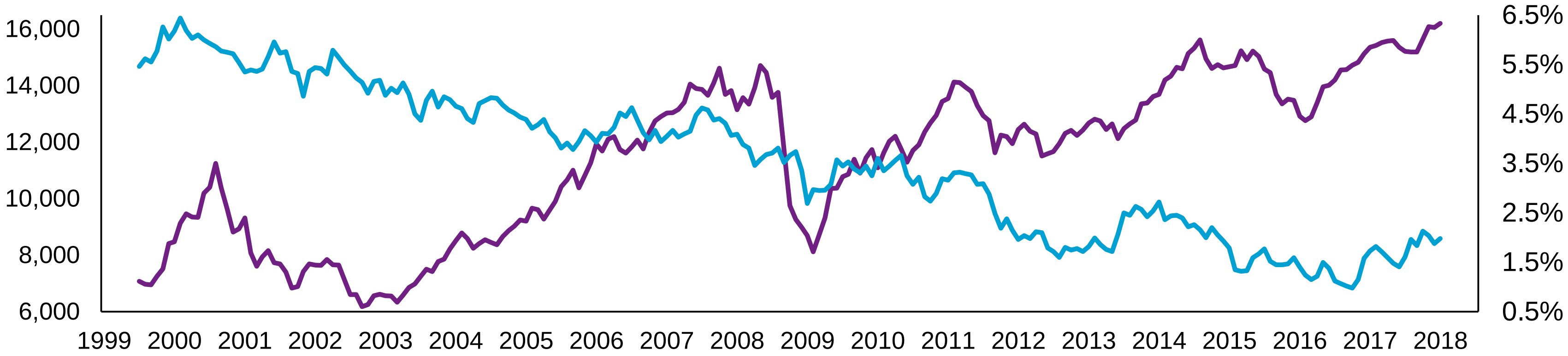
Types of Valuations

Two types of valuations are required for funding purposes:

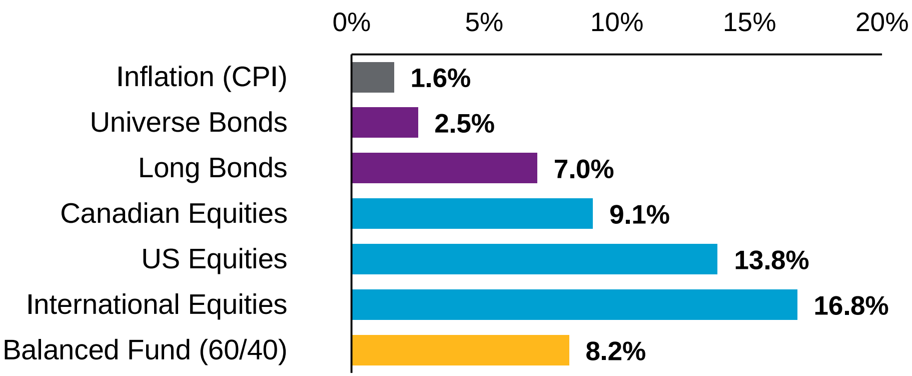
Type	Going Concern	Solvency
Scenario	Plan continues indefinitely	Plan winds up
Assumptions	Long term assumptions, selected by actuary	Largely prescribed, based on current market conditions
Timing for amortization of deficits	10 years	5 years

Financial markets backdrop

Prolonged period of declining interest rates and volatile equity markets



2017 Benchmark asset returns (in $CAD)



Solvency discount rates

80 bps

Annuity purchase rate - Solvency
- 2.2% at December 31, 2014
- 2.8% at December 31, 2017

50 bps

Annuity purchase rate - Windup
- (0.6)% at December 31, 2014
- (0.1)% at December 31, 2017

Assumptions

Overview

Two types of funding valuations are undertaken:

- **Going concern valuation** assumes the plan continues indefinitely (long-term outlook)
  - Best estimate assumptions are selected by actuary in accordance with professional actuarial standards and prescribed provincial regulations
  - Best estimate assumptions were reviewed and selected
- **Solvency valuation** assumes the plan terminated and all benefits were settled on the valuation date
  - Assumptions are based on current market conditions and are effectively prescribed by CIA

Going concern valuation

Key assumption changes

Discount Rate

- Going concern discount rate reflects the long-term expectation of investment returns (the new assumptions included no margin for conservatism)
- Interest rate decreased by 1.25% to 3.75% per annum to reflect new target asset mix, funded status of the plan and January 1, 2018 asset model

Mortality

- Going concern mortality assumption strengthened to reflect the new Canadian Institute of Actuaries (CIA) tables (liability increased by $0.5M due to this change):
  - Prior table: CPM2014 Public Sector Table projected generationally using Scale CPM-B
  - New table: CPM2014 Public Sector Table projected generationally using Scale MI-2017

Solvency valuation

Key assumption changes

Annuity Purchase Discount Rate

- Prior assumption:

  2.2% per year for solvency, (0.6)% per year for windup

- New assumption:

  2.8% per year for solvency, (0.1)% per year for windup

Mortality

- Solvency mortality assumption updated to reflect the new Canadian Institute of Actuaries (CIA) tables:
  - Prior table: 1994 Uninsured Pensioner Table projected generationally using Scale AA
  - New table: CPM2014 Table projected generationally using Scale CPM-B

Funding requirements

Minimum funding requirements

Normal Cost

- Cost of benefits that accrue during the year
- Administrative expenses

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Amortization of Going Concern Deficits

- Going concern deficit amortized over 10 years
- Schedules re-established at each valuation date

\+

Amortization of Solvency Deficits

- Solvency deficit under 85% of the solvency liability amortized over 5 years
- Net of going concern amortization payments

Membership data

Reconciliation

	Active Members	Terminated Vested Members	Retired Members	Beneficiaries
As at December 31, 2014	0	3	131	88
New Entrants				
Terminations				
▪ With lump sum settlement				
▪ Vested Termination				
Retirements				
Deaths				
▪ With Beneficiary			-15	
▪ Without Beneficiary			-12	-21
New beneficiaries				15
As at December 31, 2017	0	3	104	82

Ontario Funding Reform

Journey to Ontario Funding Reform

November 2015

Government announces intention to review solvency funding rules for DB pension plans.

July 2016

Release of consultation paper with 2 broad options: reduce solvency or eliminate solvency with enhanced Going Concern

May 2017

Framework for new funding rules announced

June 2017

Interim measures announced relating to 2017 valuations

January 2018

Detailed rules and transition measures

April 2018

Final funding reform regulations released, effective May 1, 2018

Valuations with an effective date on or after Dec. 31, 2017 * will be subject to new rules

* Current rules apply for any valuation filed before May 1, 2018, irrespective of the valuation date

Impact of Changes to Plan Funding

Change	Current Rules	Final Regulations (Effective May 2018)	Impact for the Plan
Solvency	▪ Solvency funding target of 100% ▪ Deficits amortized over 5 years	▪ Solvency funding target of 85% ▪ Deficits below 85% threshold are amortized over 5 years	▪ No immediate impact as the plan is fully funded on a going concern basis
Going Concern Funding	▪ Deficits are amortized over 15 years	▪ Deficits are amortized over 10 years ▪ Fresh start of going concern schedules every valuation, starting one year later ▪ Schedules continue until one year following effective date of subsequent valuation	▪ No immediate impact as the plan is fully funded on a going concern basis
Discount Rates	▪ Going Concern discount rate is best estimate based on asset mix (less margin required by FSCO); ▪ Solvency discount rates are prescribed	▪ Expected that FSCO will drop requirement for margin in Going Concern discount rate	▪ Going concern valuations had a 0.25% reduction in the discount rate as the margin for adverse deviations. Equates to a load of approximately 2.0% on liabilities. ▪ PfAD is 7.0%
Provision for Adverse Deviation (PfAD)	▪ None	▪ “Load” applied to going concern liability and normal cost; ▪ Reflects open/closed status of plan and asset mix	
Benefit Improvements	▪ Increase in the deficit must be funded according to solvency and going concern funding rules	▪ Solvency ratio and going concern ratio after the improvement must be at least 80% ▪ If the improvement brings the ratio below 80%, the plan must be brought back up to 80% with a one-time contribution, limited to the cost of the improvement ▪ Increase in the going concern liability must be funded over 8 years without consolidation option (including recognizing any one-time contribution made)	▪ No immediate impact.

Details regarding Provision for Adverse Deviation (PfAD)

"Non-Fixed Income":
Equities and employer issued securities

"Fixed Income":
Bonds, cash, treasury bills, GICs, annuities held as plan assets

"Alternatives" (Considered 50/50 Non-Fixed Income/Fixed Income):
Real estate, resource properties, infrastructure, mortgage loans

% Non-Fixed Income	Closed Plan	Open Plan
0	5%	4%
20	7%	5%
40	9%	6%
50	10%	7%
60	12%	8%
70	16%	10%
80	20%	12%
100	28%	16%

\+

% that going concern discount rate exceeds "Benchmark Discount Rate"

Ontario – Funding Reform

Additional requirements for SIPP and Plan text

- Ontario's funding reform changes will require revisions to SIPP and to Plan text

Statement of Investment Policies and Procedures (SIPP)	▪ Include a target asset allocation for each of 16 classes identified in regulations (as used for % fixed income and non-fixed income in determination of PfAD)
Annual (active members) and Biennial Statements (deferred vested and retired members)	▪ Enhance funding disclosure for first valuation filed after December 31, 2017 (whether under new or old rules) ▪ Effective January 1, 2019, must include estimated transfer ratio as of the end of the statement reporting period
Plan text	▪ Plan text to include additional employer requirements regarding contributions in respect of PfAD, solvency contributions, benefit improvements, annuity discharge ▪ To be filed within 12 months of the date the first report is filed under the new rules

Other Important Changes

The Ministry of Finance released the final regulations on April 20, 2018.

Effective Date	▪ Valuations with effective date on or after December 31, 2017
One-Time Transition Measure	▪ In first valuation under new framework, any solvency excess can be used to reduce solvency payment amount or period
Phase-In of New Rules	▪ If total contributions under new rules (normal cost, special payments, PfAD) are greater than under old rules, increase may be phased in over the three years following first report under new framework
Member notification	▪ Members must be notified of new rules on first active and inactive statements after a valuation is filed
Still to Come	▪ Details regarding governance policies and funding policies

Next Steps

Next Steps

- Plan amendment may be required for various items
- Adjusting the asset allocation based on funded status of the plan and SIPP
- Continuing to Monitor Governance and funding policies – no further details yet

Hamilton

INFORMATION REPORT

TO:	Chair and Members HMRF / HWRF Pension Administration Sub-Committee
COMMITTEE DATE:	December 18, 2018
SUBJECT/REPORT NO:	Master Trust Pension Investment Performance Report as at December 31, 2017 (FCS17088(a)) (City Wide)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Gerald T. Boychuk (905) 546-4321 Brandon A. Teglas (905) 546-4363
SUBMITTED BY: **SIGNATURE:**	Cindy Mercanti Director, Customer Service and POA Acting Director, Financial Planning and Policy Corporate Services Department

Council Direction:

Not Applicable.

Information:

Attached, as Appendix “A” to Report FCS17088(a), is Aon Hewitt’s investment performance report for the Hamilton Municipal Retirement Fund (HMRF), the Hamilton-Wentworth Retirement Fund (HWRF) and the Hamilton Street Railway (HSR), as of December 31, 2017. Together, the three pension funds make up the Master Trust, which is referred to as the “Plan” throughout Report FCS17088(a).

As of December 31, 2017, the market value of the assets of the Plan was $341.9 M, an increase of $11.6 M compared with $330.3 M as at December 31, 2016.

The funded ratio increased to 75.2% which required a change in asset mix. The “Dynamic Investment Policy” set a long-term target of 80% fixed income assets with adjustment being upwards in fixed income holdings as interest rates rise and reduce the present value of liabilities as total returns exceed the prescribed discount rate and increase total asset present values.

For the one-year period ending December 31, 2017, the Plan's return was 9.5%, outperforming its benchmark return of 8.3% by 1.2%. The benchmark return is based on the benchmark asset mix for the Plan. The Plan return overall of 9.5% underperformed the OMERS (Gross) plan return of 11.5% by 2.0%.

Table 1 shows the Plan's one-year (ending December 31 in each year) return for the last five years.

Table 1
Plan's 1 year (ended Dec. 31) Returns

	12 Months Ended Dec. 31/17	12 Months Ended Dec. 31/16	12 Months Ended Dec. 31/15	12 Months Ended Dec. 31/14	12 Months Ended Dec. 31/13
Plan Return	9.5%	9.3%	2.6%	12.0%	13.0%
Benchmark	8.3%	8.0%	4.2%	13.7%	9.7%
Value Added	1.2%	1.3%	-1.6%	-1.7%	3.3%
Market Value	$341.9M	$330.3M	$320.6M	$330.5M	$316.3M
Funded Status	75.2%	68.6%	64.8%	68.4%	71.2%

The Plan's performance may be compared to the return earned in the broader pension market in Canada. Attached as Appendix "B" to Report FCS17088(a), RBC Investor & Treasury Service reports its universe of pension funds, which totals C$650 B and had an average annual return of 9.7% in the year ended December 31, 2017. The Plan's return of 9.5% underperformed the annual return by 0.2%. Fixed income and global equity returns were major contributors to the Plan's overall return.

Table 2 compares the Plan's returns to OMERS fund's gross returns over one, five and ten-year periods, all ending December 31, 2017. The Plan's gross returns are less than OMERS for two periods and higher for the five-year return.

Table 2
Annualized Returns

	Dec.31/17 One-Year Annualized Return	5-Year Annualized Return	10-Year Annualized Return
Plan (HSR, HMRF, HWRF)	9.5%	9.2%	6.0%
Plan Benchmark	8.3%	8.7%	5.9%
OMERS (Gross)	11.5%	8.9%	7.0%
OMERS Benchmark (Gross)	7.3%	N/A	N/A
OMERS Capital Markets	9.5%	N/A	N/A
OMERS Capital Markets Benchmark	N/A	N/A	N/A

The Plan's ten-year gross annualized return for the period ending December 31, 2017 is 6.0%, outperforming the benchmark return of 5.9% by 0.1% and underperforming OMERS return of 7.0% by 1.0%.

The Plan's five-year gross annualized return for the period ending December 31, 2017 is 9.2%, exceeding the benchmark return of 8.7% by 0.5% and outperforming OMERS return of 8.9% by 0.3%.

OMERS return in public market securities (OMERS Capital Markets in Table 2 above) is estimated at 9.5% for the one-year ending December 31, 2017. The Plan's gross return for the period ending December 31, 2017 is 9.5% and equaled OMERS 9.5% estimate. OMERS financial reports no longer separate this return, which was estimated by averaging the fixed income returns of 4.3%for fixed income and 14.7% for equities.

OMERS invests in public market securities (such as public equities and bonds) and in private market investments (such as private equity, real estate, infrastructure and strategic investments). The Plan invests only in public market securities. Private market investments require expertise developed over many years, have limited liquidity, require significant administrative costs and current valuations may or may not be realized.

Asset Mix:
Table 3 shows the percentage of Plan assets in each asset class of December 31, 2017 compared to December 31, 2016.

Table 3
Percentage of Plan Assets in Each Asset Class

Asset Class	Dec.31, 2017	Dec.31, 2016	Change
Canadian Equity	34.4%	32.6%	1.8%
Global Equity	25.8%	23.8%	2.0%
Total Equity	60.2%	56.4%	3.8%
Canadian Fixed Income	39.4%	43.2%	-3.8%
Cash	0.4%	0.5%	

Note: Anomalies due to rounding.

Total equity increased by 3.8% to 60.2% and total fixed income decreased by a corresponding 3.8% to 39.4%. Global equity increased by 2.0% to 25.8%. Canadian equity holdings increased by 1.8% to 34.4%. Canadian fixed income decreased to 39.4%. The year saw equity returns domestically and internationally ranging from 9.3% to 18.1%. The fixed income portfolios incurred marginal returns for the year ranging from 4.2% to 5.3%.

The Master Trust at year-end was not within its prescribed boundaries set by the Plan's investment policy given the funded ratio at 75.2% (60.2% equity and 39.4% fixed income). The fund was rebalanced and the fixed income bond percentage was increased to 42.5% by June 30, 2018.

The Canadian equities held between Guardian and Letko totaled 34.4%, while the global equities totaled 25.8%. Canadian equities were reduced to balance out holdings in equities and fixed income by December 31, 2017.

Managers' Performance:
Managers' investment performance relative to their benchmark and peer group is summarized in Table 4. One-year rates of return, percentages of plan assets and rankings in terms of quartile performance are as of December 31, 2017.

Table 4
Managers' Performance

	Manager Return	Benchmark Return	Value Added (Manager Return less Benchmark Return)	Percentage Total Assets
Period Ending Dec.31/17				
Canadian Equity:				
Guardian	9.9%	9.1%	0.8%	12.9%
Letko	13.8%	9.1%	4.7%	21.5%
Global Equity				
Aberdeen[(1)]	17.1%	14.4%	2.7%	6.9%
Brandes	9.3%	14.4%	-5.1%	5.2%
GMO[(2)]	18.1%	14.4%	3.7%	13.7%
Fixed Income:				
TDAM Long Bonds[(3)]	7.0%	7.0%	0.0%	22.1%
TDAM Real Return Bonds[(3)]	0.6%	0.7%	-0.1%	17.4%

Notes: [(1)] *Engaged in April 2010*
[(2)] *Engaged in July 2010*
[(3)] *Toronto Dominion Asset Management (TDAM) engaged in March 2012*

Guardian, one of the two Canadian active equity managers, had a return of 9.9% and outperformed its benchmark return of 9.1% by 0.8%. Its performance is second quartile (31%) over the one-year and first quartile (23%) over the four-year period, with a benchmark return of 10.6% and an actual return of 13.0%. Guardian manages 12.9% of Plan assets and added value of 0.8%.

Letko, the second Canadian active equity manager, had a return of 13.8% and outperformed its benchmark return of 9.1% by 4.7%. Its performance is first quartile over the one-year period and first quartile over the four-year period (13.8% and 11.2%, respectively). Letko manages 21.5% of Plan assets and added value of 4.7%.

Aberdeen is the first active global equity manager. Its return was 17.1% outperforming the benchmark return of 14.4% by 2.7%. Aberdeen's performance is second quartile (42%) over the one-year period and added value of 2.7%. Aberdeen manages 6.9% of Plan assets. The firm's performance is fourth quartile (93%) over four years.

Brandes, second of the three active global equity managers, had a return of 9.3% and underperformed the benchmark return of 14.4% by 5.1%. Brandes manages 5.2% of Plan assets. It is a deep-value manager with historically volatile returns, typically beating the benchmark by a significant margin in some years which off-sets some significant underperformance in other years. Brandes one-year return was fourth quartile (92%) and the four-year return was fourth quartile (83%) and underperformed by 5.1% for the year and returned 9.3% vs 14.4% (benchmark).

GMO is the third active global equity manager. Its return was 18.1%, outperforming the benchmark return of 14.4% by 3.7%. GMO's performance is second quartile (38%) over the one-year period and added value of 3.7%. GMO manages 13.7% of Plan assets and is fourth quartile (87%) over four years yet returned 10.7% vs 12.7% (benchmark).

TDAM Long Bonds - The active long bond fund manager has 22.1% of the portfolio holdings under management. Performance over one year is a return of 7.0% compared to the benchmark return of 7.0%. This is a third quartile (56%) ranking with no added value. The four-year ranking is third quartile (68%).

TDAM Real Return Bonds – The passively managed fund has 17.4% of the portfolio under management and returned 0.6% over the one-year period compared to the benchmark return of 0.7%. Value added was -0.1%.

In summary, the Plan's gross return of 9.5% underperformed OMERS' gross return of 11.5% by 2.0% and its funding ratio increased to 75.2%. However, OMERS Capital Markets return was 9.5% while the Plan's 9.5% return equaled OMERS comparable return. Through the upcoming year (2018), bonds are expected to be emphasized over equities if interest rates increase and / or the trigger point of 75% remains. Global Equity returns were positive and much higher than their benchmarks, with a range of 9.3% to 18.1% contributing significantly to overall returns. Potential alternatives to one global manager are being reviewed.

APPENDICES AND SCHEDULES ATTACHED

Appendix "A" – The City of Hamilton Master Trust Period Ending December 31, 2017

Appendix "B" – Canadian Defined Benefit Pension Plans Gain Further Ground in 2017: RBC Investor & Treasury Services

GB/BT/dt

The City of Hamilton Master Trust Period Ending 31 December 2017

Performance Review and Investment Manager Evaluation

*Visit the **Aon Retirement and Investment Blog** (http://retirementandinvestmentblog.aon.com); sharing our best thinking.*

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As of 31 December 2017

Mandate	Comments	Recommendations
Total Fund	▪ The Total Fund's return of 4.7% underperformed the benchmark return by 10 basis points. ▪ Performance in Canadian equities weighed on returns while some value was added from Real Return Bonds. Overweight allocation towards Canadian equities and Cash & Cash Equivalents also detracted value. ▪ The funded ratio increased to 75.2% (from 72.4%) over the fourth quarter. ▪ The bond allocation as of 31 December 2017 was within the range determined acceptable for the current funded ratio of 75.2%. However, within the growth component, the Canadian equity asset class was outside the acceptable range and rebalancing is required for the growth component only.	▪ Continue to monitor.
Guardian	▪ Guardian's Q4 return of 5.2% outperformed the Index by 70 basis points. ▪ Security picks in Energy, Materials, and Info Tech added value. ▪ Sector allocation had a negative impact as an underweight to Health Care and overweight allocations to Energy and Cash added value, offsetting the outperformance by 50 basis points.	▪ No action required.
Letko	▪ Letko's Q4 return of 3.2% was 130 basis points below the Index return. ▪ Security selection was the primary factor in the detraction of value. Holdings within Health Care, Info Tech, Real Estate and Financials weighed on returns. ▪ Asset allocation had a slight positive impact, with an overweight to Health Care adding value.	▪ No action required.
Aberdeen	▪ Aberdeen's Q4 return of 5.9% was 20 basis points higher than the Index return. ▪ Aberdeen's outperformance can be attributed to holdings, with picks in Telecomm and Health Care adding value. An underweight to utilities sector also benefited the relative performance.	▪ Aberdeen Global Equity strategy had net outflow of $4.04 billion (USD) in 2017 (including Global Equity SRI strategy). ▪ Our rating for the global equity strategies was changed to "Sell" ▪ We recommend that the City of Hamilton consider the results of Global Equity search performed in 2017.

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As of 31 December 2017

Mandate	Comments	Recommendations
Brandes	▪ Brandes' Q4 return of 4.5% underperformed the Index by 120 basis points. ▪ Brandes' underperformance was due to both stock selection and sector allocation decisions. Weak picks in Info Tech, Health Care and Consumer Discretionary detracted value. ▪ Underweights to Info Tech, Materials and an overweight to Health Care also detracted value.	▪ No action required.
GMO	▪ GMO's return of 6.0% over the quarter outperformed the Index by 30 basis points. ▪ Outperformance was due to sector allocation and security selection decisions. An overweight to Info Tech and an underweight to Health Care added value. Strong security picks in Health Care and Industrials also added value.	▪ Effective 30 June 2017, GMO's Global Equity team assumed portfolio management responsibilities for the strategies previously managed by the International Active team. ▪ No action required
TDAM	▪ TDAM long bond portfolio returned 5.3% over the quarter, outperforming the index return by 10 basis points. ▪ TDAM's real return bond return of 4.2% outperformed the Index by 40 basis points for the quarter.	▪ No action required.

Governance	Comments	Recommendations
Statement of Investment Policies and Procedures (SIPP)	▪ Aon had reviewed and updated the Statement of Investment Policies and Procedures (SIPP) in late 2017. ▪ SIPP and form 14 were filed with FSCO in January 2018.	▪ No action required.
Ontario Funding Reform	▪ In the second quarter of 2017, the Ontario government published further guidance on the upcoming changes to the funding framework for defined benefit plans. ▪ Solvency funding will no longer be required for plans that are at least 85% funded on this basis. Going-concern funding will be strengthened	▪ Discuss the impact of the Ontario Funding Reform with your investment consultant.

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Governance	Comments	Recommendations

	by shortening the amortization period from 15 to 10 years, and the funding of a going-concern provision for adverse deviations i.e. a funding reserve.
	▪ In the fourth quarter of 2017, the government provided details on the calculation of the provision for adverse deviations and it is contingent on the following three factors:
	  ▪ Whether the plan is open or closed to new entrants
	  ▪ The plan's allocation to non-fixed income assets
	  ▪ The degree to which the plan's going-concern discount rate is greater than a benchmark discount rate
	▪ In addition, the maximum insured benefit provided by the Pension Benefits Guarantee Fund will increase from $1,000 to $1,500 per month.
	▪ The government is currently collating feedback from stakeholders and regulations associated with these changes are expected in spring 2018.	

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Latest Thinking

During the last quarter, we have produced papers on the following topics. Although these topics may not be directly applicable to your plan, they may be of general interest and provide some insight into Aon's global research. For more details, please contact your Aon Investment Consultant.

Topic	Summary
How Diversified is your Global Equity Portfolio	US equities now represent close to 60% in key developed global equity benchmarks. This has been driven by strong US stock performance, a strong US dollar over a number of years and, over the past 12 months, a boom in technology stocks with 85% of the developed market technology sector based in the US. This note looks at some of the reasons why US equity market share has grown so substantially, some of the inherent risks investors face from a high US equity exposure as well as ways to mitigate these risks. http://www.aon.com/canada/attachments/thought-leadership/report_How-Diversified-Is-Your-Global-Equity-Portfolio.pdf
How Do Public Pension Plans Impact Credit Ratings?	Credit rating agencies, like many public pension plan stakeholders, have increased their attention and scrutiny on unfunded pension liabilities, which ultimately impact borrowing costs borne by taxpayers. This paper, written in the U.S., details how public pension plans influence credit ratings as well as the relationship between credit ratings and borrowing costs for public entities. Additionally, the paper outlines effective actions that plan sponsors can take today to improve the impact a pension plan has on its locality's credit rating. http://www.aon.com/canada/attachments/thought-leadership/report_How-Do-Pensions-Impact-Credit-Ratings.pdf
Global Infrastructure Equity - An Attractive Opportunity Despite Roadblocks Ahead	Over the last year infrastructure investments have attracted greater attention from investors, continuing a trend that we have seen over the last few years of low yields have pushing investors towards more illiquid investments. The latest round of attention for infrastructure has also been driven by hopes of more opportunities being created by proposed infrastructure spending around the world. This note, written in the U.K., looks at what has driven the strong performance of unlisted infrastructure equity since the Great Financial Crisis and explores potential opportunities and headwinds for the asset class in the future. http://www.aon.com/canada/attachments/thought-leadership/report_AAView_Global-Infrastructure-Equity.pdf

For more timely access to our latest thinking, please visit and subscribe to the Aon Retirement & Investment Blog: https://retirementandinvestmentblog.aon.com/

Executive Summary

Trailing Period Performance

As of 31 December 2017

	Allocation		Performance (%)						
	Market Value ($000)	%	1 Quarter	1 Year	2 Years	3 Years	4 Years	5 Years	10 Years
Total Fund	341,919	100.0	4.7 (5)	9.5 (35)	9.4 (20)	7.1 (71)	8.3 (67)	9.2 (81)	6.0 (82)
Benchmark			4.8 (5)	8.6 (57)	8.5 (34)	7.1 (70)	8.7 (29)	8.9 (86)	6.0 (81)
Value Added			-0.1	0.9	0.9	0.0	-0.4	0.3	0.0
Canadian Equity	117,571	34.4	4.0 (62)	12.3 (8)	18.1 (12)	9.7 (5)	10.3 (9)	13.1 (9)	7.7 (22)
Guardian (including cash)	44,029	12.9	5.2 (19)	9.9 (31)	14.0 (53)	7.7 (40)	9.0 (30)	9.9 (65)	5.6 (62)
S&P/TSX Composite			4.5 (43)	9.1 (54)	14.9 (32)	6.6 (72)	7.6 (66)	8.6 (89)	4.6 (85)
Value Added			0.7	0.8	-0.9	1.1	1.4	1.3	1.0
Letko (including cash)	73,542	21.5	3.2 (84)	13.8 (2)	20.7 (2)	11.1 (3)	11.2 (4)	15.0 (1)	9.2 (8)
S&P/TSX Composite			4.5 (43)	9.1 (54)	14.9 (32)	6.6 (72)	7.6 (66)	8.6 (89)	4.6 (85)
Value Added			-1.3	4.7	5.8	4.5	3.6	6.4	4.6
Global Equities	88,355	25.8	5.7 (50)	15.8 (52)	10.1 (42)	10.2 (85)	10.2 (89)	13.2 (94)	4.8 (98)
Aberdeen	23,722	6.9	5.9 (42)	17.1 (43)	11.1 (30)	9.1 (94)	9.5 (94)	11.7 (98)	-
MSCI World (Net) (CAD)			5.7 (48)	14.4 (64)	8.9 (61)	12.2 (64)	12.7 (59)	16.9 (61)	7.6 (73)
Value Added			0.2	2.7	2.2	-3.1	-3.2	-5.2	-
Brandes	17,756	5.2	4.5 (78)	9.3 (92)	6.9 (89)	10.0 (88)	11.2 (83)	16.6 (66)	5.9 (94)
MSCI World (Net) (CAD)			5.7 (48)	14.4 (64)	8.9 (61)	12.2 (64)	12.7 (59)	16.9 (61)	7.6 (73)
Value Added			-1.2	-5.1	-2.0	-2.2	-1.5	-0.3	-1.7
GMO	46,877	13.7	6.0 (38)	18.1 (37)	10.9 (31)	11.6 (73)	10.7 (87)	14.2 (90)	-
MSCI World (Net) (CAD)			5.7 (48)	14.4 (64)	8.9 (61)	12.2 (64)	12.7 (59)	16.9 (61)	7.6 (73)
Value Added			0.3	3.7	2.0	-0.6	-2.0	-2.7	-

*GMO returns are reported net-of-fees.
Parentheses contain percentile rankings.

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Trailing Period Performance

As of 31 December 2017

	Allocation		Performance (%)						
	Market Value ($000)	%	1 Quarter	1 Year	2 Years	3 Years	4 Years	5 Years	10 Years
Canadan Fixed Income	134,878	39.4	4.7	3.8	3.4	3.3	6.0	3.2	5.0
TDAM Long Bonds	75,506	22.1	5.3	7.0	4.9	4.4	7.4	4.6	-
FTSE Canada Long Term Bond			5.2	7.0	4.7	4.4	7.5	4.6	6.6
Value Added			0.1	0.0	0.2	0.0	-0.1	0.0	-
TDAM Real Return Bonds	59,329	17.4	4.2	0.6	1.8	2.1	4.7	1.2	-
FTSE Canada Real Return Bond			3.8	0.7	1.8	2.1	4.8	0.9	5.0
Value Added			0.4	-0.1	0.0	0.0	-0.1	0.3	-
TDAM Cash	43	0.0	-	-	-	-	-	-	-
Operating Account	1,115	0.3							

*GMO returns are reported net-of-fees.
Parentheses contain percentile rankings.

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Executive Summary

Trailing Period Performance

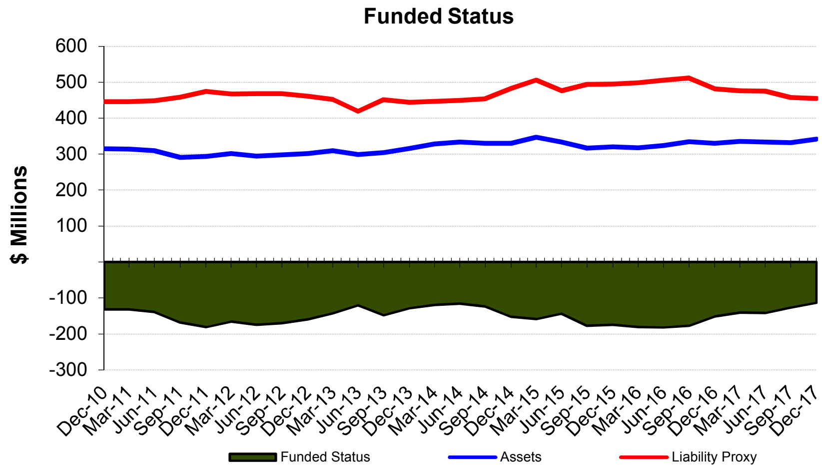
As of 31 December 2017

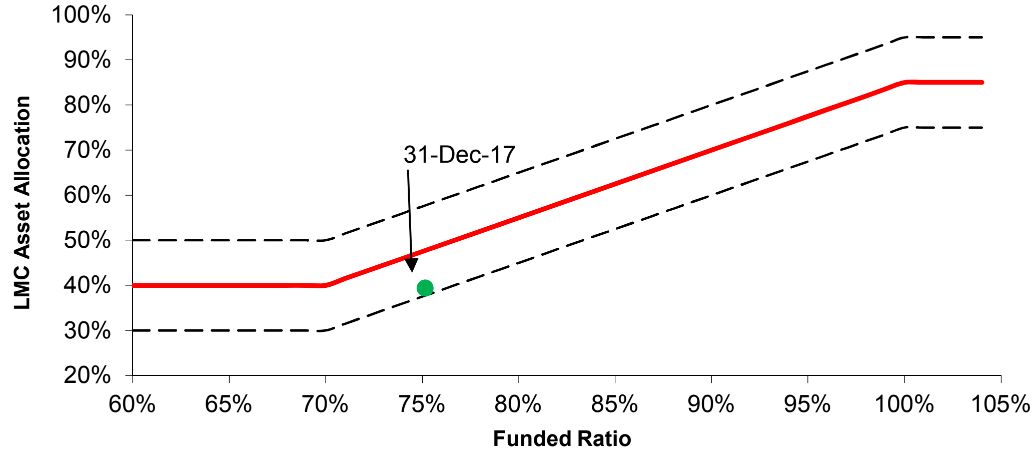
	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Total Fund	9.5 (35)	9.3 (22)	2.6 (93)	12.0 (28)	13.0 (91)	10.5 (24)	0.5 (38)	9.6 (71)	14.3 (83)	-17.3 (64)	2.5 (41)
Benchmark	8.6 (57)	8.4 (33)	4.3 (81)	13.9 (1)	9.7 (97)	8.3 (72)	0.4 (42)	10.3 (54)	16.6 (53)	-16.4 (52)	3.8 (22)
Value Added	0.9	0.9	-1.7	-1.9	3.3	2.2	0.1	-0.7	-2.3	-0.9	-1.3
Canadian Equities	12.3 (8)	24.1 (17)	-5.3 (49)	11.9 (39)	25.3 (16)	17.1 (2)	-9.1 (51)	14.8 (79)	32.0 (61)	-29.8 (31)	9.4 (44)
Guardian (including cash)	9.9 (31)	18.3 (59)	-4.0 (42)	13.0 (23)	13.8 (92)	13.7 (15)	-8.3 (46)	15.3 (73)	27.5 (88)	-30.0 (36)	10.9 (37)
S&P/TSX Composite	9.1 (54)	21.1 (36)	-8.3 (82)	10.6 (57)	13.0 (95)	7.2 (81)	-8.7 (49)	17.6 (43)	35.1 (47)	-33.0 (61)	9.8 (42)
Value Added	0.8	-2.8	4.3	2.4	0.8	6.5	0.4	-2.3	-7.6	3.0	1.1
Letko (including cash)	13.8 (2)	28.1 (6)	-5.9 (55)	11.5 (45)	31.5 (3)	18.4 (1)	-9.1 (51)	14.3 (86)	32.8 (57)	-26.5 (18)	8.3 (53)
S&P/TSX Composite	9.1 (54)	21.1 (36)	-8.3 (82)	10.6 (57)	13.0 (95)	7.2 (81)	-8.7 (49)	17.6 (43)	35.1 (47)	-33.0 (61)	9.8 (42)
Value Added	4.7	7.0	2.4	0.9	18.5	11.2	-0.4	-3.3	-2.3	6.5	-1.5
Global Equities	15.8 (52)	4.7 (35)	10.4 (92)	10.2 (82)	26.3 (92)	12.8 (69)	-0.1 (31)	6.6 (65)	1.5 (94)	-29.4 (72)	-12.9 (92)
Aberdeen	17.1 (43)	5.4 (31)	5.3 (97)	10.5 (81)	21.3 (98)	14.0 (57)	2.0 (19)	-	-	-	-
MSCI World (Net) (CAD)	14.4 (64)	3.8 (44)	18.9 (55)	14.4 (45)	35.2 (54)	13.3 (64)	-3.2 (51)	5.9 (74)	10.4 (72)	-25.8 (50)	-7.5 (65)
Value Added	2.7	1.6	-13.6	-3.9	-13.9	0.7	5.2	-	-	-	-
Brandes	9.3 (92)	4.6 (35)	16.3 (73)	15.1 (37)	41.0 (20)	10.9 (81)	-2.9 (48)	6.2 (70)	1.5 (94)	-29.4 (72)	-12.9 (92)
MSCI World (Net) (CAD)	14.4 (64)	3.8 (44)	18.9 (55)	14.4 (45)	35.2 (54)	13.3 (64)	-3.2 (51)	5.9 (74)	10.4 (72)	-25.8 (50)	-7.5 (65)
Value Added	-5.1	0.8	-2.6	0.7	5.8	-2.4	0.3	0.3	-8.9	-3.6	-5.4
GMO	18.1 (37)	4.2 (40)	12.9 (88)	8.1 (91)	29.1 (84)	12.5 (71)	0.9 (25)	-	-	-	-
MSCI World (Net) (CAD)	14.4 (64)	3.8 (44)	18.9 (55)	14.4 (45)	35.2 (54)	13.3 (64)	-3.2 (51)	5.9 (74)	10.4 (72)	-25.8 (50)	-7.5 (65)
Value Added	3.7	0.4	-6.0	-6.3	-6.1	-0.8	4.1	-	-	-	-
Canadian Fixed Income	3.8	3.0	3.1	14.8	-7.4	5.5	9.5	7.1	7.7	4.7	3.5
TDAM Long Bonds	7.0 (62)	2.8 (45)	3.4 (80)	16.8 (69)	-5.7 (55)	-	-	-	-	-	-
FTSE Canada Long Term Bond	7.0 (61)	2.5 (80)	3.8 (48)	17.5 (27)	-6.2 (86)	5.2 (78)	18.1 (26)	12.5 (51)	5.5 (83)	2.7 (32)	3.4 (64)
Value Added	0.0	0.3	-0.4	-0.7	0.5	-	-	-	-	-	-
TDAM Real Return Bonds	0.6	3.1	2.6	13.0	-11.5	-	-	-	-	-	-
FTSE Canada Real Return Bond	0.7	2.9	2.8	13.2	-13.1	2.9	18.3	11.1	14.5	0.4	1.6
Value Added	-0.1	0.2	-0.2	-0.2	1.6	-	-	-	-	-	-

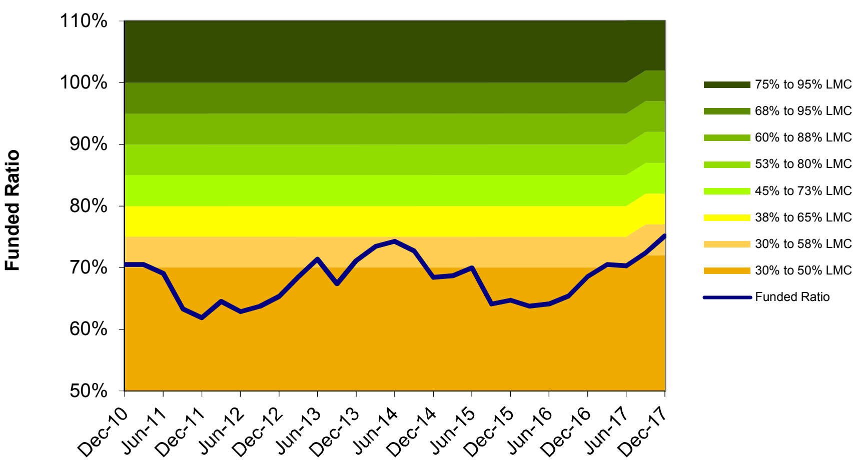
Parentheses contain percentile rankings.

Empower Results®

Quarterly Performance Report for the City of Hamilton
Funded Status and Glide Path Information for December 31, 2017







Snapshot (Wind-Up)	31-Mar-17	30-Jun-17	30-Sep-17	31-Dec-17
Market value of assets ($ Millions)	$335.6	$334.3	$331.8	$341.9
Liability proxy ($ Millions)	$476.1	$475.5	$458.2	$454.9
Funded status ($ Millions)	($140.5)	($141.2)	($126.4)	($113.0)
Funded ratio	70.5%	70.3%	72.4%	75.2%
Current LMC Asset Allocation	42.1%	42.5%	40.4%	39.4%

Rebalancing

- The rebalancing strategy for this plan requires that assets be rebalanced to the target allocation (indicated by the red line) whenever the LMC Asset Allocation falls outside of the range deemed acceptable for a given funded ratio (indicated by the dashed lines).
- The LMC Asset Allocation as of December 31, 2017 is within the range determined acceptable for the current funded ratio (75.2%). However, within the growth component, the Canadian equity asset class is outside the acceptable range and rebalancing is required for the growth component. Please refer to Asset Allocation Compliance on page 17 for more information.

Empower Results®

Capital Markets Performance

Capital Market Performance

Major Capital Markets' Returns

As of 31 December 2017

	1 Quarter	Year To Date	1 Year	2 Years	3 Years	4 Years	5 Years	10 Years
Equity								
S&P/TSX Composite	4.5	9.1	9.1	14.9	6.6	7.6	8.6	4.6
S&P 500 (CAD)	6.8	13.8	13.8	10.9	14.4	16.7	21.2	11.1
S&P 500 (USD)	6.6	21.8	21.8	16.8	11.4	12.0	15.8	8.5
MSCI EAFE (Net) (CAD)	4.4	16.8	16.8	6.7	10.7	8.9	13.0	4.4
MSCI World (Net) (CAD)	5.7	14.4	14.4	8.9	12.2	12.7	16.9	7.6
MSCI ACWI (Net) (CAD)	5.9	15.8	15.8	9.8	12.2	12.5	16.0	7.2
MSCI Emerging Markets (Net) (CAD)	7.6	28.3	28.3	17.3	12.0	10.6	9.3	4.1
Real Estate								
REALpac / IPD Canada Property Index (IPD)	2.7	7.2	7.2	6.7	7.1	7.0	7.7	8.0
REALpac / IPD Canada Property Fund Index (PFI)	2.5	7.8	7.8	7.2	6.6	6.5	7.2	7.2
Fixed Income								
FTSE Canada Universe Bond	2.0	2.5	2.5	2.1	2.6	4.1	3.0	4.7
FTSE Canada Long Term Bond	5.2	7.0	7.0	4.7	4.4	7.5	4.6	6.6
FTSE Canada 91 Day TBill	0.2	0.6	0.6	0.5	0.6	0.7	0.7	1.0
Consumer Price Index								
Canadian CPI, unadjusted	0.0	1.9	1.9	1.7	1.7	1.6	1.5	1.6

Canadian Equities

The S&P/TSX Composite Index returned 4.5% in the fourth quarter of 2017. All sectors posted positive returns. Healthcare (46.7%) was the strongest performing sector while Energy (0.7%) was the weakest performer. Value stocks outperformed growth stocks in the quarter (5.7% vs. 3.5%) and in the year (11.1% vs. 7.7%). The S&P/TSX Composite Index returned 9.1% over the past twelve months. The best performing sector was Healthcare (34.2%) while the worst performer was the Energy (-7.0%) sector.

U.S. Equities

The S&P 500 Index returned 6.8% during the quarter in Canadian dollar terms. All sectors generated positive returns, with Consumer Discretionary (10.1%) the best performing sector and Utilities (0.4%) the worst performing sector. The Index returned 13.8% over the last twelve months in Canadian dollar terms. The appreciation of the Canadian dollar versus the U.S. dollar over the year subtracted 8.0% for unhedged Canadian investors. The best performing sector was Information Technology (29.7%) while Energy (-7.5%) was the worst performer.

Non-North American Equities

The MSCI EAFE Index returned 4.4% in the quarter in Canadian dollar terms. All sectors, except for Utilities (-0.8%), posted positive returns. Over the past year, the Index returned 16.8% in Canadian dollar terms. All sectors generated positive returns. The best performing sectors were Information Technology (30.2%) and Materials (25.1%) while Healthcare (9.2%) and Telecommunications (5.4%) were the weakest performers.

Fixed Income

The Canadian bond market, as measured by the FTSE TMX Universe Bond Index, returned 2.0% over the last quarter. Bond market returns were positive over all sectors. Provincial bonds (3.4%) outperformed both Corporate bonds (1.9%) and Federal bonds (0.9%). Over the last twelve months, the Index returned 2.5%. Long duration bonds (7.0%) outperformed both medium duration (1.0%) and short duration bonds (0.1%).

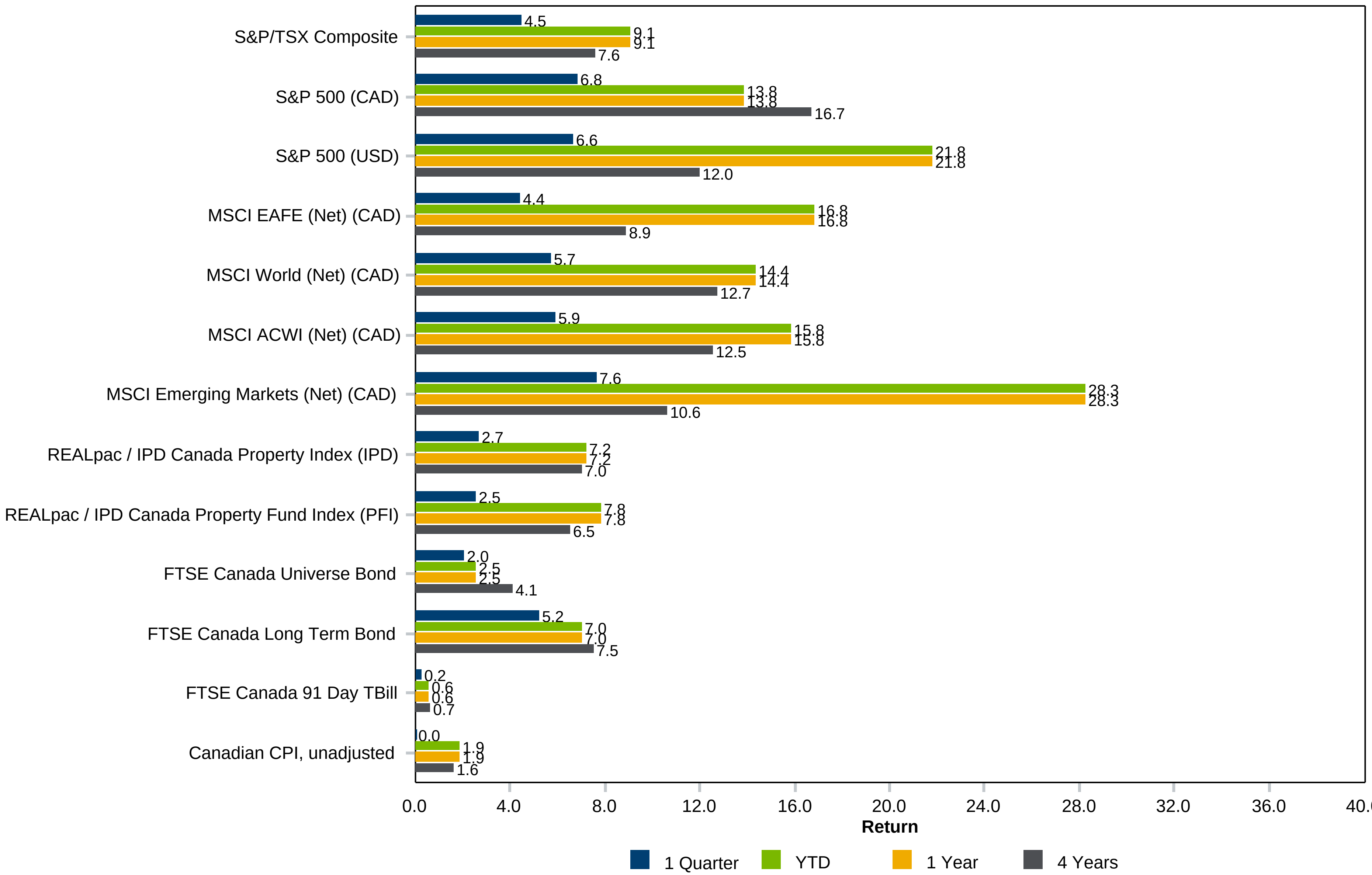
Returns for periods greater than one year are annualized.

AON Empower Results®

Capital Market Performance

Comparative Performance

As of 31 December 2017



Empower Results®

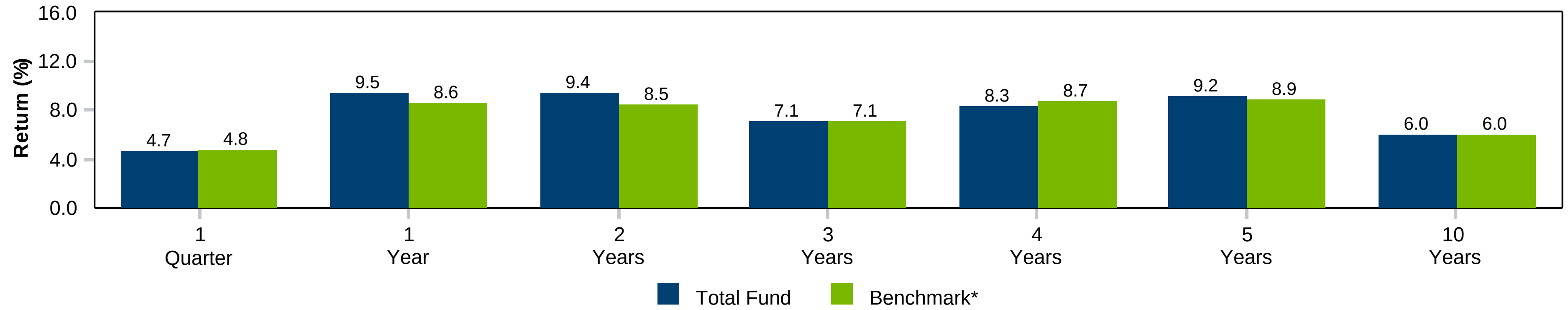
Total Fund Analysis

Total Fund

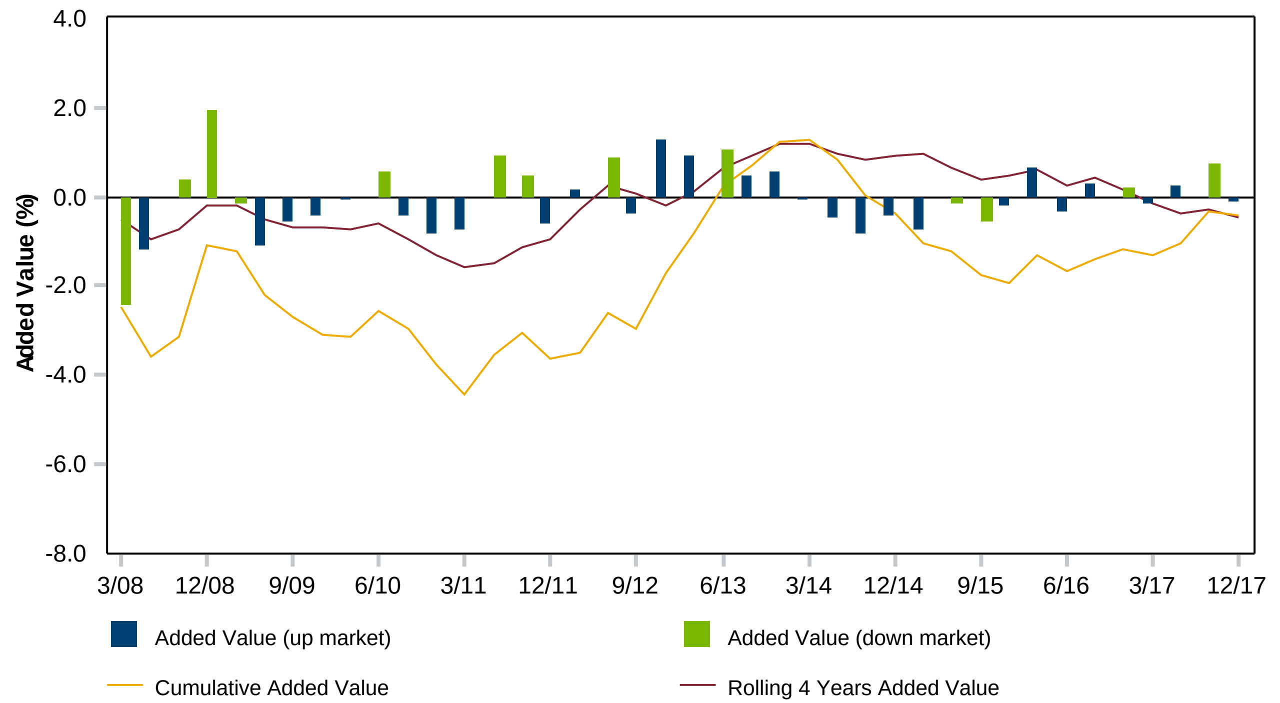
Total Fund Performance Summary

As of 31 December 2017

Return Summary



Added Value History (%)



* See Appendix A for benchmark components.

Performance Statistics	Quarters	%
Market Capture		
Up Markets	27	95.3
Down Markets	13	89.9
Batting Average		
Up Markets	27	33.3
Down Markets	13	69.2
Overall	40	45.0

Quarter

The Total Fund underperformed the benchmark by 10 basis points, returning 4.8% over the quarter.

Performance in Canadian equities weighed on returns while some value was added from Real Return Bonds. Overweight allocation towards Canadian equities and Cash & Cash Equivalents also detracted value.

Longer Periods

Over a four year period the fund also trailed its benchmark by 20 basis points, returning 8.3%.

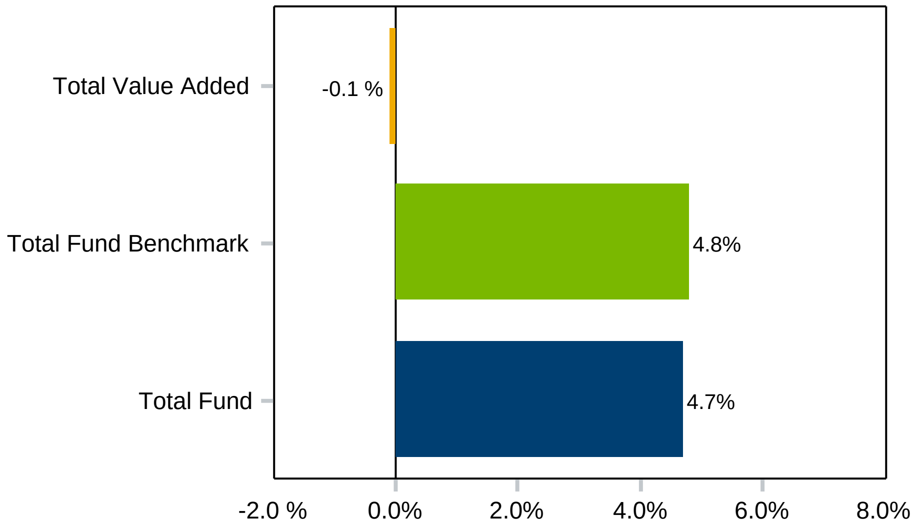
Total Fund

Total Fund Performance Attribution

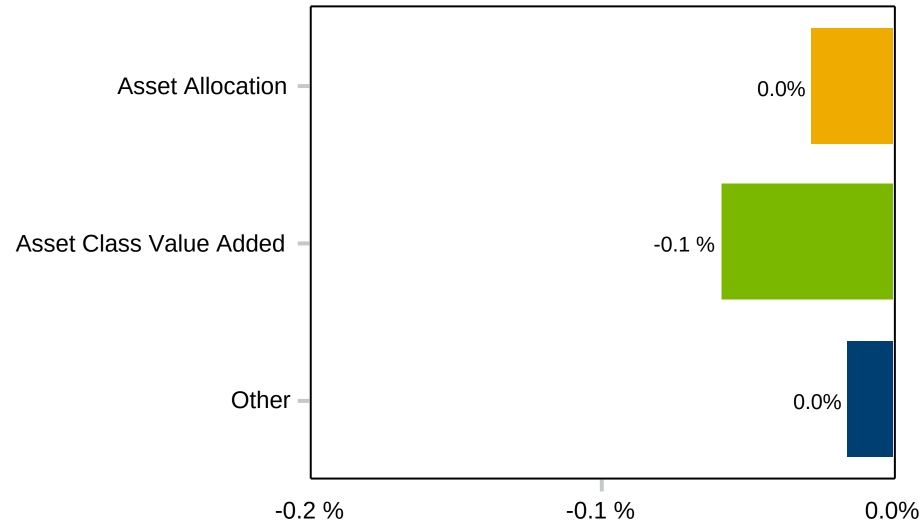
1 Quarter Ending 31 December 2017

Total Fund vs. Benchmark

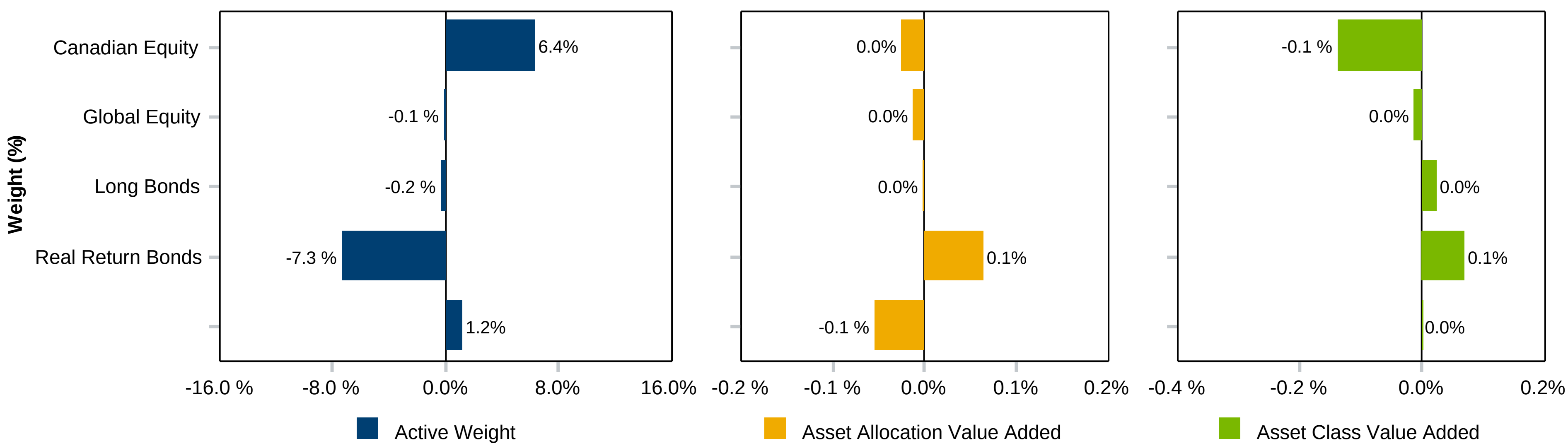
Total Fund Performance



Total Value Added: -0.1 %



1 Quarter **Total Asset Allocation: 0.0%** **Total Asset Class Value Added: -0.1 %**

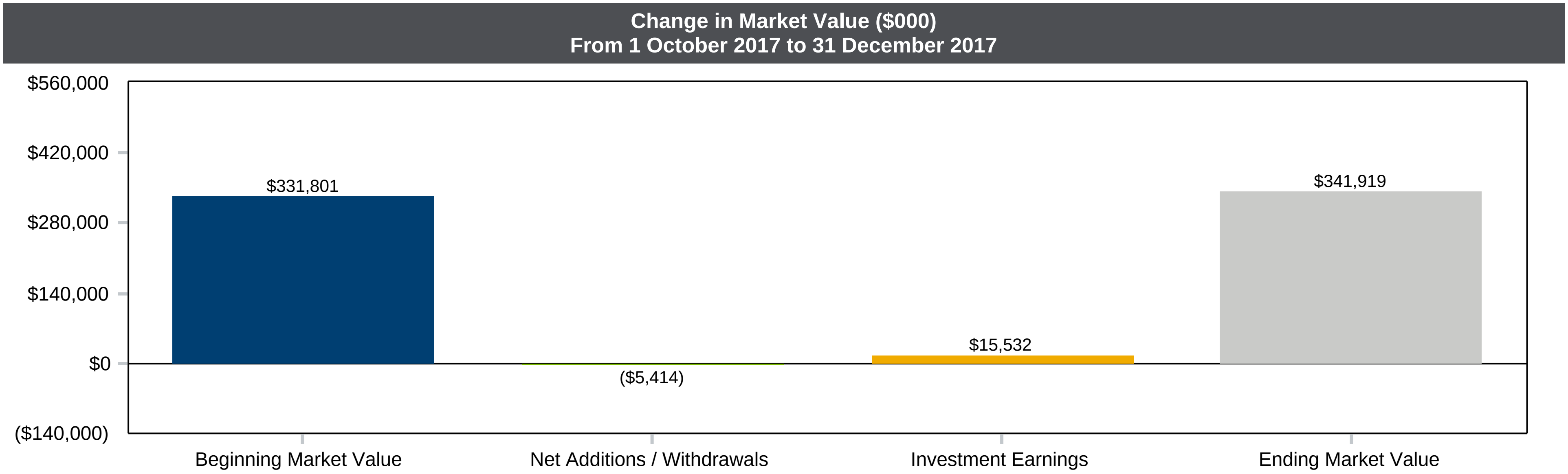


Empower Results®

Total Fund

Total Fund Asset Summary

As of 31 December 2017



Summary of Cash Flows ($000)

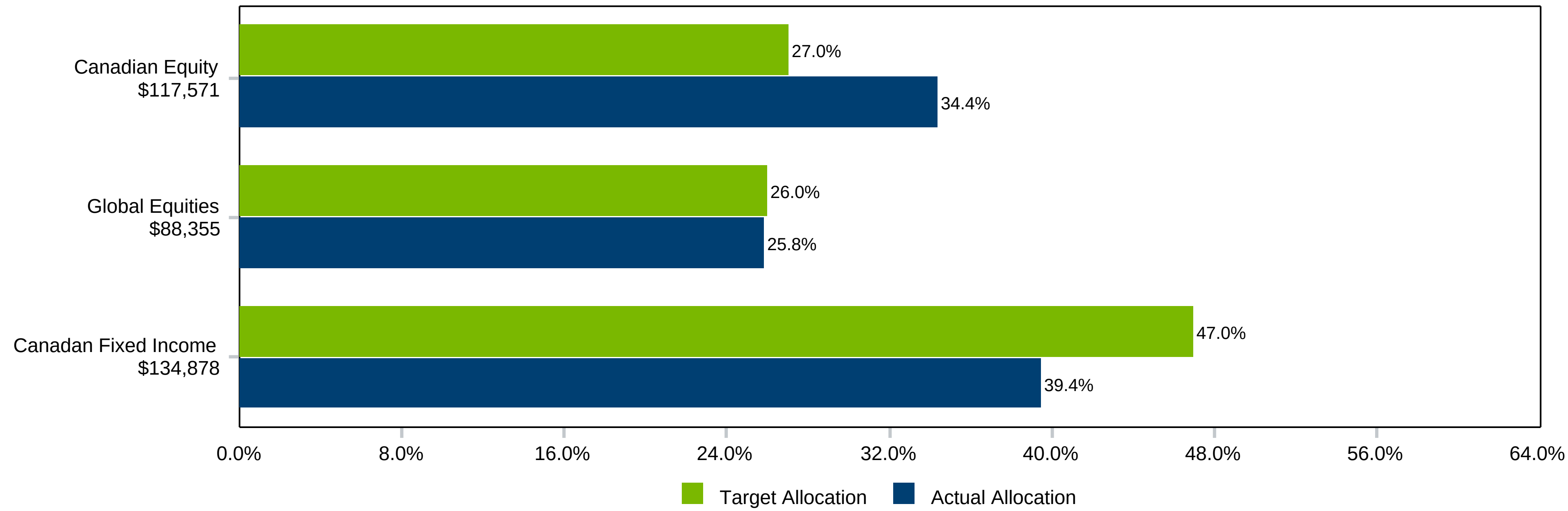
	1 Quarter	Year To Date	1 Year	4 Years
Total Fund				
Beginning Market Value	331,801	330,312	330,312	316,336
+/- Net Cash Flows	-5,414	-18,751	-18,751	-79,570
+/- Income	9,866	12,847	12,847	61,291
+/- Capital Gains / Losses	5,666	17,510	17,510	43,861
= Ending Market Value	**341,919**	**341,919**	**341,919**	**341,919**

AON
Empower Results®

Total Fund

Asset Allocation Compliance

As of 31 December 2017 ($000)



	Market Value ($000)	Market Value (%)	Target Allocation (%)	Differences (%)	Minimum Allocation (%)	Maximum Allocation (%)	Within Range
Total Fund	341,919	100.0	100.0	0.0			
Canadian Equity	117,571	34.4	27.0	7.4	22.0	32.0	No
Global Equities	88,355	25.8	26.0	-0.2	21.0	31.0	Yes
Canadan Fixed Income	134,878	39.4	47.0	-7.6	37.0	57.0	Yes

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Appendix A - Plan Information

Empower Results®

Plan Information

Summary of Investment Objective

The investment policy contains specific performance objectives for the fund and the investment managers.
All investment rates of return are measured over moving four-year periods. Return objectives are net of fees and include realized and unrealized capital gains or losses plus income from all sources.

Returns will be calculated on a time-weighted basis and compared to the objectives described below.

The *objective* of the total fund is to outperform a benchmark portfolio that is comprised of the following weightings:

	From 30 September 2017	1 July 2014 to 30 September 2017	1 April 2012 to 30 June 2014	1 July 2011 to 31 March 2012	1 January 2008 to 30 June 2011	1 July 2006 to 31 December 2007	Up to 30 June 2006
S&P/TSX Composite	27.00%	28.00%	30.00%	30.00%	30.00%	30.00%	25.00%
MSCI World (C$)	26.00%	28.00%	30.00%	30.00%	0.00%	0.00%	0.00%
MSCI World ex. Cda (C$)	0.00%	0.00%	0.00%	0.00%	15.00%	15.00%	17.50%
S&P 500 - hedged to C$	0.00%	0.00%	0.00%	0.00%	5.00%	7.50%	8.75%
MSCI EAFE - hedged to C$	0.00%	0.00%	0.00%	0.00%	5.00%	7.50%	8.75%
FTSE TMX Universe Bond	0.00%	0.00%	0.00%	40.00%	45.00%	40.00%	40.00%
FTSE TMX Long Bond	22.00%	22.00%	25.00%	0.00%	0.00%	0.00%	0.00%
FTSE TMX Real Return Bond	25.00%	22.00%	15.00%	0.00%	0.00%	0.00%	0.00%
	100.00%	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**

Appendix B - Manager Updates

Empower Results®

Manager Updates

As of 31 December 2017

Aberdeen Asset Management

Q4 2017

Business
There were no significant events.

Staff
During the quarter, Evie Paterson, Analyst - Responsible Investing and Timothy Tsang, Investment Analyst, left the firm. Both were members of the Global Emerging Markets Equity team.

Brandes Investment Partners

Q4 2017

Business
There were no significant events.

Staff
There were no significant events.

Empower Results®

Manager Updates

As of 31 December 2017

GMO

Q4 2017

Business

Effective 15 December 2017, GMO Renewable Resources, LLC (“GMORR”) and its joint venture members, GMO and the GMORR management principals, entered into a definitive agreement with The Rohatyn Group (“TRG”), whereby TRG acquired the GMORR business.

Staff

In October 2017, Michelle Morphew joined the firm as a Portfolio Strategist on the Global Equity Team.

There were a large number of departures resulting from the sale of the GMO Renewable Resources, as team members transferred to the Rohatyn Group.

Guardian Capital

Q4 2017

Business

Guardian Capital has reached an agreement to acquire Alta Capital Management, an investment management firm based in Salt Lake City, Utah, U.S. Alta Capital was founded in 1981 with approximately $3.2 billion USD in assets under management as of September 30, 2017.

Staff

There were no significant events.

Letko, Brosseau & Associates Inc. ("Letko, Brosseau")

Q4 2017

Business

There were no significant events.

Staff

There were no significant events.

Empower Results®

Manager Updates

As of 31 December 2017

TD Asset Management ("TDAM")

Q4 2017

Business
There were no significant events.

Staff
Jason Carvalho, Vice President, Client Portfolio Manager - Fixed Income left TDAM to pursue another career opportunity.
Scott Colbourne, Managing Director, Portfolio Manager - Global Active Fixed Income joined TDAM in the quarter. Colbourne has prior experience as a Co-CIO at a financial institution.

Appendix C - Fee Analysis

Fee Analysis

Manager Fees

Account	Fee Schedule	Market Value	Percentage of Portfolio	Estimated Annual Fee ($)	Estimated Annual Fee (%)
Total		**$341,918,856**	**100.0%**	**$1,065,137**	**0.31%**
Guardian	0.40% of the first $10 Million	$44,028,966	12.9%	$123,058	0.28%
	0.30% of the next $15 Million				
	0.20% of the balance				
Letko	1.00% of the first $0.3 Million	$73,541,617	21.5%	$194,604	0.26%
	0.75% of the next $0.7 Million				
	0.50% of the next $2.0 Million				
	0.25% of the balance				
Aberdeen	0.80% of the first $50 Million	$23,722,281	6.9%	$189,778	0.80%
	0.70% of the next $50 Million				
	0.60% of the balance				
Brandes	1.00% of the first $5 Million	$17,755,727	5.2%	$157,046	0.88%
	0.90% of the next $5 Million				
	0.80% of the next $10 Million				
	0.60% of the next $30 Million				
	0.50% of the balance				
GMO	0.60% of the balance	$46,876,790	13.7%	$281,261	0.60%
TDAM	0.17% of the first $20 Million	$134,878,143	39.4%	$119,391	0.09%
	0.07% of the next $80 Million				
	0.02% of the balance				
	plus a premium of 0.03% for the TDAM Long Bond Pooled Fund Trust				
Operating Account		$1,115,331	0.3%		

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Appendix D - Disclosure

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Statement of Disclosure

As of 31 December 2017

Aon Hewitt Inc. reconciles the rates of return with each investment manager quarterly. Aon Hewitt Inc. calculates returns from the custodian/trustee statements while the managers use different data sources. Occasionally discrepancies occur because of differences in computational procedures, security prices, "trade date" versus "settlement date" accounting, etc. We monitor these discrepancies closely and find that they generally do not tend to persist over time. However, if a material discrepancy arises or persists, we will bring the matter to your attention after discussion with your money manager.

This report may contain slight discrepancies due to rounding in some of the calculations.

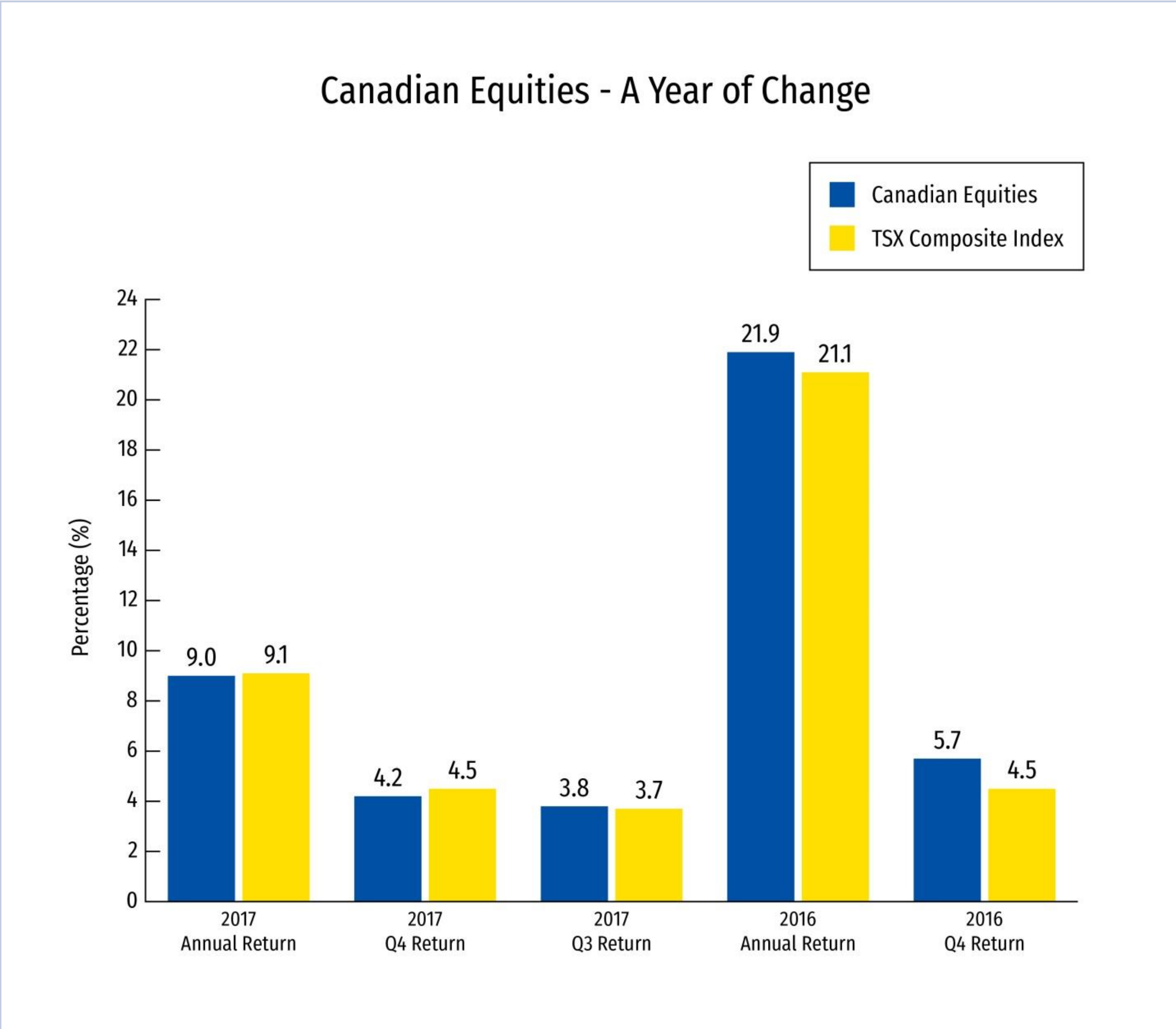
Canadian Defined Benefit Pension Plans gain further ground in 2017: RBC Investor & Treasury Services

Q4 total returns gain 4.4 per cent, led by global equity returns of 6.1 per cent

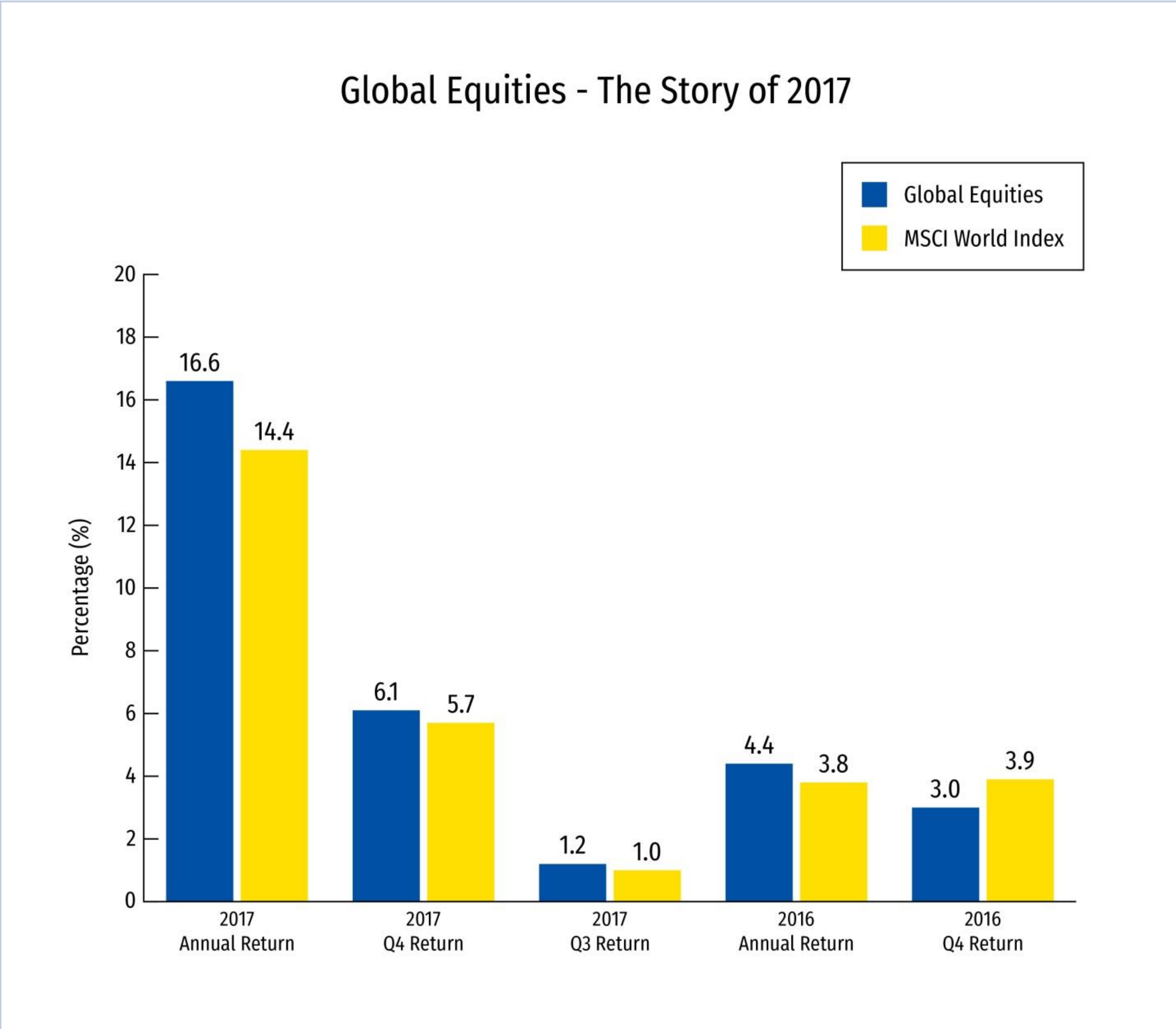
TORONTO, February 6, 2018 - Canadian defined benefit pension plans ended 2017 in positive territory, posting an annual return of 9.7 per cent, according to the $650 billion RBC Investor & Treasury Services All Plan Universe – the industry’s most comprehensive universe of Canadian pension plans – marking nine consecutive years of positive returns.

In addition, a recent RBC Investor & Treasury Services poll of Canadian defined benefit pension plan sponsors, showed their median funded status stands at 96 per cent. The poll, *A Confident Outlook* revealed that nearly 25 per cent of respondents reported levels in excess of 100 per cent and only five per cent with funded levels of less than 70 per cent. Eighty-seven per cent of respondents remain confident they can meet their ongoing pension liabilities, which should be good news for the longevity of Canadian defined benefit pension plans.

“2017 was a strong year for Canadian pension plans, with year-over-year returns, despite a backdrop of ongoing global economic and political volatility,” said James Rausch, Head of Client Coverage, Canada, RBC Investor & Treasury Services. “The Bank of Canada rate hikes, the first in seven years, reverberated through the bond market, while the energy and commodity sectors continued to fluctuate and impact Canadian markets. Meanwhile, global equities continued to provide strong and stable returns. Fund managers will continue to pay close attention to these strong global returns and geopolitical developments to maintain a diversified portfolio across asset sectors and classes in the year ahead.”

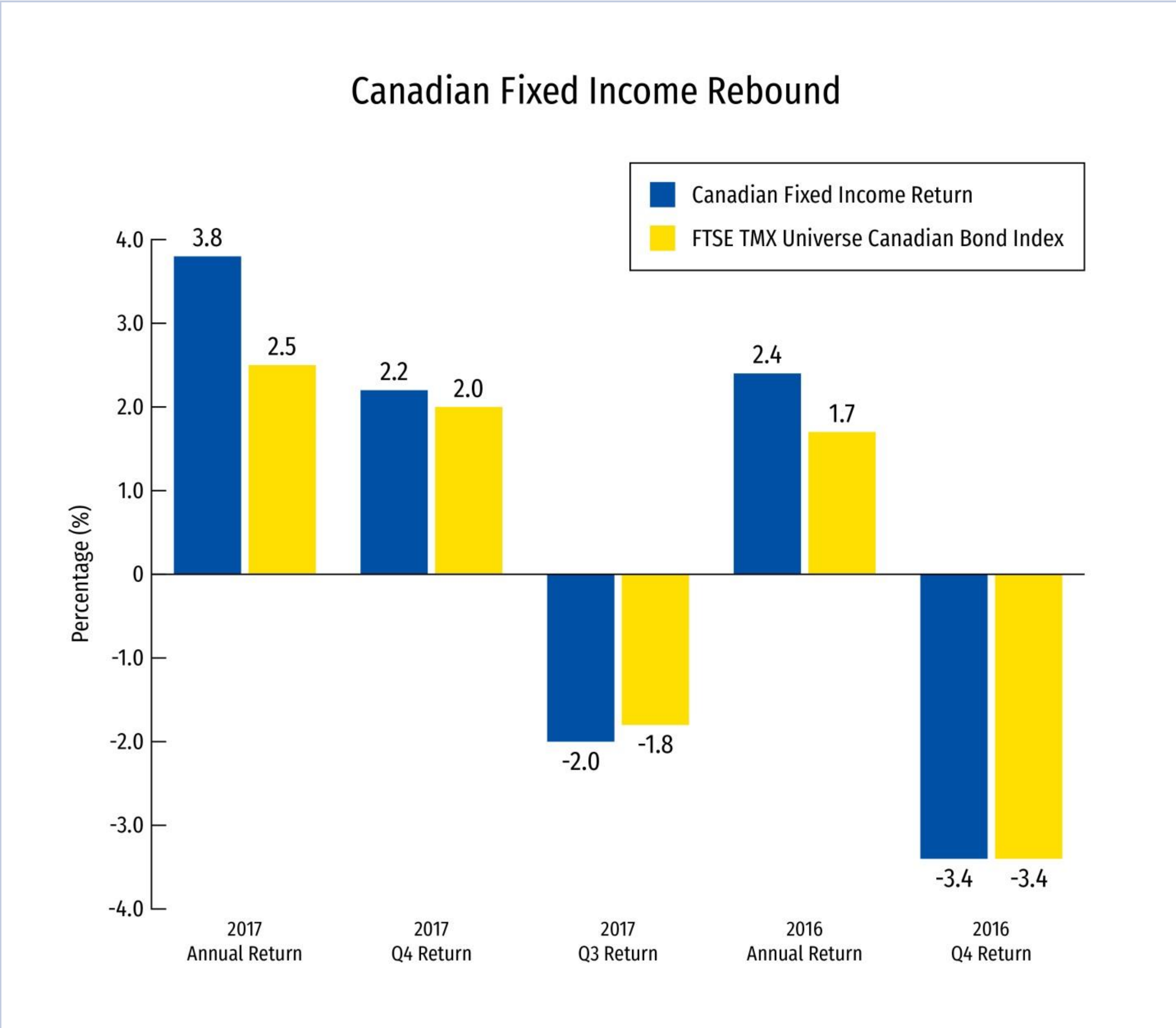


Continuing low interest rates, an uptick in the global economy, recovering emerging markets and improving labour markets helped fuel 2017 global equity returns.



While the Canadian economy was a strong performer in 2017, and the Bank of Canada interest rate hike in September of 2017 boosted financial stocks in Q4, the energy sector weighed down year-over-year returns on the TSX. In 2016, however, Canada’s three largest sectors – energy, materials and financial services, posted strong results, helping lift returns.

The RBC Investor & Treasury Services poll also revealed that 40 per cent of respondents identified low interest rates as their main concern in the year ahead.



In 2017, Canadian bond yields rose across most of the curve while the Bank of Canada’s interest rate hikes in July and September led to a flatter yield curve when compared to the start of the year.

HISTORIC PERFORMANCE

Period	Return (%)	Period	Return (%)
Q4 2017	4.4	Q4 2015	3.1
Q3 2017	0.4	Q3 2015	-2.0
Q2 2017	1.4	Q2 2015	-1.6
Q1 2017	2.9	Q1 2015	6.6
Q4 2016	0.5	Q4 2014	2.7
Q3 2016	4.2	Q3 2014	1.1
Q2 2016	2.9	Q2 2014	3.0
Q1 2016	0.0	Q1 2014	4.8

About the RBC Investor & Treasury Services All Plan Universe
For the past 30 years, RBC Investor & Treasury Services (RBC I&TS) has managed one of the industry’s largest and most comprehensive universes of Canadian pension plans. The “All Plan Universe” currently tracks the performance and asset allocation of over $650 billion in assets under management across Canadian defined benefit (DB) pension plans, and is a widely-recognized performance benchmark indicator. The RBC Investor & Treasury Services “All Plan Universe” is produced by RBC I&TS’ Risk & Investment Analytics (R&IA) service. R&IA work in partnership with best-in-class technology to deliver independent and cost effective solutions designed to help institutional investor clients monitor investment decisions, optimize performance, reduce costs, mitigate risk and increase governance capability.

About RBC Investor & Treasury Services
RBC Investor & Treasury Services (RBC I&TS) is a specialist provider of asset services, custody, payments and treasury services for financial and other institutional investors worldwide. We serve clients from 16 countries across North America, Europe, Asia and Australia, delivering services to safeguard client assets and maximize liquidity. As a strong, stable partner, focused on meeting our clients' evolving needs, RBC I&TS has an unwavering commitment to managing operational risk in our business and the highest credit ratings among our peers. Rated by our clients as the #1 global custodian for seven consecutive years, RBC I&TS is trusted with CAD 4.3 trillion in client assets under administration as at October 31, 2017.

About RBC
Royal Bank of Canada is a global financial institution with a purpose-driven, principles-led approach to delivering leading performance. Our success comes from the 80,000 employees who bring our vision, values and strategy to life so we can help our clients thrive and communities prosper. As Canada’s biggest bank, and one of the largest in the world based on market capitalization, we have a diversified business model with a focus on innovation and providing exceptional experiences to our 16 million clients in Canada, the U.S. and 35 other countries. For more information, please visit rbc.com.

We are proud to support a broad range of community initiatives through donations, community investments and employee volunteer activities. See how at rbc.com/community-sustainability/.

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For more information, please contact:
Briana D’Archi, +1 416 955 5658, briana.darchi@rbc.com
Ben Adams, +44 (0)20 7653 4109, ben.adams@rbc.com

Hamilton

INFORMATION REPORT

TO:	Chair and Members HMRF / HWRF Pension Administration Sub-Committee
COMMITTEE DATE:	December 18, 2018
SUBJECT/REPORT NO:	Master Trust Pension Investment Performance Report as at June 30, 2018 (FCS18091) (City Wide)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Gerald T. Boychuk (905) 546-4321 Brandon A. Teglas (905) 546-4363
SUBMITTED BY: **SIGNATURE:**	Cindy Mercanti Director, Customer Service and POA Acting Director, Financial Planning and Policy Corporate Services Department

Council Direction:

Not Applicable.

Information:

Attached as Appendix “A” to Report FCS18091 are the first 11 pages of Aon Hewitt’s investment performance report for the Hamilton Retirement Fund (HMRF), the Hamilton-Wentworth Retirement Fund (HWRF) and the Hamilton Street Railway (HSR), as of June 30, 2018. Together, the three pension funds make up the Master Trust, which is referred to as the “Plan” in this Report.

The Plan’s return for the one-year period ended June 30, 2018 of 7.3% underperformed its benchmark of 7.7% by 0.4%. The market value of the assets of the Plan totalled $339.9 M compared to June 30, 2017 of $334.3 M, an increase of $5.6 M.

The funded ratio increased to 75.3%. Currently, a funding ratio of 75.3% enables a range of 37% to 57% for the Liability Matching Component (LMC) and the fund is at 42.5% (Fixed Income). The Plan should be decreasing holdings in equities and possibly increasing holdings in fixed income bonds which are limited to 57% of holdings going forward with due regard to current market conditions in both markets. The ultimate target contemplates 80% fixed income as interest rates rise and value of assets increases relative to liability present values.

Table 1 shows the Plan's one-year (ended June 30) returns, the value added, market value and funded status for the last five years.

Table 1
Plan's 1 year (ended June 30) Returns

	12 Months Ended Jun. 30/18	12 Months Ended Jun. 30/17	12 Months Ended Jun. 30/16	12 Months Ended Jun. 30/15	12 Months Ended Jun. 30/14
Plan Return	7.3%	9.0%	3.2%	6.3%	19.8%
Benchmark	7.7%	7.5%	3.8%	8.3%	19.1%
Value Added	-0.4%	1.5%	-0.6%	-2.0%	0.7%
Market Value ($ Millions)	$339.9	$334.3	$324.4	$333.6	$334.2
Funded Status	75.3%	70.3%	64.1%	70.0%	74.3%

The Plan's performance may be compared to the return earned in the broader pension market in Canada. Attached as Appendix "B" to Report FCS18091, RBC Investor & Treasury Service reports its universe of pension funds, which totals C$650 B and a median return of 2.2% in the quarter ended June 30, 2018. The Plan's annual return of 7.3% and quarterly return of 2.0% underperformed the universe's median quarterly return of 2.2%

Asset Mix:
Table 2 shows the percentage of Plan assets in each asset class as of June 30, 2018 compared to December 31, 2017.

Table 2
Percentage of Plan Assets in Each Asset Class

	Jun.30/18	June.30/17	Change	Benchmark
Asset Class				
Canadian Equity	31.4%	31.9%	-0.5%	30.0%
Global Equity	25.0%	25.1%	-0.1%	30.0%
Total Equity	56.4%	57.0%	-0.6%	
Canadian Fixed Income	42.5%	42.5%	0.0%	20%
Cash	1.1%	0.5%	+0.6%	

Note: Anomalies due to rounding

Managers' Performance:
Managers' investment performance relative to their benchmark is summarized in Table 3. One-year rates of return are all as of June 30, 2018.

Table 3
Managers' Performance

	Manager Return	Benchmark Return	Value Added (Manager Return less Benchmark Return)	Percentage Total Assets
One-Year Period Ended Jun.30/18				
Canadian Equity:				
Guardian	10.8%	10.4%	0.4%	12.1%
Letko	13.4%	10.4%	3.0%	19.3%
Global Equity				
Aberdeen[(1)]	7.9%	12.5%	-4.6%	5.6%
Brandes	9.3%	12.5%	-3.2%	5.5%
GMO[(2)]	8.1%	12.5%	-4.4%	13.9%
Fixed Income:				
TDAM Long Bonds[(3)]	1.8%	1.8%	0.0%	22.4%
TDAM Real Return Bonds[(3)]	4.2%	4.0%	0.2%	20.1%

Notes: [(1)] *Engaged in April 2010*
[(2)] *Engaged in July 2010*
[(3)] *Toronto Dominion Asset Management (TDAM) engaged in March 2012*

Pension Investment Transfer - Update

Three options for potential pension investment transfers previously disclosed to the Sub-committee are “Pension Pooling”, migration to “OMERS” and possibly, migration to private sector management. Migration to private sector management still exists. “Pension Pooling”, the creation of a large management firm from which public sector pension plans may draw on varying investment portfolios in order to fund liabilities, seems to have been put on hold with changes in Canada Pension and the shelving of the Ontario sponsored pension. However, a new entity created called Investment Management Corporation Ontario has recently been launched which may be able to undertake investments from Pension Plans as well as municipalities under the Prudent Person delegation.

The potential transfer of legacy plans in the municipal sector to OMERS is in process as Toronto and Ottawa have been reviewing the feasibility over the past year. OMERS has presented business cases to their boards on the consolidation of their legacy plans in 2016. Toronto has agreed with OMERS to a discount rate and is in the process of receiving a proposal soon and negotiating a final process. Hamilton met with representatives of OMERS who had recently assumed one of Toronto's plans. In discussions with the OMERS representatives, interest in assuming Hamilton's plan was at best marginal and likely very expensive in both time and cash transfer.

Appendices and Schedules Attached

Appendix "A" –City of Hamilton Master Trust Defined Benefit Plan – Period Ending June 30, 2018 (pages 1 to 11)

Appendix "B" – Canadian Equities Rebound in Q2 2018, Driving Canadian Pension Returns Higher – RBC Investor & Treasury Services Release

GB/BT/dt

The City of Hamilton Master Trust Period Ending 30 June 2018

Performance Review and Investment Manager Evaluation

*Visit the **Aon Retirement and Investment Blog** (http://retirementandinvestmentblog.aon.com); sharing our best thinking.*

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As of 30 June 2018

Mandate	Comments	Recommendations
Total Fund	▪ The Total Fund's return of 2.0% over the quarter underperformed the benchmark return by 150 basis points. ▪ Selection in Canadian and Global equities detracted value. ▪ Overweight allocation towards Canadian equities and an underweight allocation to Real Return bonds partially offset the relative underperformance. ▪ The funded ratio increased to 75.3% (from 74.6%) over the second quarter. ▪ The bond allocation as of 30 June 2018 was within the range determined acceptable for the current funded ratio of 75.3%; therefore, the asset mix does not require rebalancing.	▪ Continue to monitor.
Guardian	▪ Guardian's Q2 return of 6.2% underperformed the Index by 60 basis points. ▪ Security selection was the primary cause of underperformance. Weak picks in all sectors except Materials and Telecomm detracted value. ▪ Sector allocation had a positive impact as overweight to Energy and Info Tech, and underweights to Financials and Telecomm partially offset the weak relative performance.	▪ No action required.
Letko	▪ Letko's Q2 return of 4.1% was 270 basis points below the Index return. ▪ Security selection was the primary cause of underperformance. Weak picks in all sectors except Energy, Telecomm and Utilities detracted value. ▪ Asset allocation was positive, underweight to Financials and Utilities partially offset the weak relative performance.	▪ No action required.

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Commentary and Recommendations

As of 30 June 2018

Mandate	Comments	Recommendations
Aberdeen	▪ Aberdeen's Q2 return of 0.3% underperformed the index by 350 basis points. ▪ Aberdeen's underperformance can be attributed to stock selection, with weak picks in all sectors except for Materials detracted value. Asset allocation had a neural effect.	▪ Aberdeen Global Equity strategy had net outflow of $4.04 billion (USD) in 2017 (including Global Equity SRI strategy). ▪ Our rating for the global equity strategies was changed to "Sell." ▪ We recommend that the City of Hamilton consider the results of Global Equity search performed in 2017.
Brandes	▪ Brandes' Q2 return of 1.6% underperformed the Index by 220 basis points. ▪ Brandes' underperformance was due to stock selection and asset allocation. Weak picks in Consumer Discretionary, Energy, Telecomm and Utilities sectors, along with underweights to Info Tech and Materials and an overweight to Financials sectors weighed on returns.	▪ No action required.
GMO	▪ GMO's return of -1.9% over the quarter underperformed the Index by 570 basis points. ▪ Underperformance was due to stock selection as weak picks in all sectors except for Health Care detracted value.	▪ Effective 30 June 2017, GMO's Global Equity team assumed portfolio management responsibilities for the strategies previously managed by the International Active team. ▪ No action required
TDAM	▪ TDAM long bond portfolio returned 0.9% over the quarter, matching the index return. ▪ TDAM's real return bond return of 2.1% outperformed the Index by 10 basis points for the quarter. ▪ On 10 July 2018, Toronto Dominion Bank ("TD") announced its acquisition of Greystone Capital Management Inc. ("GCMI"), pending regulatory approval. Aon will continue to monitor the progress of this transaction and integration of GCMI within TD after the deal closes. We are not recommending any changes at this point in time and further updates will be provided as material information becomes available. See Appendix C for flash report.	▪ No action required.

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Governance	Comments	Recommendations
Statement of Investment Policies and Procedures (SIPP)	▪ Aon had reviewed and updated the Statement of Investment Policies and Procedures (SIPP) in late 2017. ▪ SIPP and form 14 were filed with FSCO in January 2018.	▪ No action required.

Ontario Funding Reform	▪ In the second quarter of 2017, the Ontario government published further guidance on the upcoming changes to the funding framework for defined benefit plans.
	▪ Solvency funding will no longer be required for plans that are at least 85% funded on this basis. Going-concern funding will be strengthened by shortening the amortization period from 15 to 10 years, and the funding of a going-concern provision for adverse deviations i.e. a funding reserve.
	▪ In the fourth quarter of 2017, the government provided details on the calculation of the provision for adverse deviations and it is contingent on the following three factors:
	  ▪ Whether the plan is open or closed to new entrants
	  ▪ The plan's allocation to non-fixed income assets
	  ▪ The degree to which the plan's going-concern discount rate is greater than a benchmark discount rate
	▪ In addition, the maximum insured benefit provided by the Pension Benefits Guarantee Fund will increase from $1,000 to $1,500 per month.
	▪ Final regulations posted on 20 April 2018 are consistent with the key components described above and are effective 1 May 2018.
		▪ Discuss the impact of the Ontario Funding Reform with your investment consultant.

Latest Thinking

During the last quarter, we produced papers on the following topics. Although these topics may not be directly applicable to your plan, they may be of general interest and provide some insight into Aon's global research. For more details, please contact your Aon Investment Consultant.

Topic	Summary
Global Perspectives on Responsible Investing	Over the course of the past year, Aon has noted a dramatic upsurge in the number of institutional clients who are exploring or implementing responsible investing ("RI") initiatives. To stay current with the evolving landscape, Aon launched a global responsible investment survey to capture current attitudes towards and developments in investors' RI thinking. This paper discusses the survey, including methodology, demographics and key findings, as well as investor attitudes towards RI and practical applications of RI within portfolios. http://www.aon.com/getmedia/8bd5172a-ab8b-4aee-aadc-10b59aba426a/Global-Perspectives-On-Responsible-Investing.aspx
Guide to Aon's ESG Ratings for fund managers	While Environmental, Social and Governance (ESG) has always been considered as part of Aon's due diligence on managers, we have recently increased our efforts in this area and developed an explicit ESG rating system for buy-rated investment strategies which is designed to assess whether and how well investment managers integrate Responsible Investment (RI), and more specifically ESG considerations, into their investment decision making process. This paper sets out the overall rationale for assessing managers on their ESG capabilities, provides an overview of the process itself and includes an explanation of the 1-4 ratings scale. http://www.aon.com/getmedia/0b52d7ec-db77-41bc-bb45-9386034db392/AonCanada-Publication-Investment-GuideESGRatings.aspx
Direct Lending	Private debt includes a wide range of illiquid credit strategies, including distressed debt, direct lending, mezzanine debt, special situations, and venture debt. This paper, written in the U.S., discusses direct lending, a growing segment of the private debt market. The current market dynamics are favorable for direct lending as historical players are leaving the market, driven partially by shifting regulations. Key risks and considerations are also identified. http://www.aon.com/getmedia/414c12e9-ac55-421d-9da7-16aa4124acc7/AonCanada-Report-Investment-DirectLending.aspx

For more timely access to our latest thinking, please visit and subscribe to the Aon Retirement & Investment Blog: https://retirementandinvestmentblog.aon.com/

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Executive Summary

Trailing Period Performance

As of 30 June 2018

	Allocation		Performance (%)						
	Market Value ($000)	%	1 Quarter	1 Year	2 Years	3 Years	4 Years	5 Years	10 Years
Total Fund	339,904	100.0	2.0 (77)	7.3 (50)	8.1 (55)	6.5 (44)	6.4 (75)	9.0 (66)	6.6 (70)
Benchmark			3.5 (15)	7.7 (31)	8.0 (58)	6.5 (39)	7.0 (47)	9.3 (54)	6.3 (76)
Value Added			-1.5	-0.4	0.1	0.0	-0.6	-0.3	0.3
Canadian Equity	106,662	31.4	4.9 (77)	12.6 (17)	15.1 (7)	10.6 (4)	8.1 (8)	12.1 (9)	7.8 (21)
Guardian (including cash)	41,133	12.1	6.2 (41)	10.8 (38)	11.3 (39)	8.5 (29)	6.5 (37)	10.3 (46)	5.5 (64)
S&P/TSX Composite			6.8 (27)	10.4 (45)	10.7 (57)	7.0 (65)	4.9 (69)	9.2 (70)	4.2 (89)
Value Added			-0.6	0.4	0.6	1.5	1.6	1.1	1.3
Letko (including cash)	65,528	19.3	4.1 (89)	13.4 (11)	17.4 (3)	11.8 (2)	9.1 (4)	13.2 (4)	9.3 (12)
S&P/TSX Composite			6.8 (27)	10.4 (45)	10.7 (57)	7.0 (65)	4.9 (69)	9.2 (70)	4.2 (89)
Value Added			-2.7	3.0	6.7	4.8	4.2	4.0	5.1
Global Equities	85,045	25.0	-0.6 (95)	8.3 (80)	13.7 (70)	7.7 (88)	8.4 (94)	11.3 (95)	6.7 (97)
Aberdeen	19,172	5.6	0.3 (89)	7.9 (82)	12.1 (79)	7.6 (90)	7.6 (98)	10.3 (97)	-
MSCI World (Net) (CAD)			3.8 (28)	12.5 (48)	15.3 (59)	10.4 (52)	12.5 (60)	14.9 (56)	9.1 (71)
Value Added			-3.5	-4.6	-3.2	-2.8	-4.9	-4.6	-
Brandes	18,630	5.5	1.6 (76)	9.3 (72)	15.6 (57)	7.6 (89)	9.5 (88)	13.6 (77)	8.1 (87)
MSCI World (Net) (CAD)			3.8 (28)	12.5 (48)	15.3 (59)	10.4 (52)	12.5 (60)	14.9 (56)	9.1 (71)
Value Added			-2.2	-3.2	0.3	-2.8	-3.0	-1.3	-1.0
GMO	47,244	13.9	-1.9 (100)	8.1 (82)	13.9 (70)	8.0 (85)	9.0 (92)	11.8 (92)	-
MSCI World (Net) (CAD)			3.8 (28)	12.5 (48)	15.3 (59)	10.4 (52)	12.5 (60)	14.9 (56)	9.1 (71)
Value Added			-5.7	-4.4	-1.4	-2.4	-3.5	-3.1	-

*GMO returns are reported net-of-fees.
Parentheses contain percentile rankings.

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Executive Summary

Trailing Period Performance

As of 30 June 2018

	Allocation		Performance (%)						
	Market Value ($000)	%	1 Quarter	1 Year	2 Years	3 Years	4 Years	5 Years	10 Years
Canadan Fixed Income	144,364	42.5	1.4	2.8	0.8	3.1	4.1	4.9	5.0
TDAM Long Bonds	76,036	22.4	0.9	1.8	1.0	4.0	5.2	5.8	-
FTSE TMX Long Term Bond			0.9	1.8	1.1	4.0	5.5	5.9	6.7
Value Added			0.0	0.0	-0.1	0.0	-0.3	-0.1	-
TDAM Real Return Bonds	68,254	20.1	2.1	4.2	0.6	2.1	3.0	4.1	-
FTSE TMX Real Return Bond			2.0	4.0	0.6	2.1	3.0	4.0	4.3
Value Added			0.1	0.2	0.0	0.0	0.0	0.1	-
TDAM Cash	74	0.0	-	-	-	-	-	-	-
Operating Account	3,834	1.1							

*GMO returns are reported net-of-fees.
Parentheses contain percentile rankings.

Executive Summary

Trailing Period Performance

As of 30 June 2018

	2018		2017		2016		2015		2014		2013		2012		2011		2010		2009		2008	
Total Fund	7.3	(50)	9.0	(67)	3.2	(39)	6.3	(86)	19.8	(30)	9.6	(71)	2.3	(22)	12.1	(85)	7.7	(50)	-9.4	(51)	-5.4	(92)
Benchmark	7.7	(31)	8.3	(77)	3.7	(31)	8.5	(59)	19.1	(42)	6.5	(96)	1.4	(38)	13.2	(68)	8.1	(45)	-10.6	(65)	0.3	(34)
Value Added	-0.4		0.7		-0.5		-2.2		0.7		3.1		0.9		-1.1		-0.4		1.2		-5.7	
Canadian Equities	12.6	(17)	17.7	(3)	2.1	(50)	1.1	(44)	29.7	(50)	19.0	(14)	-5.9	(31)	21.4	(47)	11.0	(60)	-21.1	(41)	-0.6	(71)
Guardian (including cash)	10.8	(38)	11.7	(55)	3.3	(31)	0.7	(48)	26.7	(78)	9.3	(82)	-3.1	(17)	21.6	(44)	4.6	(100)	-22.3	(48)	4.0	(45)
S&P/TSX Composite	10.4	(45)	11.0	(65)	-0.2	(63)	-1.2	(63)	28.7	(65)	7.9	(93)	-10.3	(64)	20.9	(55)	12.0	(55)	-25.7	(67)	6.7	(33)
Value Added	0.4		0.7		3.5		1.9		-2.0		1.4		7.2		0.7		-7.4		3.4		-2.7	
Letko (including cash)	13.4	(11)	21.5	(1)	1.5	(54)	1.4	(41)	31.1	(35)	24.2	(2)	-6.9	(34)	20.4	(63)	14.2	(32)	-17.4	(19)	-3.1	(78)
S&P/TSX Composite	10.4	(45)	11.0	(65)	-0.2	(63)	-1.2	(63)	28.7	(65)	7.9	(93)	-10.3	(64)	20.9	(55)	12.0	(55)	-25.7	(67)	6.7	(33)
Value Added	3.0		10.5		1.7		2.6		2.4		16.3		3.4		-0.5		2.2		8.3		-9.8	
Global Equities	8.3	(80)	19.4	(52)	-3.4	(77)	10.5	(91)	23.9	(64)	18.7	(85)	2.0	(40)	17.6	(68)	-0.1	(85)	-21.2	(73)	-27.0	(99)
Aberdeen	7.9	(82)	16.4	(71)	-1.0	(60)	7.6	(96)	22.0	(79)	17.2	(91)	4.3	(26)	18.3	(60)	-		-		-	
MSCI World (Net) (CAD)	12.5	(48)	18.2	(60)	1.1	(43)	18.9	(59)	25.2	(53)	22.7	(57)	0.4	(52)	18.5	(59)	0.8	(75)	-19.3	(62)	-14.8	(61)
Value Added	-4.6		-1.8		-2.1		-11.3		-3.2		-5.5		3.9		-0.2		-		-		-	
Brandes	9.3	(72)	22.2	(29)	-6.8	(91)	15.3	(78)	31.6	(7)	27.3	(24)	-1.5	(64)	17.2	(71)	-0.4	(87)	-21.2	(73)	-27.5	(99)
MSCI World (Net) (CAD)	12.5	(48)	18.2	(60)	1.1	(43)	18.9	(59)	25.2	(53)	22.7	(57)	0.4	(52)	18.5	(59)	0.8	(75)	-19.3	(62)	-14.8	(61)
Value Added	-3.2		4.0		-7.9		-3.6		6.4		4.6		-1.9		-1.3		-1.2		-1.9		-12.7	
GMO	8.1	(82)	20.0	(47)	-2.8	(72)	11.9	(90)	23.8	(65)	19.0	(83)	2.9	(33)	16.8	(74)	-		-		-	
MSCI World (Net) (CAD)	12.5	(48)	18.2	(60)	1.1	(43)	18.9	(59)	25.2	(53)	22.7	(57)	0.4	(52)	18.5	(59)	0.8	(75)	-19.3	(62)	-14.8	(61)
Value Added	-4.4		1.8		-3.9		-7.0		-1.4		-3.7		2.5		-1.7		-		-		-	
Canadian Fixed Income	2.8		-1.2		7.8		7.5		8.1		-3.9		10.4		5.0		7.8		6.9		6.6	
TDAM Long Bonds	1.8	(83)	0.3	(85)	10.2	(29)	9.0	(89)	8.0	(39)	-2.0	(26)	-		-		-		-		-	
FTSE TMX Long Term Bond	1.8	(80)	0.4	(75)	9.9	(51)	10.1	(34)	7.6	(70)	-2.9	(84)	18.8	(23)	7.0	(70)	10.9	(72)	4.6	(76)	6.9	(65)
Value Added	0.0		-0.1		0.3		-1.1		0.4		0.9		-		-		-		-		-	
TDAM Real Return Bonds	4.2		-2.9		5.4		5.8		8.2		-8.5		-		-		-		-		-	
FTSE TMX Real Return Bond	4.0		-2.7		5.3		5.6		8.1		-9.9		14.9		11.7		12.2		-3.8		15.2	
Value Added	0.2		-0.2		0.1		0.2		0.1		1.4		-		-		-		-		-	

Parentheses contain percentile rankings.

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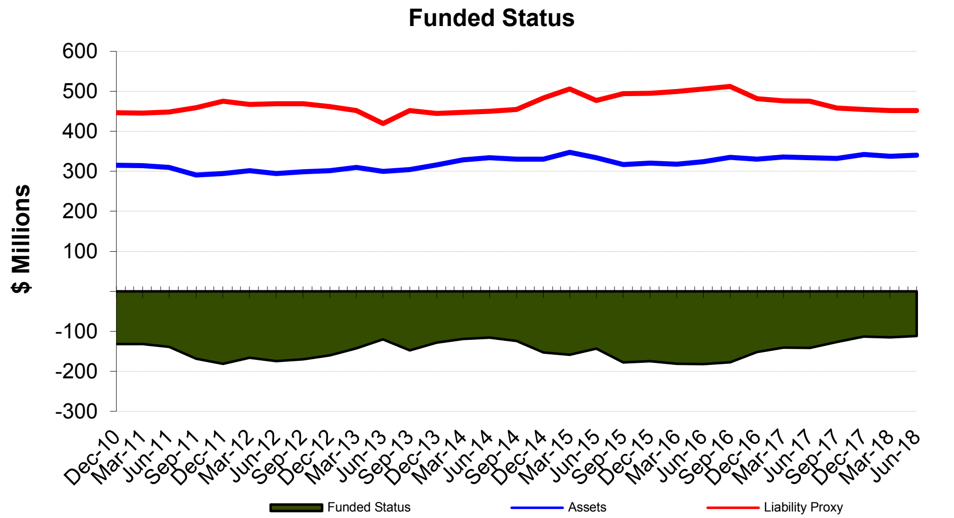
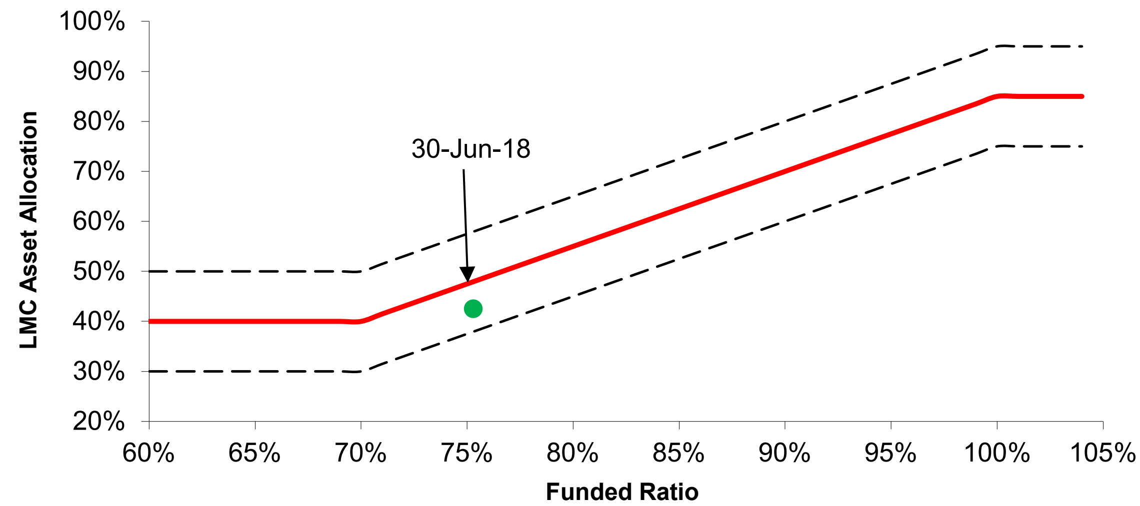
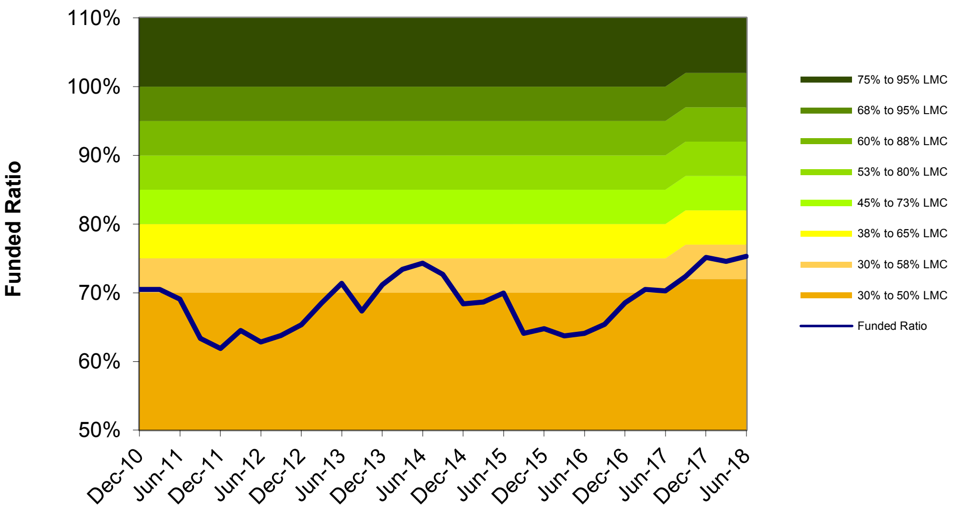
Quarterly Performance Report for the City of Hamilton
Funded Status and Glide Path Information for June 30, 2018







Snapshot (Wind-Up)	30-Sep-17	31-Dec-17	31-Mar-18	30-Jun-18
Market value of assets ($ Millions)	$331.8	$341.9	$337.4	$339.9
Liability proxy ($ Millions)	$458.2	$454.9	$452.2	$451.4
Funded status ($ Millions)	($126.4)	($113.0)	($114.8)	($111.5)
Funded ratio	72.4%	75.2%	74.6%	75.3%
Current LMC Asset Allocation	40.4%	39.4%	42.2%	42.5%

Rebalancing

- The rebalancing strategy for this plan requires that assets be rebalanced to the target allocation (indicated by the red line) whenever the LMC Asset Allocation falls outside of the range deemed acceptable for a given funded ratio (indicated by the dashed lines).
- Because the LMC Asset Allocation as of June 31, 2018 is within the range determined acceptable for the current funded ratio (75.3%), the asset mix does not require rebalancing.

Canadian equities rebound in Q2 2018, driving Canadian pension returns higher: RBC Investor & Treasury Services

Q2 total returns gain 2.2 per cent while Canadian equities return 6.8 per cent

TORONTO, August 2, 2018 - Canadian defined benefit pension plans posted a mild uptick in Q2 2018, returning 2.2 per cent, up from Q1 returns of 0.2 per cent, according to RBC Investor & Treasury Services All Plan Universe.

ADDITIONAL RESULTS

- Strong results in the energy sector propelled Canadian equities to return 6.8 per cent, reversing the Q1 2018 loss of -3.9 per cent
- The TSX Composite Index posted a 6.8 per cent return, compared to a -4.5 per cent loss in Q1 2018
- Global equities, impacted by trade war fears, along with central banks’ drive towards normalization of monetary policy, returned 2.6 per cent, up from Q1 2018 return of 2 per cent
- The MSCI World Index gained 3.8 per cent this quarter, versus 1.6 per cent in Q1 2018, while the Emerging Markets index dropped 6.1 per cent in Q2 2018
- Escalating tensions with the U.S., the impact of taxing imports and the volatility associated with policy uncertainty placed pressure on fixed income markets, which ended the quarter almost unchanged with a 0.6 per cent return compared to 0.1 per cent in Q1 2018
- The FTSE TMX Universe Canadian bond index also returned a modest 0.5 percent return, up from 0.1 per cent in Q1 2018

QUOTE

“Despite ongoing volatility at home and abroad, Canadian defined benefit pension plans have posted positive returns during the first half of 2018. The Canadian market rallied this quarter partly due to the energy sector rebound, as well as strong returns from other segments, including the Materials sector. As we head into the second half of the year, asset managers must remain vigilant. NAFTA trade tensions, U.S. – China trade friction and ongoing geopolitical issues will continue to reverberate through the markets, forcing asset managers to remain attentive to the ongoing volatility and its impact on portfolios and risk exposure.”

- **Ryan Silva, Director, Head of Pension and Insurance Segments, Global Client Coverage RBC Investor & Treasury Services**

HISTORIC PERFORMANCE

Period	Return (%)	Period	Return (%)
Q2 2018	2.2	Q1 2016	0.0
Q1 2018	0.2	Q4 2015	3.1
Q4 2017	4.4	Q3 2015	-2.0
Q3 2017	0.4	Q2 2015	-1.6
Q2 2017	1.4	Q1 2015	6.6
Q1 2017	2.9	Q4 2014	2.7
Q4 2016	0.5	Q3 2014	1.1
Q3 2016	4.2	Q2 2014	3.0
Q2 2016	2.9	Q1 2014	4.8

About the RBC Investor & Treasury Services All Plan Universe
For the past 30 years, RBC Investor & Treasury Services (RBC I&TS) has managed one of the industry’s largest and most comprehensive universes of Canadian pension plans. The “All Plan Universe” currently tracks the performance and asset allocation of a cross-section of assets under management across Canadian defined benefit (DB) pension plans, and is a widely-recognized performance benchmark indicator. The RBC Investor & Treasury Services “All Plan Universe” is produced by RBC I&TS’ Risk & Investment Analytics (R&IA) service. R&IA work in partnership with best-in-class technology to deliver independent and cost effective solutions designed to help institutional investor clients monitor investment decisions, optimize performance, reduce costs, mitigate risk and increase governance capability.

About RBC Investor & Treasury Services
RBC Investor & Treasury Services (RBC I&TS) is a specialist provider of asset services, custody, payments and treasury services for financial and other institutional investors worldwide, with employees in 17 countries across North America, Europe, Asia and Australia. We deliver services which safeguard client assets, underpinned by client-centric digital solutions which continue to be enhanced and evolved in line with our clients’ changing needs. Trusted with CAD 4.4 trillion in client assets under administration as at May 24, 2018, RBC I&TS has been rated by our clients as the #1 global custodian for seven consecutive years and is a financially strong partner with among the highest credit ratings globally.

About RBC
Royal Bank of Canada is a global financial institution with a purpose-driven, principles-led approach to delivering leading performance. Our success comes from the 81,000+ employees who bring our vision, values and strategy to life so we can help our clients thrive and communities prosper. As Canada’s biggest bank, and one of the largest in the world based on market capitalization, we have a diversified business model with a focus on innovation and providing exceptional experiences to our 16 million clients in Canada, the U.S. and 34 other countries. Learn more at rbc.com.

We are proud to support a broad range of community initiatives through donations, community investments and employee volunteer activities. See how at rbc.com/community-sustainability.

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For more information, please contact:
Briana D’Archi, +1 416 955 5658, briana.darchi@rbc.com
Ben Adams, +44 (0)20 7653 4109, ben.adams@rbc.com

CITY OF HAMILTON
CORPORATE SERVICES DEPARTMENT
Financial Planning, Administration and Policy Division

TO:	Chair and Members HMRF/HWRF Pension Administration Sub-Committee
COMMITTEE DATE:	December 18, 2018
SUBJECT/REPORT NO:	2018 Master Trust Pension Statement of Investment Policies and Procedures (FCS18090) (City Wide)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Rosaria Morelli (905) 546-2424 Ext. 1390
SUBMITTED BY: **SIGNATURE:**	Brian McMullen Acting General Manager Finance and Corporate Services Corporate Services Department

RECOMMENDATIONS

(a) That the 2017 Master Trust Statement of Investment Policies and Procedures be deleted and replaced with the 2018 Master Trust Statement of Investment Policies and Procedures, attached as Appendix "A" to Report FCS18090;

(b) That the 2018 Master Trust Statement of Investment Policies and Procedures, attached as Appendix "A" to Report FCS18090, be forwarded to the Hamilton Street Railway Pension Advisory Committee for their information.

EXECUTIVE SUMMARY

The Statement of Investment Policies and Procedures ("SIPP") for the City of Hamilton Defined Benefit Pension Plans Master Trust (the "Master Trust SIPP") has been amended as a result of an annual review required under the Master Trust SIPP. The amended Master Trust SIPP is attached as Appendix "A" to Report FCS18090.

The scope of the review focused primarily on making amendments to the Master Trust SIPP to comply with the new requirements as a result of the changes to pension legislation impacting the Master Trust SIPP since the last review. These legislated changes relate to the new funding rules for defined benefit pension funds in Ontario.

Under the new funding framework and under Ontario Regulation 909 (the “Regulation”) made under the *Pension Benefits Act* (PBA), a SIPP must now include a target asset allocation for each of a number of specific investment categories listed under the regulations. The target asset allocation for an investment category is the target proportion of the plan’s assets invested in a particular investment category in proportion to the total target investment in all categories, expressed as a percentage. Accordingly, the Master Trust SIPP has been amended on Page 6 under Section 2.03(a) to include a table that specifies the target asset allocation for each investment category.

This new disclosure requirement for the SIPP is significant because these target asset allocations determine one of the factors used to calculate the contributions in respect of the Provision for Adverse Deviations (PfAD) — a new funding cushion or reserve within a defined benefit pension plan under the new funding rules for going concern valuations.

Additionally, the Master Trust SIPP has been updated to incorporate new information on plan members and liabilities for the Hamilton Municipal Retirement Fund (“HMRF”) as a result of the new actuarial valuation for the HMRF pension plan completed since the last review. This new information is contained in Section 1.03 on page 28 of the Master Trust SIPP.

Alternatives for Consideration – Not Applicable

FINANCIAL – STAFFING – LEGAL IMPLICATIONS

Financial: Not Applicable

Staffing: Not Applicable

Legal: Not Applicable

HISTORICAL BACKGROUND

The Master Trust SIPP provides the framework for the investment of the assets of the City of Hamilton’s three non-OMERS defined-benefit pension plans: the Hamilton Street Railway Company Pension Plan (“HSR”), the Hamilton-Wentworth Retirement Fund (“HWRF”) and HMRF. Assets for the three pension plans (the “Plans”) have been aggregated for investment purposes in a private pooling vehicle structure or master trust structure (the “Master Trust”) which was approved and adopted by Council on May 18, 1999.

The Master Trust SIPP contains details of the individual statement of investment policies and procedures for each of the HSR, HWRF and HMRF pension plans participating in the Master Trust.

Since 2006, a policy review of the Master Trust SIPP has been completed annually (with the exception of the fiscal years 2010 and 2013). For each review, the applicable Master Trust SIPP was replaced with the amended version adopted and approved by Council. Details of each review can be found in the following staff reports: Report FCS07096; Report FCS08111; Report FCS09093; Report FCS11033; Report FCS12084; Report FCS14080; Report FCS15083; Report FCS16081; and Report FCS17079.

The review for the year of 2010 was constrained as a result of the City's decision to implement the Dynamic Investment Policy (Report FCS09112) which was approved by Council on February 10, 2010. Similarly, in 2013, unplanned pressures resulted in the deferral of the annual review.

POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS

The Regulation requires that the administrator of a provincially regulated pension plan establish a written statement of investment policies and procedures that complies with requirements of the federal investment regulations as modified in Sections 47.8 and 79 of the Regulation.

As a result of changes to the Regulation to implement new funding rules for defined benefit pension plans registered in Ontario, a pension plan's SIPP shall now include the plan's target asset allocation for each investment category listed in subsection 76(12) in the Regulation. The target asset allocation for an investment category is the target proportion of the plan's assets invested in a particular investment category in proportion to the total target investment in all categories, expressed as a percentage.

RELEVANT CONSULTATION

Staff consulted with the Financial Services Division who reviewed the information on members, contributions, benefits and liabilities, contained in each of the statement of investment policies and procedures for HSR, HWRF and HMRF.

Staff consulted with Legal and Risk Management Services Division in the preparation of Report FCS18090.

The City's investment consultant, Aon, was engaged to review the Master Trust SIPP. Aon provided recommendations and requirements for amendments to ensure its compliance with applicable pension legislation. Additionally, Aon provided advice with regard to standard industry and best practices for a pension plan SIPP.

ANALYSIS AND RATIONALE FOR RECOMMENDATIONS

In accordance with the new requirements under the Regulation, the Master Trust SIPP sets out the target asset allocation for each of the 17 investment categories specified by the Regulation, as shown on page 6 in Section 2.03(a) of the Master Trust SIPP and in Table 1.

Table 1
Target Asset Allocations for Investment Categories

	Investment Category under subsection 76(12) of Regulation 909	Target Asset Allocation	Accessed Through Mutual or Pooled or Segregated Funds
1.	Insured contracts	0.0%	-
2.	Mutual or pooled funds or segregated funds	N/A	-
3.	Demand deposits and cash on hand	0.0%	-
4.	Short-term notes and treasury bills	0.0%	-
5.	Term deposits and guaranteed investment certificates	0.0%	-
6.	Mortgage loans	0.0%	-
7.	Real estate	0.0%	-
8.	Real estate debentures	0.0%	-
9.	Resource properties	0.0%	-
10.	Venture capital	0.0%	-
11.	Corporations referred to in subsection 11(2) of Schedule III to the federal investment regs	0.0%	-
12.	Employer issued securities	0.0%	-
13.	Canadian stocks other than investments referred to in 1 to 12 above	30.0%	Yes
14.	Non-Canadian stocks other than investments referred to in 1 to 12 above	30.0%	Yes
15.	Canadian bonds and debentures other than investments referred to in 1 to 12 above	40.0%	Yes
16.	Non-Canadian bonds and debentures other than investments referred to in 1 to 12 above	0.0%	-
17.	Investments other than investments referred to in 1 to 16 above	0.0%	-

The values for the target asset allocations in Table 1 reflect the initial target weight for the asset mix policy of the Plans' investments under Section 2.03(a) of the Master Trust SIPP and are as set out below:

- The initial target weight to Canadian equity was 30% of the Plans' assets and is allocated to investment category 13;

- The initial target weight to global equity was 30% of the Plans' assets and is allocated to investment category 14;

- The initial target weight to fixed income was 40% of the Plans' assets and is allocated to investment category 15.

In Table 1, investment categories 1, 3 through 12 inclusive, 16 and 17 have a target asset allocation value of zero because the initial target weight to these investments categories was zero. Investment Category 2 is assigned as "Not Applicable" because it is further clarified by the addition of the third column in Table 1 to indicate how the assets contained in the target asset allocation are accessed — through a pooled, mutual or segregated fund.

According to the Regulation, the fixed income assets of the Plans can only be included in the target asset allocation for those investment categories corresponding to fixed income if these assets have a credit rating that meets the prescribed minimum credit rating, shown in Table 2:

Table 2
Prescribed Minimum Credit Ratings for Inclusion in Fixed Income Categories

Credit Rating Agency	Rating Bond Market Securities	Rating Money Market Securities
DBRS	BBB	R-2 (middle)
Fitch Ratings	BBB-	F-3
Moody's Investors Services	Baa3	P-3
Standard & Poor's	BBB-	A-3

Accordingly, the Master Trust SIPP has been amended to include Table 2, as shown in Section 2.03(a) on page 6 of the Master Trust SIPP.

In summary, the target asset allocations are significant because the contribution requirements on a valuation date for the PfAD (the calculation is prescribed in the Regulation) depend, in part, on the combined target asset allocation for non-fixed income assets. The target asset allocations for each of the investment categories on a valuation date would be based on the Plans' funded status and on the Dynamic Investment Policy Schedule outlined in Section 2.03(e) on page 7 and page 8 of the Master Trust SIPP.

Since the last review in 2017, the actuarial valuation for HMRF as at December 31, 2017 has been completed and filed. Accordingly, Section 1.03(c) on page 28 of the Master Trust SIPP has been amended to incorporate the new information on members and liabilities for the HMRF pension plan contained in the new actuarial valuation.

ALTERNATIVES FOR CONSIDERATION

Not Applicable

ALIGNMENT TO THE 2016 – 2025 STRATEGIC PLAN

Our People and Performance
Hamiltonians have a high level of trust and confidence in their City government.

APPENDICES AND SCHEDULES ATTACHED

Appendix "A" – Statement of Investment Policies and Procedures – City of Hamilton Defined Benefit Pension Plans Master Trust, December 2018

RM/dt

Statement of Investment Policies and Procedures

City of Hamilton Defined Benefit Pension Plans Master Trust

December 2018

APPROVED on this day of December, 2018

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Contents

Section 1—Overview

1.01 Purpose of Statement

This Statement of Investment Policies and Procedures (the "Policy" or "Master Trust SIPP") provides the framework for the investment of the assets of the City of Hamilton Defined Benefit Pension Plans Master Trust (the "Master Trust").

This Policy is based on the "prudent person portfolio approach" to ensure the prudent investment and administration of the assets of the Master Trust are within the parameters set out in the *Pension Benefits Act*, (Ontario) and the Regulations thereunder.

1.02 Background of the Master Trust

The inception date of the Master Trust is November 1, 1999, when three defined benefit pension plans, the "Plans", (the Hamilton Municipal Retirement Fund (Registration number 0275123), the Hamilton Street Railway Pension Plan (1994) (Registration number 0253344), and the Hamilton Wentworth Retirement Fund (Registration number 1073352)) invested in units of the Master Trust. The portfolio of assets in the Master Trust is referred to as "the Fund". These Plans hold units of the Master Trust and share, on a pro-rata basis, in all income, expenses and capital gains and losses of the Master Trust.

For reference purposes, the details of the Statement of Investment Policies and Procedures for each of the above mentioned Plans participating in the Master Trust have been attached to Appendix A of this Policy.

1.03 Objective of the Plan

The objective of the Plans is to provide members of the Plans with retirement benefits prescribed under the terms thereof.

1.04 Investment and Risk Philosophy

The primary investment objective is to provide an economic return on assets sufficient to fund Plan liabilities over the long-term, while adhering to prudent investment practices.

The investment philosophies and strategies must take into account both return and risk objectives of the Plans and the City of Hamilton (the "City").

In recognition of the risk and return objectives of the Plans and the City, an initial asset allocation policy was developed by the Investment Consultant in consultation with both the Chief Investments Officer and the Treasurer of the City (the "Treasurer") based on the Plans' current (at that time) funded status and the characteristics of the Plans and City. It is recognized, however, that the Plans' return requirements and risk tolerance will change over time, and the intent is to reallocate the portfolio to lower risk allocations dynamically as the Plans' funded statuses improve.

1.05 Administration

The General Manager of Finance and Corporate Services for the City ("General Manager of Finance and Corporate Services") is the designated contact person at the City for administrative purposes.

Section 2—Asset Mix and Diversification Policy

2.01 Master Trust Return Expectations

Each of the investment managers appointed to invest the assets of the Master Trust (the “Investment Managers”) is directed to achieve a satisfactory long-term real rate of return through a diversified portfolio, consistent with acceptable risks, performance objectives and prudent management.

In order to achieve their long-term investment goals, the Plans must invest in assets that have uncertain returns, such as Canadian equities, foreign equities and bonds. However, the City attempts to reduce the overall level of risk by diversifying the asset classes and further diversifying within each individual asset class. Based on historical data and reasonable expectations for future returns, the City believes that a diversified portfolio of Canadian equities, nominal bonds, real return bonds and foreign equities will likely outperform over the long term.

The overall goal of this Policy is to maximize the return of the Fund while bearing a reasonable level of risk relative to the liabilities in order to ensure the solvency of the Fund over time. The assets of the Plans are sufficiently liquid to make payments which may become due from the Plans. The weights applied to each of the asset classes are based on the targets in the initial asset allocation outlined in Section 2.03 and adjusted based on the target allocation in the Dynamic Investment Policy Schedule in Section 2.03.

2.02 Expected Volatility

The volatility of the Master Trust is directly related to its asset mix, specifically, the balance between Canadian bonds, Canadian equities and foreign equities. Since the Investment Managers do not have the authority to make any type of leveraged investment on behalf of the Master Trust, the volatility of the Master Trust should be similar to the volatility of the Benchmark Portfolio set out in Section 4.02 (Performance Measurement).

2.03 Asset Mix

(a) In order to achieve the long-term objective within the risk/return considerations described in Section 1.04, the following asset mix policy (Benchmark Portfolio) and ranges were selected for the initial asset allocation:

Assets	Minimum %	Initial Target Weight %	Maximum %	Asset Category
Canadian Equity	25	30	35	Return-Seeking
Global Equity	25	30	35	Return-Seeking
Total Equities	50	60	70	Return-Seeking
Fixed Income	30	40	50	Liability-Hedging

For purpose of the total asset mix described above, the Investment Managers' asset class pooled funds are deemed to be 100% invested, even though these funds may contain a portion held in cash and cash equivalent instruments.

The Plan's target asset allocation for each investment category listed in subsection 76(12) of the Regulation 909 to the Pension Benefits Act (Ontario) is as follows:

Investment Category under subsection 76(12) of Regulation 909	**Target Asset Allocation**	**Accessed through mutual or pooled or segregated funds**
1. Insured Contracts	0.0%	-
2. Mutual or pooled funds or segregated funds	N/A	-
3. Demand deposits and cash on hand	0.0%	-
4. Short-term notes and treasury bills	0.0%	-
5. Term Deposits and guaranteed investment certificates	0.0%	-
6. Mortgage Loans	0.0%	-
7. Real Estate	0.0%	-
8. Real Estate Debentures	0.0%	-
9. Resource properties	0.0%	-
10. Venture Capital	0.0%	-
11. Corporations referred to in subsection 11(2) of Schedule III to the federal investment regs	0.0%	-
12. Employer issued securities	0.0%	-
13. Canadian stocks other than investments referred to in 1 to 12 above	30.0%	Yes
14. Non-Canadian stocks other than investments referred to in 1 to 12 above	30.0%	Yes
15. Canadian bonds and debentures other than investments referred to in 1 to 12 above	40.0%	Yes
16. Non-Canadian bonds and debentures other than investments referred to in 1 to 12 above	0.0%	-
17. Investments other than investments referred to in 1 to 16 above	0.0%	-

For inclusion within a fixed income investment category in the above table, the minimum ratings for target asset allocations of fixed income assets are outlined below. This framework is used to inform whether the target asset allocation to an investment category qualifies as fixed income for purposes of calculating the Provision for Adverse Deviations (PfAD) as defined under Regulation 909.

Credit Rating Agency	**Rating – Bond Market Securities**	**Rating – Money Market Securities**
DBRS	BBB	R-2 (middle)
Fitch Ratings	BBB-	F-3
Moody's Investors Services	Baa3	P-3
Standard & Poor's	BBB-	A-3

(b) Return-Seeking Assets: These assets generally will consist of all non-fixed income investments, such as equities and alternatives, with a main focus on price appreciation with generally higher expected long-term returns.

(c) Liability-Hedging Assets: These assets generally will be fixed-income investments, such as bonds, with similar duration characteristics as the pension liabilities (i.e., these assets generally behave like pension liabilities). Since these assets focus mainly on current income, their expected long-term returns will generally be lower than return-seeking assets.

(d) Sub-Allocations and Rebalancing Ranges: The sub-allocations and rebalancing ranges within the return-seeking portfolio will be reviewed from time to time as the total return-seeking allocation changes due to the Dynamic Investment Policy Schedule below. The rebalancing ranges for the total return-seeking assets and liability-hedging assets (fixed income) are also determined by the Dynamic Investment Policy Schedule below.

(e) In recognition of the risk and return objectives of the Plans and the City, an initial asset allocation policy was developed by the Investment Consultant in consultation with both the Chief Investments Officer and the Treasurer based on the Plans' current (at that time) funded status and the characteristics of the Plans and City. It is recognized, however, that the Plans' return requirements and risk tolerance will change over time, and the intent is to reallocate the portfolio to lower risk allocations dynamically as the Plans' funded statuses improve.

Based on an assessment of the Plans' long-term goals and desired risk levels, the HMRF/HWRF Pension Administration Sub-Committee (following advice from the Investment Consultant) recommended to City Council a "Dynamic Investment Policy" which was subsequently approved by City Council. The Dynamic Investment Policy was developed by the Investment Consultant in consultation with the Chief Investments Officer and the Treasurer, and is based on the 2010 Dynamic Investment Policy Study which was conducted by the Investment Consultant.

The Dynamic Investment Policy dynamically adjusts the allocation to return-seeking assets and liability-hedging assets as the Plans' funded statuses improve. Funded status may change due to any combination of investment returns, contributions, benefit payments, fund expenses, and changes to liabilities (including discount rate changes).

This Policy is based on the results of the 2010 Dynamic Investment Policy Study and the Dynamic Investment Policy Schedule is as follows:

	Return -Seeking Allocation		
Funded Ratio[1 2]	**Minimum**	**Target**	**Maximum**
<65%	50%	60%	70%
65%	50%	60%	70%
66%	50%	60%	70%
67%	50%	60%	70%
68%	50%	60%	70%
69%	50%	60%	70%
70%	50%	60%	70%
71%	49%	59%	69%
72%	47%	57%	67%
73%	46%	56%	66%
74%	44%	54%	64%
75%	43%	53%	63%
76%	41%	51%	61%
77%	40%	50%	60%
78%	38%	48%	58%
79%	37%	47%	57%
80%	35%	45%	55%
81%	34%	44%	54%
82%	32%	42%	52%
83%	31%	41%	51%

	Return -Seeking Allocation		
Funded Ratio[1 2]	**Minimum**	**Target**	**Maximum**
84%	29%	39%	49%
85%	28%	38%	48%
86%	26%	36%	46%
87%	25%	35%	45%
88%	23%	33%	43%
89%	22%	32%	42%
90%	20%	30%	40%
91%	19%	29%	39%
92%	17%	27%	37%
93%	16%	26%	36%
94%	14%	24%	34%
95%	13%	23%	33%
96%	11%	21%	31%
97%	10%	20%	30%
98%	8%	18%	28%
99%	7%	17%	27%
100%	5%	15%	25%
>100%	5%	15%	25%

[1] Funded ratio defined on a Wind-up basis.

[2] Funded ratio will change based on any combination of investment returns, contributions, benefits payments, expenses and changes in liabilities.

Sub-Allocations: The sub-allocations within the liability hedging and return seeking categories will be drawn down approximately based on the table below. However, allocations to illiquid assets may be adjusted at a slower rate. Sub-allocations should be within 5% of their targets. The sub-allocations will be adjusted proportionately when the return-seeking allocation is between the levels listed in the table below.

	Return Seeking		Liability Hedging	
	Canadian Equity	Global Equity	Long-Term Bonds	Real Return Bonds
15% return seeking	8%	7%	11%	74%
20% return seeking	10%	10%	12%	68%
25% return seeking	13%	12%	14%	61%
30% return seeking	15%	15%	15%	55%
35% return seeking	18%	17%	17%	48%
40% return seeking	20%	20%	18%	42%
45% return seeking	23%	22%	20%	35%
50% return seeking	25%	25%	21%	29%
55% return seeking	28%	27%	23%	22%
60% return seeking	30%	30%	25%	15%

Duration Strategy: Based on the Dynamic Investment Policy Study completed in 2010, the portfolio interest rate dollar duration will increase as the funded status improves and the allocation to liability hedging assets increases. Interest rate derivatives may be used on either a strategic or opportunistic basis to mitigate risk by increasing the hedge ratio up to 100%. This will be at the discretion of the Administrator and based on the duration of the Plan's liabilities.

Rebalancing and Monitoring: A systematic rebalancing procedure will be utilized to ensure that the asset allocation of the Fund stays within the ranges defined above. As the return-seeking asset allocation changes, the sub-category allocations will be kept approximately proportional to the Initial allocation specified above. However, the allocations to illiquid investments may be adjusted more slowly. The funded ratio and asset allocation of the Fund will be reviewed regularly or when significant cash flows occur, and will be monitored and reported on at least an annual basis, or upon such more frequent basis as may be requested by City Council or its delegates from time to time. The Fund will be rebalanced as necessary, making use of benefit payments and contributions to the extent possible and considering the transaction costs involved in the rebalancing.

2.04 Management Structure

The Master Trust may employ a mix of active and passive management styles. Active management provides the opportunity to outperform specific investment benchmarks and it can provide lower absolute volatility of returns. Passive, or index, management minimizes the risk of underperformance relative to a benchmark index and is generally less expensive than active management. This approach also diversifies the manager risk, making the Master Trust less reliant on the skills of a single Investment Manager.

Because holding large amounts of foreign assets can expose the Master Trust to fluctuations in the level of the Canadian dollar, a portion of the foreign assets may be hedged back into Canadian dollars.

2.05 Environmental, Social and Governance (ESG) Issues

The Administrator's primary responsibility is to make decisions in the best interest of the Plan beneficiaries. This responsibility requires that there be an appropriate balance between the need to seek long-term investment returns to help build better pensions for all members of the Plans and the needs for those returns to be delivered in as stable a manner as possible (given the behaviour of the investment markets).

The Administrator neither favours nor avoids managers and investments based on ESG integration. In keeping with the foregoing, and having regard to the size of the Plans and the pension fund, the Administrator does not take ESG factors into account when making investment decisions. As previously noted, the Administrator has delegated the search for investment managers to its Investment Consultant. On the direction of the Administrator, the Investment Consultant is directed to search and select the best investment managers for investing the assets of the Plans considering factors such as business, staff, historical performance and investment process, since the Administrator believes that these factors will contribute to higher investment returns in the long run and manage risk. Investment Managers are not prohibited from considering ESG factors if they believe that it will have a positive impact on the Plans' investment returns.

Section 3—Permitted and Prohibited Investments

3.01 General Guidelines

The investments of the Master Trust must comply with the requirements and restrictions set out in the *Income Tax Act* (Canada) and the *Pension Benefits Act* (Ontario), and their respective Regulations.

3.02 Permitted Investments

In general, and subject to the restrictions in this Section 3, the Investment Managers may invest in any of the following asset classes and in any of the investment instruments listed below:

(a) **Canadian and Foreign Equities**

(i) Common and convertible preferred stock the shares of which are (a) listed on a prescribed stock exchange in Canada; or (b) listed on a prescribed stock exchange outside Canada;

(ii) Debentures convertible into common or convertible preferred stock, provided such instruments are traded on a recognized public exchange or through established investment dealers;

(iii) Rights, warrants and special warrants for common or convertible preferred stock the shares of which are (a) listed on a prescribed stock exchange in Canada; or (b) listed on a prescribed stock exchange outside Canada;

(iv) Private placement equities, where the security will be eligible for trading on a recognized public exchange within a reasonable and defined time frame;

(v) Instalment receipts, American Depository Receipts, Global Depository Receipts and similar exchange traded instruments;

(vi) Units of real estate investment trusts (REITs);

(vii) Exchange traded index-participation units (e.g., iUnits; SPDRs);

(viii) Income trusts registered as reporting issuers under the Securities Act, domiciled in a Canadian jurisdiction that provides limited liability protection to unit holders; and

(ix) Units of limited partnerships which are listed on the TSX exchange.

(b) **Canadian and Foreign Fixed Income**

(i) Bonds, debentures, notes, non-convertible preferred stock and other evidence of indebtedness of Canadian or developed market foreign issuers whether denominated and payable in Canadian dollars or a foreign currency, provided such instruments are traded on a recognized public exchange or through established investment dealers, subject to Section 3.04 below;

(ii) Real return bonds, subject to Section 3.04 below;

(iii) Mortgages secured against Canadian real estate subject to Section 3.05 below;

(iv) Mortgage-backed securities, guaranteed under the *National Housing Act*;

(v) Term deposits and guaranteed investment certificates;

(vi) Private placements of bonds subject to Section 3.03 below; and,

(vii) Investment in bond and debenture issues of the City and affiliated bodies is neither encouraged nor discouraged. The decision by the Investment Manager(s) to invest in such issues is entirely their responsibility and they should be governed by the same degree of due diligence and prudence that they would apply when assessing any other investment in respect of a registered pension plan.

(c) **Cash and Short Term Investments**

(i) Cash on hand and demand deposits;

(ii) Canadian and U.S. Treasury bills and bonds (with remaining maturities not exceeding 365 days) issued by the federal (Canada & U.S., as applicable) and provincial governments and their agencies;

(iii) Sovereign short-term debt instruments of developed countries, with maturities not exceeding 365 days;

(iv) Obligations of trust companies and Canadian and foreign banks chartered to operate in Canada, including bankers' acceptances;

(v) Commercial paper and term deposits; and

(vi) Other money market instruments (maturity not exceeding 365 days).

(d) **Derivatives**

Assets are not invested in derivative instruments and the trust will not invest in derivatives directly (including options and futures). In the event that a pooled fund invests in derivatives, prior to investing in such pooled fund, appropriate risk management processes and procedures will be in place in order to help mitigate any risks associated with derivatives. Specifically, all derivative investments will be made in accordance with applicable legislation and regulatory policies relating to the investment of pension plan assets in derivatives. The following uses of non-leveraged derivative instruments are permitted:

(i) Covered put and/or call options with respect to publicly traded securities that are held in the portfolio;

(ii) The Investment Manager of an index portfolio may utilize fully backed, i.e. non-leveraged, derivative strategies designed to replicate the performance of specific market indices, i.e.- exchange-traded equity index futures contracts;

(iii) Investment Managers may use currency futures contracts and forward contracts to hedge foreign currency exposure; and

(iv) Interest rate derivatives can be used to hedge the interest rate risk in the liabilities.

(e) **Other Investments**

(i) Investments in open-ended or closed-ended pooled funds provided that the assets of such funds are permissible investments under this Policy, and

(ii) Deposit accounts of the Custodian can be used to invest surplus cash holdings.

(f) **Index Mandates**

(i) For managers of index mandates, permitted investment vehicles may include all instruments that may form part of the respective index.

3.03 Minimum Quality Requirements

(a) **Quality Standards**

Within the investment restrictions for individual portfolios, all portfolios should hold a prudently diversified exposure to the intended market.

(i) The minimum quality standard for individual bonds and debentures is ‘BBB-’ or equivalent as rated by a Recognized Bond Rating Agency, at the time of purchase.

(ii) The minimum quality standard for individual short term investments is ‘R-1’ low or equivalent as rated by a Recognized Bond Rating Agency, at the time of purchase.

(iii) The minimum quality standard for individual preferred shares is ‘P-1’ or equivalent as rated by a Recognized Bond Rating Agency, at the time of purchase.

(iv) All investments shall be reasonably liquid (i.e. in normal circumstances they should be capable of liquidation within 1 month).

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(b) **Split Ratings**
In cases where the Recognized Bond Rating Agencies do not agree on the credit rating, the bond will be classified according to the following methodology:

(i) If two agencies rate a security, use the lower of the two ratings;

(ii) If three agencies rate a security, use the most common; and if four agencies rate a security, use the lowest most common; and

(iii) If three agencies rate a security and all three agencies disagree, use the middle rating; if four agencies rate a security and all four agencies disagree, use the lowest middle rating.

(c) **Downgrades in Credit Quality**
Each Investment Manager will take the following steps in the event of a downgrade in the credit rating of a portfolio asset by a Recognized Rating Agency to below the purchase standards set out in Section 3.03 (a) Quality Standards:

(i) The Chief Investments Officer will be notified of the downgrade by telephone at the earliest possible opportunity;

(ii) Within ten business days of the downgrade, the Investment Manager will advise the Chief Investments Officer in writing of the course of action taken or to be taken by the Investment Manager, and its rationale; and

(iii) Immediately upon downgrade, the Investment Manager will place the asset on a Watch List subject to monthly review by the Investment Manager with the Chief Investments Officer until such time as the security matures, is sold or until it is upgraded to a level consistent with the purchase quality standards as expressed in the above guidelines.

(d) Rating Agencies
For the purposes of this Policy, the following rating agencies shall be considered to be 'Recognized Bond Rating Agencies':

(i) Dominion Bond Rating Service Limited;

(ii) Standard and Poor's;

(iii) Moody's Investors Services Inc.; and

(iv) Fitch Ratings

(e) Private Placement Bonds
Private placement bonds are permitted subject to **all** of the following conditions:

(i) The issues acquired must be 'A' or equivalent rated;

(ii) The total investment in such issues must **not** exceed 10% of the market value of the Investment Manager(s) bond portfolio;

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(iii) The Investment Manager's portfolio may **not** hold more than 5% of the market value of any one private placement;

(iv) The Investment Manager(s) must be satisfied that there is sufficient liquidity to ensure sale at a reasonable price; and

(v) The minimum issue size for any single security must be at least $150 million.

3.04 Maximum Quantity Restrictions

(a) Total Fund Level

No one equity holding shall represent more than 10% of the total market value of the Master Trust's assets.

(b) Individual Investment Manager Level

The Investment Manager(s) shall adhere to the following restrictions:

(i) Equities

(A) No one equity holding shall represent more than 10% of the market value of any one Investment Manager's equity portfolio.

(B) No one equity holding shall represent more than 10% of the voting shares of a corporation.

(C) No one equity holding shall represent more than 10% of the available public float of such equity security.

(D) Income Trusts shall not comprise more than 15% of any Investment Manager's Canadian equity portfolio.

(ii) Bonds and Short Term

(A) Except for federal and provincial bonds (including government guaranteed bonds), no more than 10% of an Investment Manager's bond portfolio may be invested in the bonds of a single issuer and its related companies.

(B) Except for federal and provincial bonds, no one bond holding shall represent more than 10% of the market value of the total outstanding for that bond issue.

(C) No more than 8% of the market value of an Investment Manager's bond portfolio shall be invested in bonds rated BBB (this includes all of BBB's: BBB+, BBB, and BBB-) or equivalent.

(D) This Policy will permit the continued holding of instruments whose ratings are downgraded below BBB- after purchase, provided that such instruments are disposed of in an orderly fashion.

(E) No more than 10% of the market value of an Investment Manager's bond portfolio shall be invested in bonds denominated in a currency other than Canadian dollars.

(F) Except for the dedicated real return bond mandate, no more than 10% of the market value of the bond portfolio may be held in real return bonds.

(iii) Other

The use of derivative securities shall be supported at all times by the explicit allocation of sufficient assets to back the intended derivative strategy. For greater certainty, Investment Managers are not permitted to leverage the assets of the Master Trust. The use of derivative securities is only permitted for the uses described in this Policy. Purchase or sale of any of these instruments for speculative purposes is prohibited.

Notwithstanding the limits described in this Section, the single security limits do not apply to an Investment Manager's index mandate.

3.05 Prior Permission Required

The following investments are permitted **provided that** prior permission for such investments has been obtained from the Administrator:

(a) Investments in private placement equities (except for the foreign equity investment managers investing in pooled funds where the pooled fund policy permits private placement equities).

(b) Direct investments in mortgages.

(c) Direct investments in any one parcel of real property that has a book value less than or equal to 5% of the book value of the Master Trust's assets. The aggregate book value of all investments in real property and Canadian resource properties shall not exceed 25% of the book value of the Master Trust's assets. (Previously, the overall 25% limit in respect of real and resource properties was a requirement under the *Pension Benefits Act* (Ontario).)

(d) Direct investments in venture capital financing or private equity partnerships; and

(e) Derivatives other than those described in 3.02(d).

3.06 Prohibited Investments

The Investment Managers shall not:

(a) Invest in companies for the purpose of managing them;

(b) Invest in securities that would result in the imposition of a tax on the Fund under the *Income Tax Act* (Canada) unless they provide a prior written acknowledgement that such investments will result in a tax and receive prior written permission for such investments from the Administrator or;

(c) Make any investments not specifically permitted by this Policy.

3.07 Securities Lending

The investments of the Master Trust may be loaned, for the purpose of generating revenue for the Fund, subject to the provisions of the *Pension Benefits Act* (Ontario) and the *Income Tax Act* (Canada), and applicable regulations.

For securities held in segregated accounts, such loans must be secured by cash and/or readily marketable government bonds, treasury bills and/or letters of credit, discount notes and bankers' acceptances of chartered banks. For loaned securities, the security held or collateral must have an aggregate market value which shall never be less than the percentage of the aggregate market value of the loaned securities which is the highest of: (i) the minimum percentage required by any applicable legislation, regulatory authority or prevailing market practice; or (ii) 105%. The aggregate market value of the loaned securities and of the collateral shall be monitored and calculated by the Custodian daily.

The terms and conditions of any securities lending program will be set out in a contract with the custodian. The custodian shall, at all times, ensure that the Chief Investments Officer has a current list of those institutions that are approved to borrow the Fund's investments.

Lending of the portion of the Master Trust's assets held in a pooled fund is governed by the terms of the conditions set out in the pooled fund Statement of Investment Policies and Procedures or similar document.

3.08 Borrowing

The Master Trust shall not borrow money, except to cover short-term contingency and the borrowing is for a period that does not exceed ninety days, subject to the *Pension Benefits Act* (Ontario), the *Income Tax Act* (Canada) and the written permission of the General Manager of Finance and Corporate Services.

3.09 Conflicts between the Policy and Pooled Fund Investment Policies

While the guidelines in this Policy are intended to guide the management of the Master Trust, it is recognized that, due to the use of pooled funds, there may be instances where there is a conflict between the Policy and the investment policy of a pooled fund. In that case, the Investment Manager is expected to notify Chief Investments Officer upon the initial review of the Policy and whenever a change in the pooled fund policy creates a conflict. However, it is understood that any ambiguity will be interpreted in favour of the pooled fund policy, provided such interpretation complies with all applicable laws.

Section 4—Monitoring and Control

4.01 Delegation of Responsibilities

The General Manager of Finance and Corporate Services is the designated contact person for administrative matters. However, City Council has delegated certain administrative duties and responsibilities to internal and external agents, including to the HMRF/HWRF Pension Administration Sub-committee, the Chief Investments Officer and the General Manager of Finance and Corporate Services. Overall responsibility for the Master Trust ultimately rests with City Council, and the City (acting through Council) is the pension plan administrator of the Plans (for each Plan, the “Administrator”)**.**

(a) Chief Investments Officer

The Chief Investments Officer has been delegated the following responsibilities:

(i) monitoring the Master Trust asset mix and rebalancing as required, including executing asset mix changes required per the Dynamic Policy Schedules outlined in section 2.03;

(ii) day-to-day liaison including contract management with external Investment Managers, the Investment Consultant, and the Custodian/Trustee;

(iii) monitoring and budgeting for cash flow within the pension fund;

(iv) researching, recommending and implementing improvements to asset management of the Master Trust;

(v) directing and implementing strategy for self-managed portfolios, if any; and

(vi) preparing and presenting to City Council and the HMRF/HWRF Pension Administration Sub-Committee a report on the Plan’s investment performance and asset mix, and such other information as City Council may require and/or other such information as the Chief Investments Officer considers appropriate to include in the report, on at least an annual basis, or upon such more frequent basis as may be requested by City Council or its delegates from time to time.

(b) Investment Managers

The Investment Managers have been delegated the following responsibilities:

(i) invest the assets of the Master Trust in accordance with this Policy;

(ii) meet with the Chief Investments Officer as required and provide written reports regarding the Investment Manager's past performance, their future strategies and other issues as requested;

(iii) notify the Chief Investments Officer, in writing of any significant changes in the Investment Manager's philosophies and policies, personnel or organization and procedures;

(iv) will provide periodically, but no less than on an annual basis, or upon such more frequent basis as may be requested by City Council or its delegates from time to time, lists of assets and such other information as may be requested by the Chief Investments Officer; and,

(v) file, on at least an annual basis, or upon such more frequent basis as may be requested by City Council or its delegates from time to time compliance reports (see Section 4.03).

(c) Custodian/Trustee

The custodian/trustee will:

(i) Fulfil the regular duties of a Custodian/Trustee as required by law;

(ii) maintain safe custody over the assets of the Master Trust Plans;

(iii) execute the instructions of the Chief Investments Officer and the Investment Managers; and

(iv) record income and provide financial statements to the Chief Investments Officer on at least an annual basis, or upon such more frequent basis as may be requested by City Council or its delegates from time to time, or as otherwise required.

(d) Investment Consultant

The investment consultant has been delegated the following responsibilities:

(i) assist the Chief Investments Officer in developing a prudent long-term asset mix, and specific investment objectives and policies;

(ii) monitor, analyse and report on the Master Trust's investment performance and to support the Chief Investments Officer on any investment related matters;

(iii) monitor and report the funded status of the Plans to the Chief Investments Officer on at least an annual basis, or upon such more frequent basis as may be requested by City Council or its delegates from time to time;

(iv) assist with the selection of Investment Managers, custodians and other suppliers; and

(v) meet with the Chief Investments Officer as required.

(e) Actuary
The actuary has been delegated the following responsibilities:

(i) perform actuarial valuations of the Plan as required; and

(ii) advise the Chief Investments Officer and the Investment Consultant on any matters relating to Plan design, membership and contributions, and actuarial valuations.

4.02 Performance Measurement

For the purpose of evaluating the performance of the Master Trust and the Investment Managers, all rates of returns are measured over moving four-year periods. Return objectives are net of fees and include realized and unrealized capital gains or losses plus income from all sources. Returns will be measured quarterly and will be calculated as time-weighted rates of return.

(a) Active and Index Canadian Equity Managers
Investment results of the active and index Canadian Equity Managers are to be tested regularly against a Benchmark Portfolio comprising:

Benchmark	%
S&P/TSX Composite Index	100

(b) Active and Index Global Equity Managers
Investment results of the active and index Global Equity Managers are to be tested regularly against a long-term Benchmark Portfolio comprising:

Benchmark	%
MSCI World Index (C$)	100

(c) Active and Index Canadian Bond Managers – Long Bonds
Investment results of the active and index Canadian Bond Managers for Long Bonds are to be tested regularly against a Benchmark Portfolio comprising:

Benchmark	%
FTSE Canada Long Bond Index	100

(d) Active and Index Canadian Bond Managers – Real Return Bonds
Investment results of the active and index Canadian Bond Managers for Real Return Bonds are to be tested regularly against a Benchmark Portfolio comprising:

Benchmark	%
FTSE Canada Real Return Bond Index	100

4.03 Compliance Reporting by Investment Manager

The Investment Managers are required to complete and deliver a compliance report to the Chief Investments Officer and the Investment Consultant on at least an annual basis, or upon such more frequent basis as may be requested by City Council or its delegates from time to time. The compliance report will indicate whether or not the Investment Manager was in compliance with this Policy during the period covered in the report.

In the event that an Investment Manager is not in compliance with this Policy, the Investment Manager is required to advise the Chief Investments Officer immediately, detail the nature of the non-compliance and recommend an appropriate course of action to remedy the situation.

The Master Trust invests in pooled funds with separate investment policies. In that case, the Investment Manager must confirm compliance to the pooled fund policy. In addition, should a conflict arise between a pooled fund policy and this Policy, the Investment Manager is required to advise the Chief Investments Officer immediately and detail the nature of the conflict.

4.04 Standard of Professional Conduct

The Investment Managers are expected to comply, at all times and in all respects, with a written code of ethics that is no less stringent in all material respects than the Code of Ethics and Standards of Professional Conduct as promulgated by the CFA Institute.

The Investment Managers will manage the assets with the care, diligence and skill that an investment manager of ordinary prudence would use in dealing with pension plan assets. The Investment Managers will also use all relevant knowledge and skill that they possess or ought to possess as prudent investment managers.

Section 5—Administration

5.01 Conflicts of Interest

(a) Responsibilities

This standard applies to the City's staff, as well as to all agents employed by the City, in the execution of their responsibilities under the *Pension Benefits Act* (Ontario) (the "Affected Persons").

An "agent" is defined to mean a company, organization, association or individual, as well as its employees who are retained by the Administrator to provide specific services with respect to the investment, administration and management of the assets of the Master Trust.

(b) Disclosure

In the execution of their duties, the Affected Persons shall disclose any material conflict of interest relating to them, or any material ownership of securities, which could impair their ability to render unbiased advice, or to make unbiased decisions, affecting the administration of the Master Trust assets.

Further, it is expected that no Affected Person shall make any personal financial gain (direct or indirect) because of his or her fiduciary position. However, normal and reasonable fees and expenses incurred in the discharge of their responsibilities are permitted in accordance with City policies as approved by Council.

No Affected Person shall accept a gift or gratuity or other personal favour, other than one of nominal value, from a person with whom the employee deals in the course of performance of his or her duties and responsibilities for the Master Trust.

It is incumbent on any Affected Person who believes that he or she may have a conflict of interest, or who is aware of any conflict of interest, to disclose full details of the situation to the attention of the General Manager of Finance and Corporate Services and/or the Treasurer immediately. The General Manager of Finance and Corporate Services and/or the Treasurer, in turn, will decide what action is appropriate under the circumstances.

No Affected Person who has or is required to make a disclosure as contemplated in this Policy shall participate in any discussion, decision or vote relating to any proposed investment or transaction in respect of which he or she has made or is required to make disclosure, unless otherwise determined permissible by decision of the General Manager of Finance and Corporate Services and/or the Treasurer.

5.02 Related Party Transactions

The Chief Investments Officer shall not, on behalf of the Plans or the Master Trust, directly or indirectly,

(i) lend the moneys of the Plans to a related party or use those moneys to hold an investment in the securities of a related party; or

(ii) enter into a transaction with a related party.

The Chief Investments Officer may enter into a transaction with a related party:

(i) for the operation or administration of the Plans if it is under terms and conditions that are not less favourable to the Plans than market terms and conditions and such transaction does not involve the making of loans to, or investments in, the related party or

(ii) the value of the transaction is nominal or the transaction is immaterial. In assessing whether the value of the transaction is nominal or immaterial, two or more transactions with the same related party shall be considered as a single transaction.

For the purposes of Section 5.02, only the market value of the combined assets of the Fund shall be used as the criteria to determine whether a transaction is nominal or immaterial. Transactions less than 0.5% of the combined market value of the assets of the Fund are considered nominal.

The following investments are exempt from the related party rules:

(i) investments in an investment fund or a segregated fund (as those terms are used in the *Pension Benefits Standards Regulations*) in which investors other than the administrator and its affiliates may invest and that complies with Section 9 and Section 11 of Schedule III to the *Pension Benefits Standards Regulations*;

(ii) investments in an unallocated general fund of a person authorized to carry on a life insurance business in Canada;

(iii) investments in securities issued or fully guaranteed by the Government of Canada, the government of a province, or an agency of either one of them;

(iv) investments in a fund composed of mortgage-backed securities that are fully guaranteed by the Government of Canada, the government of a province, or an agency of either one of them;

(v) investments in a fund that replicates the composition of a widely recognized index of a broad class of securities traded at a marketplace (as that term is used in the *Pension Benefits Standards Regulations*); or

(vi) investments that involve the purchase of a contract or agreement in respect of which the return is based on the performance of a widely recognized index of a broad class of securities traded at a marketplace (as that term is used in the *Pension Benefits Standards Regulations*).

A "related party" is defined to mean the Administrator of the Plans, including any officer, director or employee of the Administrator. It also includes, the Investment Managers and their employees, a union representing employees of the employer, a member of the Master Trust, a spouse or child of the persons named previously, or a corporation that is directly or indirectly controlled by the persons named previously, and any other person constituting a "related party" under the *Pension Benefits Act* (Ontario). Related party does not include government or a government agency, or a bank, trust company or other financial institution that holds the assets of the Master Trust.

5.03 Selecting Investment Managers

In the event that a new Investment Manager must be selected or additional Investment Manager(s) added to the existing Investment Manager(s), the Chief Investments Officer will undertake an Investment Manager search with or without the assistance of a third-party investment consultant depending on the expertise required. The criteria used for selecting an Investment Manager will be consistent with the investment and risk philosophy set out in Section 1.04 (Investment and Risk Philosophy).

5.04 Directed Brokerage Commissions

Investment Managers may use directed brokerage to pay for research and other investment related services provided they comply with, and provide the disclosure required by, the Soft Dollar Standards promulgated by the CFA Institute.

5.05 Monitoring of Asset Mix

In order to ensure that the Master Trust operates within the minimum and maximum guidelines stated in this Policy as outlined in Section 2, the Chief Investments Officer shall monitor the asset mix on at least an annual basis, or upon such more frequent basis as may be requested by City Council or its delegates from time to time. Rebalancing between the investment mandates can take place over a reasonably short period of time after an imbalance has been identified. Rebalancing may be effected by redirecting the net cash flows to and from the Master Trust, or by transferring cash or securities between portfolios and/or Investment Managers.

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5.06 Monitoring of Investment Managers

An important element in the success of this Policy is the link between the Investment Managers and the Chief Investments Officer. It is expected that the Investment Managers will communicate with the Chief Investments Officer whenever necessary. Periodic, written investment reports from the Investment Managers are sent to and reviewed by the Chief Investments Officer and form part of the monitoring process.

Meetings including telephone conference call meetings between the Investment Managers and the Chief Investments Officer will be scheduled as required. At each meeting or telephone conference call meeting, it is expected that the Investment Managers will prepare a general economic and capital markets overview, which will be distributed prior to or during the meeting. They should also include the following in their presentations:

- review of the previous period's strategy and investment results,
- discussion of how the condition of the capital markets affects the investment strategy of their respective portfolios,
- economic and market expectations,
- anticipated changes in the asset mix within the limits provided in this Policy, and,
- discussion of compliance and any exceptions.
- discussion of any votes that were cast against the wishes of company management by the Investment Managers in exercising voting rights (Section 5.08).

5.07 Dismissal of an Investment Manager

Reasons for considering the termination of the services of an Investment Manager include, but are not limited to, the following factors:

(a) performance results which are below the stated performance benchmarks;

(b) changes in the overall structure of the Master Trusts' assets such that the Investment Manager's services are no longer required;

(c) change in personnel, firm structure or investment philosophy which might adversely affect the potential return and/or risk level of the portfolio; and/or

(d) failure to adhere to this Policy.

5.08 Voting Rights

The Administrator has delegated voting rights acquired through the investments held by the Master Trust to the custodian of the securities to be exercised in accordance with the Investment Manager's instructions. Investment Managers are expected to exercise all voting rights related to investments held by the Master Trust in the interests of the members of the underlying pension plans. The Investment Managers shall report when they vote against the wishes of the company management to the Chief Investments Officer, providing information as to the reasons behind this vote.

5.09 Valuation of Investments Not Regularly Traded

The following principles will apply for the valuation of investments that are not traded regularly:

(a) **Equities**
Average of bid-and-ask prices from two major investment dealers, at least once every calendar quarter.

(b) **Bonds**
Same as for equities.

(c) **Mortgages**
Unless in arrears, the outstanding principal plus/minus the premium/discount resulting from the differential between face rate and the currently available rate for a mortgage of similar quality and term, determined at least once every month.

(d) **Real Estate**
A certified written appraisal from a qualified independent appraiser at least once every two years.

5.10 Policy Review

This Policy may be reviewed and revised at any time, but at least once every calendar year it must be formally reviewed. Should the Investment Manager(s) wish to review this Policy at any time, it is his/her responsibility to contact the Chief Investments Officer with specific recommendations.

The appropriateness of the Dynamic Investment Policy asset allocation parameters should be reviewed on an ongoing basis. A new Dynamic Investment Policy Study (Dynamic Asset-Liability Modeling Study) may be undertaken if any of the following events occur:

(a) The plan gets significantly closer to the end-state of the flight path, including if the flight path funded ratio measurement changes significantly (to over 84%) from the starting point of the 2010 study, which was 69%.

(b) There are significant changes to the regulations that affect the key metrics used in making decisions in the 2010 Dynamic Investment Policy Study or should affect the asset allocation in the future;

(c) Capital market conditions change significantly such that the assumptions embedded in the 2010 Dynamic Investment Policy Study are no longer reasonable; or

(d) The plan sponsor’s risk posture changes significantly.

Appendix A – Statement of Investment Policies & Procedures

Statement of Investment Policies & Procedures - Hamilton Municipal Retirement Fund

Overview

1.01 Purpose of Statement

This Statement of Investment Policies and Procedures (the “Hamilton Municipal Retirement Fund SIPP”) provides the framework for the investment of the assets of the Hamilton Municipal Retirement Fund, registration number 0275123 (the “Plan”);

The objective of the Hamilton Municipal Retirement Fund SIPP is to ensure that the assets of the Plan, together with expected contributions made by both the City and the Plan members, shall be invested in a continued prudent and effective manner.

The Hamilton Municipal Retirement Fund SIPP is based on the “prudent person portfolio approach” to ensure the prudent investment and administration of the assets of the Plan (the “Fund”) are within the parameters set out in the *Pension Benefits Act,* (Ontario) and the Regulations thereunder.

All provisions in the Master Trust SIPP apply to this Appendix.

1.02 Background of the Plan

The Hamilton Municipal Retirement Fund is a contributory defined benefit plan. The plan has been closed to new entrants since 1965. Municipal employees hired after June 30, 1965 participate in the OMERS Pension Plan. Therefore, this is a closed fund and will terminate upon the death of the last retiree or successor. Effective July 1, 2001, the last active member retired from the Plan.

1.03 Plan Profile

a) Contributions

Under the terms of the Plan text:

For normal retirement age 60 class: 7% of contributory earnings up to YMPE plus 8.5% of contributory earnings in excess of the YMPE.

For normal retirement age 65 class: 6% of contributory earnings up to the YMPE plus 7.5% of contributory earnings in excess of the YMPE.

Effective August 1, 1998, the last member attained “Paid Up” status and employee contributions to the Plan ceased.

b) Benefits

2% of average annual earnings in best consecutive 5 years before retirement for each year of credited service up to 35 years reduced by 0.675% of the 5-year average earnings up to the final year’s YMPE for each year of contributory service after

January 1, 1966. CPP Offset suspended from date of retirement to age 65. Effective Jan 1, 2008 annual increases will not be less than the increase provided to retirees under the OMERS plan which is currently equal to 100% of the increase in the Consumer Price Index to a maximum of 6.0% per annum.

c) ***Liabilities***

As of the most recent actuarial valuation of the Plan as at December 31, 2017 there were no active members, 3 deferred members and 186 retirees and beneficiaries.

As of December 31, 2017 the going-concern liability of the plan was $73,940,300 compared to the actuarial value of assets of $77,679,500. On a solvency basis, the liability was $63,784,500, while the assets (at market) were $77,579,500.

1.04 Objective of the Plan

The objective of the Plans is to provide members of the Plans with retirement benefits prescribed under the terms thereof.

1.05 Investment and Risk Philosophy

The primary investment objective is to provide an economic return on assets sufficient to fund plan liabilities over the long-term, while adhering to prudent investment practices.

The investment philosophies and strategies must take into account both return and risk objectives of the Plan and the City.

In recognition of the risk and return objectives of the Plan and the City, an initial Asset Allocation Policy was developed based on the Plan’s current funded status and the characteristics of the Plan and City. It is recognized, however, that the Plan return requirements and risk tolerance will change over time, and the intent is to reallocate the portfolio to lower risk allocations dynamically as the Plan’s funded status improves.

1.06 Administration

The General Manager of Finance and Corporate Services for the City of Hamilton is the designated contact at the City for administrative purposes.

1.07 Pooling of Assets

For investment purposes, certain assets of the Plan are invested in units of the City of Hamilton Defined Benefit Plans Master Trust, along with certain assets of the Hamilton-Wentworth Retirement Fund and the Hamilton Street Railway Pension Plan (1994).

Up to 2 % of Plan assets may be invested outside of the City of Hamilton Defined Benefit Plans Master Trust for operating expenses and liquidity purposes, in accordance with the parameters set out in Section 3.02 (c) and (e) of the City of Hamilton Defined Benefit Plans Master Trust SIPP. The provisions of the City of Hamilton Defined Benefit Plans Master Trust SIPP apply to the investment of these assets.

1.08 Master Trust SIPP

The Master Trust SIPP is the policy that should be followed while investing the pooled assets of the Hamilton Municipal Retirement Fund.

Statement of Investment Policies & Procedures - Hamilton Street Railway Pension Plan (1994)

Overview

1.01 Purpose of Statement

This Statement of Investment Policies and Procedures (the " Hamilton Street Railway Pension Plan SIPP") provides the framework for the investment of the assets of the Hamilton Street Railway Pension Plan (1994), registration number 0253344 (the "Plan");

The objective of the Hamilton Street Railway Pension Plan SIPP is to ensure that the assets of the Plan, together with expected contributions made by both the City and the Plan members, shall be invested in a continued prudent and effective manner.

The Hamilton Street Railway Pension Plan SIPP is based on the "prudent person portfolio approach" to ensure the prudent investment and administration of the assets of the Plan (the "Fund") are within the parameters set out in the *Pension Benefits Act,* (Ontario) and the Regulations thereunder.

All provisions in the Master Trust SIPP apply to this Appendix.

1.02 Background of the Plan

The current Plan dates from January 1, 1994 when two former plans – Canada Coach Lines and Hamilton Street Railway plans were merged. Effective January 1, 2009 this contributory defined benefit plan was closed to new members and active members stopped contributing and accruing service under the plan.

1.03 Plan Profile

a) Contributions

Under the terms of the Plan text, members' contributions prior to 1999 were 7.5% of earnings less contributions made to Canada Pension Plan. For the calendar years 1999 through 2008, members (depending on the year) either enjoyed a contribution holiday or were limited to contribution rates of 1% of earnings. Effective January 2009, as members became City employees, no member contributions have been required or permitted to be made to the Plan.

b) Benefits

Members receive a pension equal to 1.5% of average pensionable earnings up to the average Year's Maximum Pensionable Earnings (YMPE) as established under the Canada Pension Plan, plus 2% of the excess, multiplied by years of credited service accrued up to December 2008. The "average pensionable earnings" are defined as the average of best five years' earnings during the member's credited service and OMERS credited service, if any. The "average YMPE" is defined as the average of the YMPE for the last thirty-six months of plan membership.

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In the event that pensions accrued under the prior plan exceed the pension accrued under the current plan for service prior to July 1, 1980, then the pension is increased accordingly. Pensions are subject to annual indexing equal to the indexing provided to retirees under the OMERS plan (100% of inflation to a maximum of 6% per annum).

c) Liabilities

As of the most recent actuarial valuation of the Plan as at January 1, 2017, there were 388 active members, 26 deferred members and 599 retirees and beneficiaries. The average age of the active members was approximately 52.8 years with average pensionable earnings of $66,849.

As of January 1, 2017, the going-concern liability of the plan was $214,681,000 compared to the actuarial value of assets of $193,491,000. Approximately 34.2% of the accrued liability was related to active members, approximately 65.3% was related to retirees, and approximately 0.5% was related to deferred members. On a solvency basis, the liability was $219,410,000 while the assets (at market) were $193,291,000. Both the going-concern and solvency deficits are being eliminated through a series of special payments.

1.04 Objective of the Plan

The objective of the Plan is to provide members of the Plan with retirement benefits prescribed under the terms thereof.

1.05 Investment and Risk Philosophy

The primary investment objective is to provide an economic return on assets sufficient to fund plan liabilities over the long-term, while adhering to prudent investment practices.

The investment philosophies and strategies must take into account both return and risk objectives of the Plan and the City.

In recognition of the risk and return objectives of the Plan and the City, an initial Asset Allocation Policy was developed based on the Plan's current funded status and the characteristics of the Plan and City. It is recognized, however, that the Plan return requirements and risk tolerance will change over time, and the intent is to reallocate the portfolio to lower risk allocations dynamically as the Plan's funded status improves.

1.06 Administration

The General Manager of Finance and Corporate Services for the City of Hamilton is the designated contact at the City for administrative purposes.

1.07 Pooling of Assets

For investment purposes, certain assets of the Plan are invested in units of the City of Hamilton Defined Benefit Plans Master Trust, along with certain assets of the Hamilton-Wentworth Retirement Fund and the Hamilton Municipal Retirement Fund.

Up to 2 % of Plan assets may be invested outside of the City of Hamilton Defined Benefit Plans Master Trust for operating expenses and liquidity purposes, in accordance with the parameters set out in Section 3.02 (a), (c) and (e) of the City of Hamilton Defined Benefit

Plans Master Trust SIPP. The provisions of the City of Hamilton Defined Benefit Plans Master Trust SIPP apply to the investment of these assets.

1.08 Master Trust SIPP

The Master Trust SIPP is the policy that should be followed while investing the pooled assets of the Hamilton Street Railway Pension Plan (1994).

Statement of Investment Policies & Procedures - The Hamilton-Wentworth Retirement Fund

Overview

1.01 Purpose of Statement

This Statement of Investment Policies and Procedures (the " Hamilton-Wentworth Retirement Fund SIPP") provides the framework for the investment of the assets of the Hamilton-Wentworth Retirement Fund, registration number 1073352 (the "Plan");

The objective of the Hamilton-Wentworth Retirement Fund SIPP is to ensure that the assets of the Plan, together with expected contributions made by both the City and the Plan members, shall be invested in a continued prudent and effective manner.

The Hamilton-Wentworth Retirement Fund SIPP is based on the "prudent person portfolio approach" to ensure the prudent investment and administration of the assets of the Plan (the "Fund") are within the parameters set out in the *Pension Benefits Act*, (Ontario) and the Regulations thereunder.

All provisions in the Master Trust SIPP apply to this Appendix.

1.02 Background of the Plan

The Plan is a contributory, defined benefit Plan. Effective January 1, 1985 all active Region Other Participants, excluding Police Civilians, were transferred to OMERS. The liability to transfer such members to OMERS was met by monthly payments of $115,187 until December 31, 2000 and monthly payments of $361 thereafter, concluding September 30, 2003. Effective January 1, 2002, the last active member retired from the plan.

1.03 Plan Profile

a) Contributions

Under the terms of the Plan text:

For normal retirement age 60 class:

1) Senior Police Officers: contributions should be 7% of earnings up to the YMPE plus 8.5% of contributory earnings in excess of YMPE.

2) Other Police Officers: contributions should be 6.5% of earnings up to YMPE plus 8% of contributory earnings in excess of YMPE.

For a normal retirement age of 65 contributions should be 5.75% of earnings.

b) Benefits
2% of average annual earnings in best 5 years before retirement for each year of credited service up to 35 years reduced by 0.675% of the 5-year average earnings up to the final year's YMPE for each year of contributory service after January 1, 1966. CPP Offset suspended from date of retirement to age 65. Effective Jan 1, 2008 annual increases will not be less than the increase provided to retirees under the OMERS plan, which is currently equal to 100% of the increase in the Consumer Price Index to a maximum of 6.0% per annum.

c) Liabilities
As of the most recent actuarial valuation of the Plan as at December 31, 2016, there were no active members, no deferred members and 171 retirees and beneficiaries.

As of December 31, 2016, the going-concern liability of the plan was $55,249,000 compared to the actuarial value of assets of $59,443,000. On a solvency basis, the liabilities were $63,005,000 while the assets were $59,373,000. Both deficits are being eliminated through a series of special payments.

1.04 Objective of the Plan
The objective of the Plan is to provide members of the Plan with retirement benefits prescribed under the terms thereof.

1.05 Investment and Risk Philosophy
The primary investment objective is to provide an economic return on assets sufficient to fund plan liabilities over the long-term, while adhering to prudent investment practices.

The investment philosophies and strategies must take into account both return and risk objectives of the Plan and the City.

In recognition of the risk and return objectives of the Plan and the City, an initial Asset Allocation Policy was developed based on the Plan's current funded status and the characteristics of the Plan and City. It is recognized, however, that the Plan return requirements and risk tolerance will change over time, and the intent is to reallocate the portfolio to lower risk allocations dynamically as the Plan's funded status improves.

1.06 Administration
The General Manager of Finance and Corporate Services for the City of Hamilton is the designated contact at the City for administrative purposes.

1.07 Pooling of Assets
For investment purposes, certain assets of the Plan are invested in units of the City of Hamilton Defined Benefit Plans Master Trust, along with certain assets of the Hamilton Street Railway Pension Plan (1994) and the Hamilton Municipal Retirement Fund.

Up to 2 % of Plan assets may be invested outside of the City of Hamilton Defined Benefit Plans Master Trust for operating expenses and liquidity purposes, in accordance with the parameters set out in Section 3.02 (c) and (e) of the City of Hamilton Defined Benefit Plans Master Trust SIPP. The provisions of the City of Hamilton Defined Benefit Plans Master Trust SIPP apply to the investment of these assets.

1.08 Master Trust SIPP

The Master Trust SIPP is the policy that should be followed while investing the pooled assets of the Hamilton-Wentworth Retirement Fund Pension Plan.

Appendix B – Compliance Reports

The City of Hamilton Master Trust
Index Bond Manager

Compliance Report for the Quarter Ended _____________
(date)

		GUIDELINES	POLICY COMPLIED WITH
ASSET MIX (at Market Value)		%	YES/NO *
FIXED INCOME	BONDS	100%	
CASH	SHORT-TERM & CASH	0%	
CONSTRAINTS			
GENERAL	Investment Policy Section 3.01 – General Guidelines		
BONDS	Investment Policy Section 3.02 (b) – Bonds		
CASH	Investment Policy Section 3.02 (c) – Cash		
DERIVATIVES	Investment Policy Section 3.02 (c) – Derivatives		
OTHER	Investment Policy Section 3.02 (e) – Other Investments		
INDEX	Investment Policy Section 3.02 (f) – Index Mandates		
QUALITY REQUIREMENTS	Investment Policy Section 3.03 – Minimum Quality Requirements		
QUANTITY RESTRICTIONS	Investment Policy Section 3.04 – Maximum Quantity Restrictions		
PRIOR PERMISSION	Investment Policy Section 3.05 – Prior Permission Required		
PROHIBITED INVESTMENTS	Investment Policy Section 3.06 – Prohibited Investments		
SECURITIES LENDING	Investment Policy Section 3.07 – Securities Lending		
RESPONSIBILITIES	Investment Policy Section 4.01 (b) – Delegation of Responsibilities – Investment Managers		
STANDARDS OF PROFESSIONAL CONDUCT	Investment Policy Section 4.04 - Standards of Professional Conduct		
CONFLICTS OF INTEREST	Investment Policy Section 5.01 - Conflicts of Interest		
VOTING RIGHTS	Investment Policy Section 5.08 - Voting Rights		

* If policy not complied with, comment on specifics

COMPLETED BY:________________________ SIGNED BY:______________________

The City of Hamilton Master Trust
Index Equity Manager

Compliance Report for the Quarter Ended _____________
(date)

		GUIDELINES	POLICY COMPLIED WITH
ASSET MIX (at Market Value)		%	**YES/NO ***
EQUITIES			
	U.S.		
	EAFE		
	TOTAL FOREIGN		
CASH	SHORT-TERM & CASH		
CONSTRAINTS			
GENERAL	Investment Policy Section 3.01 – General Guidelines		
EQUITIES	Investment Policy Section 3.02 (a) – Canadian and Foreign Equities		
CASH	Investment Policy Section 3.02 (c) – Cash and Short Term Investments		
DERIVATIVES	Investment Policy Section 3.02 (d) – Derivatives		
OTHER INVESTMENTS	Investment Policy Section 3.02 (e) – Other Investments		
INDEX	Investment Policy Section 3.02 (f) – Index Mandates		
QUALITY REQUIREMENTS	Investment Policy Section 3.03 – Minimum Quality Requirements		
QUANTITY RESTRICTIONS	Investment Policy Section 3.04 – Maximum Quantity Restrictions		
PRIOR PERMISSION	Investment Policy Section 3.05 – Prior Permission Required		
PROHIBITED INVESTMENTS	Investment Policy Section 3.06 – Prohibited Investments		
SECURITIES LENDING	Investment Policy Section 3.07 – Securities Lending		
BORROWING	Investment Policy Section 3.08 – Borrowing		
RESPONSIBILITIES	Investment Policy Section 4.01 (b) – Delegation of Responsibilities – Investment Managers		
STANDARDS OF PROFESSIONAL CONDUCT	Investment Policy Section 4.04 - Standards of Professional Conduct		
CONFLICTS OF INTEREST	Investment Policy Section 5.01 - Conflicts of Interest		
VOTING RIGHTS	Investment Policy Section 5.08 - Voting Rights		

* If policy not complied with, comment on specifics

COMPLETED BY:________________________ **SIGNED BY:_______________________**

The City of Hamilton Master Trust
Active Bond Manager

Compliance Report for the Quarter Ended _____________
(date)

		GUIDELINES	POLICY COMPLIED WITH
ASSET MIX (at Market Value)		%	**YES/NO ***
FIXED INCOME	BONDS	100%	
CASH	SHORT-TERM & CASH	0%	
CONSTRAINTS			
GENERAL	Investment Policy Section 3.01 – General Guidelines		
BONDS	Investment Policy Section 3.02 (b) – Bonds		
CASH	Investment Policy Section 3.02 (c) – Cash		
DERIVATIVES	Investment Policy Section 3.02 (c) – Derivatives		
OTHER	Investment Policy Section 3.02 (e) – Other Investments		
INDEX	Investment Policy Section 3.02 (f) – Index Mandates		
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VOTING RIGHTS	Investment Policy Section 5.08 - Voting Rights		

* If policy not complied with, comment on specifics

COMPLETED BY:________________________ **SIGNED BY:______________________**

The City of Hamilton Master Trust
Active Equity Manager

Compliance Report for the Quarter Ended ______________
(date)

		GUIDELINES	POLICY COMPLIED WITH
ASSET MIX (at Market Value)		%	**YES/NO ***
EQUITIES	CANADIAN		
	U.S.		
	EAFE		
	TOTAL FOREIGN		
CASH	SHORT-TERM & CASH		
CONSTRAINTS			
GENERAL	Investment Policy Section 3.01 – General Guidelines		
EQUITIES	Investment Policy Section 3.02 (a) – Canadian and Foreign Equities		
CASH	Investment Policy Section 3.02 (c) – Cash and Short Term Investments		
DERIVATIVES	Investment Policy Section 3.02 (d) – Derivatives		
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VOTING RIGHTS	Investment Policy Section 5.08 - Voting Rights		

* If policy not complied with, comment on specifics

COMPLETED BY:________________________ SIGNED BY:______________________

CITY OF HAMILTON

CORPORATE SERVICES DEPARTMENT
Financial Services and Taxation

TO:	Chair and Members HMRF/HWRF Pension Administration Sub-Committee
COMMITTEE DATE:	December 18, 2018
SUBJECT/REPORT NO:	HMRF/HWRF/HSR Pension Plan Possible Transfer to OMERS (FCS18093) (City Wide)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Barb Howe (905) 546-2424 Ext. 5599
SUBMITTED BY: **SIGNATURE:**	Rick Male Director, Financial Services, Taxation and Corporate Controller Corporate Services Department

RECOMMENDATION

That staff be directed to investigate a possible transfer of the City of Hamilton's (City) three legacy pension plans to Ontario Municipal Employees Retirement System (OMERS):

(i) Hamilton Municipal Retirement Fund (HMRF);
(ii) Hamilton Wentworth Retirement Fund (HWRF); and
(iii) Hamilton Street Railway Pension Plan (HSR).

EXECUTIVE SUMMARY

Various meetings have been held with OMERS to determine the feasibility of transferring the City's three legacy plans to OMERS. The City of Toronto had already begun its process to transfer its five legacy plans to OMERS. The transfer for one of their plans should be completed this year and the others are expected to be completed in 2019. Toronto is estimating a surplus of $70-$90 million once all plans are transferred.

A ballpark estimate of the cost to transfer the City's three legacy plans is around $50.6 million. A transfer to OMERS will allow the City to avoid the volatility of future funding costs as plan experience changes, since the risk of managing the pension funds would be transferred to OMERS. Since 1988, the City has contributed more than $94 million to fund plan deficits. The required minimum annual deficit payment for 2018 is $7.8 million, which increases to $8.0 million in 2019. An amount of $5.87 million was budgeted in 2018 and $6.87 million is budgeted for 2019 and the shortfall is funded from the Pension Reserve.

Staff will continue to investigate a potential transfer and to quantify if such a transfer is cost beneficial for the City.

Alternatives for Consideration –Not Applicable

FINANCIAL – STAFFING – LEGAL IMPLICATIONS

Financial: None currently.

Legal: None.

Staffing: None.

HISTORICAL BACKGROUND

In 2014, the Ontario government amended the Pension Benefit Act (PBA) under section 80.4, to create a framework intended to facilitate the merger of a Single Employer Pension plan (SEPP), in the public sector into an existing Jointly Sponsored Pension Plan (JSPP) if specific conditions are met. On November 1, 2015 the government passed regulation 311/15 to support these changes.

In November 2015, the City had preliminary discussions with OMERS to understand, at a high level, the necessary steps involved and the potential costing basis that may be used for such transfers. OMERS described a costing model that would be based on a negotiated discount rate on a going concern basis. At the transfer date, the City would be required to make a payment equivalent to the cost and thereafter there would be no further obligation.

At the September 2016 meeting, OMERS described a different methodology that would be based on a negotiated discount rate, but require a further premium known as a ‘true up”. Under this method, after payment had been made at the transfer date, there would be periodic subsequent actuarial reviews and if the assumptions used were insufficient such that a shortfall occurs, then the City would be liable for additional payments. And if there was a surplus, OMERS would grant the City a credit towards their regular monthly OMERS pension contributions. With this method the risk shifted to the City making a potential transfer less desirable.

In February 2017, the City was advised that OMERS had re-assigned the responsibility of mergers to their Borealis group who were more experienced in mergers and acquisitions. Borealis representatives advised that they were not interested in pursuing a "true-up" mechanism because of its complexities and the length of time it would take to receive approval from Financial Services Commission of Ontario (FSCO) and Canada Revenue Agency (CRA).
In March 2018, the City signed a reciprocal Non-Disclosure Agreement (NDA) that will allow both parties to share information that would be essential in developing a cost benefit analysis for any potential transfer. This agreement also binds members of the pension committees and elected officials.

At the May 23, 2018 meeting, OMERS disclosed that its pricing model would be based on a going concern discount rate, which would be the same used for the City of Toronto. OMERS would also need to consider other assumptions and approaches that would be appropriate for the membership of the three City of Hamilton plans. In addition, OMERS would assess a one-time fee to cover the cost of OMERS assuming each of the plans. After this meeting, OMERS was provided with copies of our most recent valuations for all three plans.

At the July 12, 2018 meeting with OMERS they indicated that after reviewing the valuations, that the Hamilton Wentworth Retirement Fund (HWRF) and the Hamilton Municipal Retirement Fund (HMRF) would be the easiest to transfer since there are no active members and all members have outlived their guarantee period. The HMRF transfer would be slightly more difficult since it has a surplus and any surplus withdrawal would require approval from FSCO. The Hamilton Street Railway (HSR) plan would be the most complex since it also has active members and there are some differences in plan benefits which may require OMERS to build a separate administration system. Similar to the City of Toronto, the pricing model would also include an amount to cover the cost of OMERS assuming each of the plans. This amount would be based on a percentage of the actuarial liabilities determined using the pricing model assumptions. The cost recovery amount for the HSR Plan is expected to be greater due to its complexity.

A further meeting was held in November 2018 to update the estimated cost based on the latest HMRF valuation at December 31, 2017 which was finalized in October 2018. This formed the basis for the costing included in Appendix "A" to Report FCS18093.

POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS

Section 80.4 of the PBA, and its related regulation 311/15 governs the conversion of a SEPP to another pension plan that is a JSPP. It sets out the following requirements for a transfer:

Notice

- The plan administrator of the SEPP must provide notice of a proposed transfer of assets under section 80.4 to members, former members, retired members, other plan beneficiaries, to any trade union that represents members of the plan, and to the Superintendent of FSCO.

Consent

- The plan administrator must provide a consent form to the union representing active members or to the active member if not represented by the trade union. In the case of retired, former or other plan beneficiaries, the administrator would provide a consent form.

Consent Threshold

- For the transfer to proceed, At least 2/3 of the active members must consent or have consent provided on their behalf by their union; and not more than 1/3 of the retired members, former members and other plan beneficiaries object in writing to the proposed transaction.

Superintendent Consent

- The employer must file an application with the Superintendent for consent to the transfer of assets within nine months after the day that notices were given. The application must include the plan amendments to provide for the transfer of assets and liabilities.

Effective Date

- The effective date of the transfer of assets cannot be earlier than the deadline established for plan members to consent or object.

- The effective date of a conversion must be within 12 months after the date on which the Superintendent consents to the proposed conversion.

Equal Commuted Values for Active Members

- The commuted values of the benefit entitled provided under the JSPP must not be less than the commuted value of the pension benefit under the SEPP.

Replication of Pension Benefits

- Retired members, former members and plan beneficiaries must receive at least the same pension benefits provided to them under the SEPP.

Unfunded Liability

- If the liabilities of the plan are greater than the assets, then the employer must fund the deficit at date of transfer.

Surplus

- If the assets of the plan are greater than the liabilities, then the surplus is distributed. Any surplus distribution must be approved by FSCO.

RELEVANT CONSULTATION

City staff have had various conference calls and meetings with the OMERS staff who are currently working on the City of Toronto' transfer of their legacy pension plans.

ANALYSIS AND RATIONALE FOR RECOMMENDATION

As of July 1, 1965, new municipal employees were required to be enrolled in OMERS. At that time the City of Hamilton (City) administered the HMRF plan. When the Region of Hamilton-Wentworth (Region) was established, the HMRF plan was split into the HMRF and HWRF plans and these members continued to contribute and receive benefits from either the City or Region pension plans.

The HSR pension plan continued to be an active plan. This was challenged by the Amalgamated Transit Union (ATU) who successfully won a class action suit and as of December 31, 2008, the HSR plan became a closed plan. On January 1, 2009, existing members began accruing service under the OMERS plan and all new HSR employees were required to enrol in OMERS.

While the HMRF plan has been well funded, the other two plans have experienced deficits over the years. The HWRF plan has had deficits since at least 1988, while the HSR plan has had a deficit since 2009, when it became a closed plan. Since 1988, and up to the end of the current valuation period (2019), the City will have contributed $60.1 to the HWRF fund and since 2009 it will have contributed $34.1 million to the HSR plan, for a combined total of $94.2 million.

The current combined required deficit payment based on the most recent valuation is $7.8 million (2018) and $8.0 million (2019). The 2018 budget to fund these deficits is $5.87 million and for 2019 this has been increased to $6.87 million with the shortfall funded from the Pension Reserve.

In addition, under the HSR plan a future enhancement arises when an actuarial report discloses a plan surplus. Under the Settlement Agreement dated March 12, 2009, the Plan was amended to include a conditional increase to the joint and survivor normal form of pension to 66 2/3% from 50%. The benefit improvement is conditional upon an actuarial report being filed that discloses a plan surplus on either a going concern, solvency or wind-up basis. All HSR Plan members who were employees on December 31, 2008 would be entitled to this benefit improvement when it comes into effect if they continue to be entitled to a pension from the plan. Given that a potential transfer would occur before a plan surplus could occur, then this enhancement may be raised as an item to be addressed as part of the transfer.

Appendix “A” to Report FCS18093 provides details of the three plans as at the last valuation date. For illustration purposes, Appendix “A” includes an estimate of the one-time cost recovery amount based on these results. Based on the financial position of the plan a rough estimated cost to transfer to OMERS would be around $50.6 million. Below is a summary of this estimate:

	Amount (in millions)
HWRF	$ 4.6
HSR	$39.0
HSR survivor upgrade	$10.0
One-Time fee to OMERS	$5.0
HMRF Surplus	-$8.0
Rough Estimate	$50.6

The current HSR survivor upgrade cost is unknown at this time. Based on information provided by the actuary at December 31, 2008, a rough estimate of the cost was $5.25 million. If the upgrade is required, we have included a conservative amount of $10 million as a current estimate. In addition, a one-time cost recovery amount based on a percentage of plan liabilities would also be required.

There is also a surplus in the HMRF plan of $3.7 million. Included in this surplus was the funding of $4.2 million for a Provision for Adverse Deviation (PfAD) which is required for SEPP plans but not JSPP plans. Therefore, this cost would not be included in the transfer cost, resulting in a surplus of $8.0 million in the HMRF plan. The estimate above assumes the City would be able to withdraw the full surplus and apply the amount against the deficits expected under the other plans at transfer date. However, any surplus withdrawal will require approval from FSCO.

During a review of historical documents supporting the HMRF plan, it was discovered that the HMRF pension committee on December 6, 1988 approved a change to the HMRF By-Law 79-70 with respect to surplus disposition whereby any surplus will revert to the City. This change was approved by City Council on December 13, 1988 and filed with FSCO on December 14, 1988. These changes occurred before the Pension Benefits Act introduced language on surplus disposition. Over the years the legislation on surplus distribution has changed, therefore it is uncertain at this time whether these historical documents would allow the City to have ownership of the surplus.

The ballpark cost to transfer of $50.6 million is provided to give some context to the magnitude of the cost and will vary depending on fund earnings and other actuarial factors.

ALTERNATIVES FOR CONSIDERATION

None.

ALIGNMENT TO THE 2016 – 2025 STRATEGIC PLAN

Community Engagement & Participation

Hamilton has an open, transparent and accessible approach to City government that engages with and empowers all citizens to be involved in their community.

Economic Prosperity and Growth

Hamilton has a prosperous and diverse local economy where people have opportunities to grow and develop.

APPENDICES AND SCHEDULES ATTACHED

Appendix “A” to Report FCS18093 – Summary of City’ of Hamilton Pre-OMERS Closed Plans

BH/dw

Summary of City of Hamilton Pre-OMERS Closed Plans
Results Extracted from Actuarial Valuation Reports

HMRF-Hamilton Municipal Retirement Fund
HSR - Hamilton Street Railway Pension Plan (1994)
HWRF-Hamilton Wentowrth Retirement Fund

Actuarial Valuations	HMRF	HSR	HWRF
Actuary	WTW	Aon	Aon
Valuation Date	31-Dec-17	1-Jan-17	31-Dec-16

Membership - Headcount	HMRF	HSR	HWRF	TOTAL
Actives	0	388	0	388
Retired Members	104	599	92	795
Beneficiaries	82	*	79	161
Deferreds	3	26	0	29
Total	189	1013	171	1373

*included in count of Retired Members

Membership - Average Age	HMRF	HSR	HWRF	TOTAL
Actives	0.0	52.8	0	52.8
Retired Members	81.8	75.5	81.5	77.0
Beneficiaries	81.3	*	84.9	83.1
Deferreds	96.2	54.2	0	58.5
Total	81.8	66.3	83.1	70.5

*included in count of Retired Members

Going Concern	HMRF	HSR	HWRF	TOTAL
Discount rate	3.75%	4.50%	4.50%	
Inflation	2.00%	2.25%	2.25%	
Post Retirement Indexing (base)	0.00%	1.50%	0.00%	
Mortality	2014CPM Pub MI-2017	2014CPM Pub (110%) Scale B	2014CPM Pub Scale B	
Assets - Market	$77,679,500	$193,491,200	$59,443,000	$330,613,700
Liabilities before provision for 100% future ind	$60,557,600	$214,681,400	$55,249,000	$330,488,000
Financial Position (before provision for 100% future indexing)	$17,121,900 Surplus	-$21,190,200 Deficit	$4,194,000 Surplus	$125,700 Deficit
Provision for Future Indexing	$9,143,700	$17,776,200	$8,769,000	$35,688,900
Financial Position (with indexing and Including	$3,739,200	-$38,966,400	-$4,575,000	-$39,802,200
Provision for PfAD	$4,239,000	N/A	N/A	$4,239,000
Financial Position (after provision for 100% future indexing and excluding PfAD)	$7,978,200 Surplus	-$38,966,400 Deficit	-$4,575,000 Deficit	-$35,563,200 Deficit

Solvency/Wind Up	HMRF	HSR	HWRF	TOTAL
Assets - Market (adjusted for expenses)	$77,579,500	$193,291,200	$59,373,000	$330,243,700
Liabilities before provision for future indexing	$63,784,500	$219,410,700	$63,005,000	$346,200,200
Financial Position (before provision for future indexing)	$13,795,000 Surplus	-$26,119,500 Deficit	-$3,632,000 Deficit	-$15,956,500 Deficit
Provision for future indexing	$16,175,700	$99,586,800	$16,879,000	$132,641,500
Financial Position (after provision for future indexing)	-$2,380,700 Deficit	-$125,706,300 Deficit	-$20,511,000 Deficit	-$148,598,000 Deficit

Annual Pensions in Pay	HMRF	HSR	HWRF	TOTAL
Pensioners	$6,214,800	$10,374,100	$6,509,600	$23,098,500

Contribution Requirements	HMRF	HSR	HWRF	TOTAL
Annual Normal Cost	$0	$0	$0	$0
Annual Special Payments - Going Concern	$0	$2,470,800	$0	$2,470,800
Annual Special Payments - Solvency	$0	$3,868,800	$1,202,900	$5,071,700
Annual Special Payments - Total	$0	$6,339,600	$1,202,900	$7,542,500

Estimated Cost Recovery Amount based on Liabilities*	HMRF	HSR	HWRF	TOTAL
Liability	$69,701,300	$232,457,600	$64,018,000	
Survivor Benefit Upgrade Liability Estimate	$0	$10,000,000	$0	
Estimated Cost Recovery Amount %				
Estimated Cost Recovery Amount	$700,000	$3,640,000	$650,000	$4,990,000

*For illustration purposes only. Final amounts will be determined based on the Pension Transfer Agreement.

CITY OF HAMILTON
CORPORATE SERVICES
Financial Services and Taxation

TO:	Chair and Members HMRF/HWRF Pension Administration Sub-Committee
COMMITTEE DATE:	December 18, 2018
SUBJECT/REPORT NO:	Hamilton Municipal Retirement Fund Plan Text Amendment (FCS18084) (City Wide)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Barb Howe (905) 546-2424 Ext. 5599
SUBMITTED BY: **SIGNATURE:**	Rick Male Director, Financial Services, Taxation and Corporate Controller Corporate Services Department

RECOMMENDATIONS

(a) That the Treasurer be authorized and directed to file the amendment to Section 4.01 to the Hamilton Municipal Retirement Fund (HMRF), per Appendix 'A' to Report FCS18084 with the applicable government agencies.

(b) That the City Solicitor be authorized and directed to prepare any necessary amendments to the HMRF or prepare any necessary by-law amendments facilitate the direction above in (a).

EXECUTIVE SUMMARY

It is recommended that the HMRF plan be amended to comply with changes to the Pension Benefit Act (PBA). New funding rules were introduced May 1, 2018 requiring plans to fund a Provision for Adverse Deviation (PfAD) on a going concern basis. The Act requires that the plan be amended to specify the obligation of the employer to contribute to the PfAD.

Alternatives for Consideration –Not Applicable

FINANCIAL – STAFFING – LEGAL IMPLICATIONS

Financial: None.

Legal: The plan amendment and applicable documents need to be filed with the appropriate authorities.

Staffing: None.

HISTORICAL BACKGROUND

On May 19, 2017 the Ministry of Finance announced proposed reforms to the funding framework for defined benefit pension plans. On April 20, 2018 the final regulations were released, and any valuation dated on or after December 31, 2017 must reflect the new funding rules which came into force on May 1, 2018.

POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS

An *Application for Registration of a Pension Plan Amendment* (Form 1.1) must be filed with the Financial Services Commission of Ontario (FSCO) and an *Application to Amend a Registered Pension Plan* (T920) must be filed with Canada Revenue Agency (CRA), accompanied by the resolution adopting the amendment.

RELEVANT CONSULTATION

Willis Towers Watson prepared the HMRF plan text amendment.

ANALYSIS AND RATIONALE FOR RECOMMENDATION

The new funding rules introduced the concept of a PfAD into the PBA, which is basically the creation and funding of a reserve within a defined benefit plan. The objective of the PfAD is to provide a buffer against future adverse experience, thereby enhancing retirement income security. The amount of the PfAD will depend on the level of risk in the plan according to criteria specified in the PBA Regulations. Contributions to fund the PfAD will be required in respect of going concern liabilities. The amount of the PfAD for a defined benefit plan will be adjusted based on the following three factors:

1. **Fixed Component** - a base percentage based on whether the plan is open (4%) or closed (5%) to new members, and

2. **Asset Mix Component** - a percentage depending on the target asset allocation of the pension plan as set out in the plan's Statement of Investment Policies and Procedures (SIPP), and in accordance with a table in the PBA Regulations, and

3. **Discount Rate Component** - a percentage reflecting the excess of the plan's going concern discount rate over a benchmark discount rate determined by detailed formulas set out in the PBA Regulations.

The new legislation also requires that the plan text be amended within twelve months of the date of the first valuation report filed under the new funding rules, to include (a) the obligations of the employer to contribute to the PfAD, (b) the funding of additional going concern liabilities (c) and any solvency deficiency.

The HMRF valuation at December 31, 2017 includes the new funding rules and was filed November 13, 2018. As a result, an amendment is required to Article 4.01, respecting employer contributions to the plan before November 13, 2019.

ALTERNATIVES FOR CONSIDERATION

None.

ALIGNMENT TO THE 2016 – 2025 STRATEGIC PLAN

Community Engagement & Participation

Hamilton has an open, transparent and accessible approach to City government that engages with and empowers all citizens to be involved in their community.

Economic Prosperity and Growth

Hamilton has a prosperous and diverse local economy where people have opportunities to grow and develop.

APPENDICES AND SCHEDULES ATTACHED

Appendix "A" to Report FCS18084 – Resolution of the Council of The City of Hamilton

BH/dw

RESOLUTION OF THE COUNCIL
OF
THE CITY OF HAMILTON

Amendment to The Hamilton Municipal Retirement Fund

WHEREAS The City of Hamilton (the "Employer") established The Hamilton Municipal Retirement Fund, as amended from time to time, (the "Plan");

AND WHEREAS the Employer now wishes to amend the Plan to comply with the changes which came into force on May 1, 2018 under Ontario Regulation 250/18 of the Pension Benefit Act,

AND WHEREAS the Employer has the right to amend the Plan;

NOW THEREFORE BE IT RESOLVED THAT effective May 1, 2018:

1. Section 4.01 shall be deleted in its entirety, and is replaced with the following:

   Corporation Contributions The Corporation shall contribute the amount required in excess of the Member contributions to provide for payment of the benefits of this Plan in accordance with the Plan, the Act and the Income Tax Act, and shall pay into the Fund from time to time as required by the Act, and based on the advice of the Actuary after taking into account the assets of the Fund and all other relevant factors, subject to the maximum contribution limitations of the Income Tax Act:

   (a) the contributions deducted under Article III from the Contributory Earnings of Members together with the amount required to be paid by the Corporation to provide the normal cost of the benefits currently accruing in accordance with the provisions of the Plan, including contributions required in respect of any provision for adverse deviations, as defined in the Act;

   (b) contributions in respect of the amortization of the cost of any Plan amendment that increases going concern liabilities, where required by and as defined in the Act; and

   (c) contributions in respect of the amortization of any unfunded liability and reduced solvency deficiency, as defined in the Act;

   all in accordance with, and within the time limits specified in, the Act.

2. The Administrator of the Plan is authorized to execute such other agreements, certificates,

consents, corporate papers and other documents, make such payments and take all other action (including the filing of all required documents with appropriate governmental agencies and ensuring compliance with any reasonable changes or conditions imposed by the Canada Revenue Agency, the Financial Services Commission of Ontario or any other appropriate governmental authorities in connection with the actions authorized or approved in the foregoing resolutions) that the Administrator deems necessary or desirable to carry out the intent and purposes of the foregoing resolution.

The foregoing resolutions are hereby certified as adopted by the authority granted by the Council of the City of Hamilton at a meeting on the ___ day of ______________, 2018.
DATED the ___ day of ________________, 2018.

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