Appendix A
HMRF/MWRF Pension
Sub-Committee
Report 17-001

Hamilton

INFORMATION REPORT

TO:	Chair and Members HMRF/HWRF Pension Administration Committee
COMMITTEE DATE:	November 30, 2017
SUBJECT/REPORT NO:	HMRF/HWRF/HSR Pension Plans- Investigation of Transfer to OMERS (FCS17096) (City Wide)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Barb Howe (905) 546-2424 Ext.5599
SUBMITTED BY: **SIGNATURE:**	Mike Zegarac General Manager Finance and Corporate Services Department

Information:

As of July 1, 1965, new municipal employees were required to be enrolled in OMERS. At that time the City of Hamilton (City) administered its own two pension plans - Hamilton Municipal Retirement Fund (HMRF) and Hamilton-Wentworth Retirement Fund (HWRF), and the existing members of those plans continued to contribute and receive benefits from the City pension plans.

On the other hand, the Hamilton Street Railway (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 1985, while the HSR plan has had a deficit since 2009, when it became a closed plan. Since 2009 and up to the end of the most current valuation year (2019), the City will have made payments of approximately $58 million. Appendix "A" to Report FCS17096 provides a detailed breakdown by plan and by year.

Under a potential transfer to OMERS, the City will avoid potential future costs as the risk of managing the pension funds would be transferred to OMERS in exchange for a payment of the actuarial liabilities based on an agreement reached between OMERS and the City, at the transfer date.

Under legislation, pensioners are protected since the legislation requires that the pensions of current retirees under the jointly-sponsored pension plan (JSPP) must be at least the same as they were in the single-employer pension plan (SEPP). In addition the Pension Benefit Act (PBA) does not allow the pension benefits of plan beneficiaries to be reduced in an ongoing JSPP. As a result, there are no adverse consequences to pensioners that would result from a potential transfer to OMERS.

Despite that an employer's proposal to merge an SEPP into a JSPP cannot proceed unless:

- At least 2/3 of the SEPP's active members consent or have consent provided on their behalf by their union; and,
- Not more than 1/3 of the SEPP's retired members, former members and other plan beneficiaries object in writing to the proposed transaction

An additional consideration under the HSR planthat will need to be addressed beforeconsidering any potential transfer to OMERS, are the future enhancements that arise 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.

In 2017, the City of Toronto and OMERS reached an agreement in principle to consolidate its five closed plan into OMERS. This was approved by the OMERS' governing bodies in August 2017 and by Toronto Council in September 2017, but is subject to the approval of its closed plan members and the Financial Services Commission of Ontario (FSCO). Ultimately, the process that OMERS develops to facilitate these transfers will serve as a framework for Hamilton and for other municipalities that have also expressed interest, such as Ottawa and Windsor.

The City is currently working with OMERS on 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. Staff will provide an update on the status of discussions regarding a potential transfer at a future date.

Historical Background

In 2014, the Ontario government amended the PBA under section 80.4, to create a framework intended to facilitate the merger of a SEPP, in the public sector into an existing JSPP if specific conditions are met. On November 1, 2015 the government passed regulation 315/11 to support these changes.

The City has 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.

In November 2015, 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.

In the September 2016, 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 FSCO and Canada Revenue Agency (CRA).

Appendices and Schedules Attached

Appendix "A" to Report FCS17096– Annual Deficit Payments by Pension Plan

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Annual Deficit Payments by Pension Plan
2009-2019

Year	HWRF	HSR	Total
2009	3,596,400	273,600	3,870,000
2010	3,440,004	419,325	3,859,329
2011	2,457,301	1,412,699	3,870,000
2012	2,401,884	1,468,116	3,870,000
2013	2,346,060	1,523,940	3,870,000
2014	1,343,400	1,388,400	2,731,800
2015	2,741,004	5,020,296	7,761,300
2016	1,630,692	4,874,148	6,504,840
2017	1,107,200	4,774,800	5,882,000
2018	1,331,100	6,419,700	7,750,800
2019	1,465,900	6,500,500	7,966,400
Total	$ 23,860,945	$ 34,075,524	$ 57,936,469

Appendix B
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Financial Statements of the Hamilton Municipal Retirement Fund Pension Plan
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INDEPENDENT AUDITORS' REPORT

To the Pension Committee of the Corporation of the City of Hamilton for the Hamilton Municipal Retirement Fund Pension Plan

We have audited the accompanying fund financial statements of the Pension Fund for the Hamilton Municipal Retirement Fund Pension Plan, which comprise the statement of net assets available for benefits as at December 31, 2016 and the statement of changes in net assets available for benefits for the year then ended, and notes, comprising a summary of significant accounting policies and other explanatory information. The fund financial statements have been prepared by management based on the financial reporting provisions of Section 76 of Regulation 909 of the Pension Benefits Act (Ontario).

Management's Responsibility for the Fund Financial Statements

Management is responsible for the preparation and fair presentation of these fund financial statements in accordance with the financial reporting provisions of Section 76 of Regulation 909 of the Pension Benefits Act (Ontario), and for such internal control as management determines is necessary to enable the preparation of fund financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these fund financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform an audit to obtain reasonable assurance about whether the fund financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the fund financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the fund financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the entity's preparation and fair presentation of the fund financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the fund financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the fund financial statements present fairly, in all material respects, the net assets available for benefits of the Hamilton Municipal Retirement Fund Pension Plan as at December 31, 2016 and the changes in net assets available for benefits for the year then ended in accordance with the financial reporting provisions of Section 76 of Regulation 909 of the Pension Benefits Act (Ontario).

Basis of Accounting and Restriction on Use

Without modifying our opinion, we draw attention to Note 2(a) to the fund financial statements, which describes the basis of accounting. The fund financial statements are prepared to assist the Hamilton Municipal Retirement Fund Pension Plan to meet the requirements of the Financial Services Commission of Ontario under Section 76 of Regulation 909 of the Pension Benefits Act (Ontario). As a result, the fund financial statements may not be suitable for another purpose.

Our report is intended solely for the Pension Committee of the Hamilton Municipal Retirement Fund Pension Plan and the Financial Services Commission of Ontario and should not be used by any other parties.

KPMG LLP

Chartered Professional Accountants, Licensed Public Accountants

June 20, 2017
Hamilton, Canada

Statement of Net Assets Available For Benefits

DECEMBER 31, 2016, with comparative information for 2015

	2016 $	2015 $
ASSETS		
Investments		
Investment in Master Trust (note 4a)	77,126,378	77,148,404
Cash in Plan (note 4a)	35,721	65,042
Accrued investment income	83,599	76,958
	77,245,698	77,290,404
LIABILITIES		
Accrued liabilities	84,133	63,967
NET ASSETS AVAILABLE FOR BENEFITS	77,161,565	77,226,437

On behalf of the Pension Plan Administrator

The accompanying notes are an integral part of these financial statements.

Statement of Changes In Net Assets Available For Be

Year Ended DECEMBER 31, 2016, with comparative information for 2015

	2016 $	2015 $
INCREASE IN NET ASSETS		
Investment income (note 5)	3,982,332	4,092,719
Net realized gain on investments	952,048	2,672,783
Change in value of investments	1,876,685	-
	6,811,065	6,765,502
DECREASE IN NET ASSETS		
Pension benefits	6,541,451	6,841,895
Change in value of investments	-	4,479,153
Administrative expenses and professional fees (note 6)	334,486	368,139
	6,875,937	11,689,187
NET DECREASE FOR THE YEAR	(64,872)	(4,923,685)
NET ASSETS AVAILABLE FOR BENEFITS AT THE BEGINNING OF THE YEAR	77,226,437	82,150,122
NET ASSETS AVAILABLE FOR BENEFITS AT THE END OF THE YEAR	77,161,565	77,226,437

The accompanying notes are an integral part of these financial statements.

Notes to Financial Statements

DECEMBER 31, 2016

1. Description of the Plan

The Hamilton Municipal Retirement Fund ("HMRF") Pension Plan (the "Pension Plan") is a contributory defined benefit pension plan. The Pension Plan is registered under the Pension Benefits Act, 1987 (Ontario) (the "Act"), Registration Number 0275123. In accordance with a provision of the Ontario Municipal Employees Retirement System (OMERS) from July 1, 1965, all new employees of the City of Hamilton (the "City") are included under OMERS rather than the Pension Plan. As a consequence, the membership of the Pension Plan has become closed to new entrants and will decrease as existing members terminate. The Pension Plan's head office is located at 71 Main Street West, Hamilton, Ontario.

These fund financial statements have been approved and authorized for issue by the Treasurer of the City, as plan sponsor of the Hamilton Municipal Retirement Fund Pension Plan on June 20, 2017.

The majority of the net assets of the Pension Plan are combined in a pooled fund under a Master Trust agreement administered by RBC Investor Services Trust.

RBC Investor Services Trust (the "Trustee") is the custodial trustee of the Pension Plan. Investment decisions are made by independent investment managers using guidelines established by the City of Hamilton's Pension Committee while Towers Watson is the Pension Plan's actuary for the defined benefit plan.

The Master Trust is divided into units of equal value, without priority or preference. The Master Trust issues units to the individual pension plans representing their proportionate ownership of the total assets in the Master Trust. Each plan is credited with units each time contributions are made while disbursements from the individual plans result in reductions of their unit holdings. Investment income in the Master Trust does not result in additional units for the individual plans but serves to increase the value of the units.

2. Basis of preparation

a) Basis of presentation

As permitted by the Financial Services Commission of Ontario ("FSCO") these fund financial statements are prepared in accordance with Canadian accounting standards for pension plans excluding pension obligations and any resulting surplus or deficit.

The Pension Plan complies on a consistent basis with International Financial Reporting Standards ("IFRS") in Part 1 of the Chartered Professional Accountants ("CPA Canada") Handbook.

These fund financial statements have been prepared to assist the Administrator of the Pension Plan to comply with the requirements of the Financial Services Commission of Ontario ("FSCO") under Section 76 of Regulation 909 of the Pension Benefits Act (Ontario). As a result, the fund financial statements may not be suitable for another purpose.

These fund financial statements of the Pension Plan do not purport to show the adequacy of the Pension Plan's assets to meet its pension obligation. Such an assessment requires additional information, such as the Pension Plan's actuarial reports and information about the City's financial health.

Notes to Financial Statements

DECEMBER 31, 2016

2. Basis of preparation (continued)

b) Basis of measurement

The financial statements have been prepared on the historical cost basis, except for financial instruments which are measured at fair value through the statement of changes in net assets available for benefits.

c) Functional and presentation currency

These fund financial statements are presented in Canadian dollars, which is the Pension Plan's functional currency.

3. Significant accounting policies

a) Financial assets and financial liabilities

(i) Non-derivative financial assets

Financial assets are recognized initially on the trade date, which is the date that the Pension Plan becomes a party to the contractual provisions of the instrument. Transaction costs are not included in the fair value of investments either on initial recognition or on subsequent re-measurement. Transaction costs are included in the statement of changes in net assets available for benefits as part of administrative expenses and professional fees incurred for the period.

The Pension Plan measures all of its investments at fair value through the statement of changes in net assets available for benefits. All other non-derivative financial assets including accrued investment income are measured at amortized cost.

The Pension Plan derecognizes a financial asset when the contractual rights to the cash flows from the asset expire, or it transfers the rights to receive the contractual cash flows in a transaction in which substantially all the risks and rewards of ownership of the financial asset are transferred or in which the Pension Plan neither transfers nor retains substantially all the risks and rewards of ownership and does not retain control of the financial asset.

On derecognition of a financial asset, the difference between the carrying amount of the asset and consideration received is recognized in the statement of changes in net assets available for benefits, as a net realized gain on investments.

Notes to Financial Statements

DECEMBER 31, 2016

3. Significant accounting policies (continued)

a) Financial assets and financial liabilities (continued)

(ii) Non-derivative financial liabilities

All financial liabilities are recognized initially on the trade date at which the Pension Plan becomes a party to the contractual provisions of the instrument. The Pension Plan derecognizes a financial liability when its contractual obligations are discharged, cancelled or expired.

Financial assets and liabilities are offset and the net amount presented in the statement of net assets available for benefits when, and only when, the Pension Plan has a legal right to offset the amounts and it intends either to settle on a net basis or to realize the asset and settle the liability simultaneously. The Pension Plan considers its accrued liabilities to be a non-derivative financial liability.

(iii) Derivative financial instruments

Derivative financial instruments are recognized initially at fair value and attributable transaction costs are recognized in the statement of changes in net assets available for benefits as incurred. Subsequent to initial recognition, derivatives are measured at fair value, and all changes are recognized immediately in the statement of changes in net assets available for benefits.

b) Fair value measurement

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between knowledgeable, willing parties in an arm's length transaction at the measurement date.

If an asset or a liability measured at fair value has a bid and an ask price, the price within the bid-ask spread that is the most representative of fair value in the circumstances shall be used to measure fair value. The Pension Plan uses closing market price as a practical expedient for fair value measurement.

When available, the Pension Plan measures the fair value of an instrument using quoted prices in an active market for that instrument. A market is regarded as active if quoted prices are readily and regularly available and represent actual and regularly occurring market transactions on an arm's length basis.

If a market for a financial instrument is not active, then the Pension Plan establishes fair value using a valuation technique. Valuation techniques include using recent arm's length transactions between knowledgeable, willing parties (if available), reference to the current fair value of other instruments that are substantially the same, discounted cash flow analyses and option pricing models.

Notes to Financial Statements

DECEMBER 31, 2016

3. Significant accounting policies (continued)

b) Fair value measurement (continued)

The best evidence of the fair value of a financial instrument at initial recognition is the transaction price, i.e. the fair value of the consideration given or received, unless the fair value of that instrument is evidenced by comparison with other observable current market transactions in the same instrument or based on a valuation technique whose variables include only data from observable markets. When transaction price provides the best evidence of fair value at initial recognition, the financial instrument is initially measured at the transaction price and any difference between this price and the value initially obtained from a valuation model is subsequently recognized in profit or loss on an appropriate basis over the life of the instrument but not later than when the valuation is supported wholly by observable market data or the transaction is closed out.

All changes in fair value, other than interest and dividend income and expense, are recognized in the statement of changes in net assets available for benefits as part of the change in value of investments.

Investments are stated at fair value. Fair value of investments including those held within the Master Trust is determined as follows:

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

(ii) Bonds and equities are valued at closing bid prices. Where quoted prices are not available, estimated fair values are calculated using comparable securities.

(iii) Pooled funds are valued at the unit value supplied by the pooled fund administrator and which represents the Pension Plan's proportionate share of the underlying net assets at fair value determined using closing bid prices.

c) Net investment income

Income from investments is recognized on an accrual basis and includes dividend and interest income.

d) Realized and unrealized gain (loss) on investments

Realized gains or losses on sales of investments is the difference between the proceeds received and the average cost of the investments sold.

Change in value of investments represents the change in the difference between the fair value and cost of investments at the beginning and end of the year.

e) Income taxes

The Pension Plan is a registered pension plan, as defined by the Income Tax Act (Canada) and, accordingly, is not subject to income taxes.

Notes to Financial Statements

DECEMBER 31, 2016

3. Significant accounting policies (continued)

f) Foreign currency

Transactions in foreign currencies are translated into Canadian dollars at the exchange rate at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies at the reporting date are retranslated into Canadian dollars at the exchange rate at that date.

Foreign currency differences arising on retranslation are recognized in the statement of changes in net assets available for benefits.

g) Use of estimates and judgments

The preparation of the fund financial statements requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets liabilities at the date of the statement of net assets available for benefits and the reported amounts of changes in net assets available for benefits during the year. Actual results may differ from those estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future years affected.

4. Investments

a) Plan and Master Trust investments

The following table provides details of the underlying investments held by the Master Trust:

Master Trust	2016			2015		
	Cost $	Market Value $	Unrealized Gain (Loss) $	Cost $	Market Value $	Unrealized Gain (Loss) $
Cash	1,504,484	1,504,484	-	4,006,929	4,006,929	-
Short term notes and treasury bills	1,411,950	1,411,950	-	992,484	992,484	-
Canadian bonds and debentures	69,953,807	70,266,809	313,002	69,606,294	69,482,186	(124,108)
Canadian pooled bond fund	71,812,905	72,316,329	503,424	75,036,278	76,056,739	1,020,461
Canadian corporate shares	72,138,062	100,662,744	28,524,682	68,112,707	79,787,954	11,675,247
Canadian pooled equity fund	2,055,186	1,804,290	(250,896)	1,120,629	1,141,996	21,367
Foreign corporate shares	4,085,160	4,943,866	858,706	4,040,596	4,841,035	800,439
Foreign pooled equity fund	77,448,520	77,044,017	(404,503)	76,488,765	83,974,567	7,485,802
	300,410,074	329,954,489	29,544,415	299,404,682	320,283,890	20,879,208

Notes to Financial Statements

DECEMBER 31, 2016

4. Investments (continued)

a) Plan and Master Trust investments (continued)

The following table provides details of the Pension Plan's proportionate interest of underlying investments held within the Master Trust:

Master Trust HMRF Shares	2016			2015		
	Cost	Market Value	Unrealized Gain (Loss)	Cost	Market Value	Unrealized Gain (Loss)
	$	$	$	$	$	$
Cash	351,671	351,671	-	965,169	965,169	-
Short term notes and treasury bills	330,041	330,041	-	239,065	239,065	-
Canadian bonds and debentures	16,351,600	16,424,764	73,164	16,766,421	16,736,527	(29,894)
Canadian pooled bond fund	16,786,161	16,903,836	117,675	18,074,369	18,320,172	245,803
Canadian corporate shares	16,862,166	23,529,769	6,667,603	16,406,653	19,218,929	2,812,276
Canadian pooled equity fund	480,397	421,750	(58,647)	269,932	275,078	5,146
Foreign corporate shares	954,900	1,155,621	200,721	973,279	1,166,084	192,805
Foreign pooled equity fund	18,103,478	18,008,926	(94,552)	18,424,237	20,227,380	1,803,143
	70,220,414	77,126,378	6,905,964	72,119,125	77,148,404	5,029,279

The Pension Plan also directly holds cash of $35,721 (2015 - $65,042).

b) Fair value

The following table presents financial assets measured at fair value in the statement of net assets available for benefits in accordance with the fair value hierarchy. This hierarchy groups financial assets into three levels based on the significance of inputs used in measuring the fair value of the financial assets. The fair value hierarchy has the following levels:

Level 1: Unadjusted quoted prices in active markets for identical assets or liabilities;

Level 2: Inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly; and

Level 3: Inputs for assets and liabilities that are not based on observable market data.

The level within which the financial asset is classified is determined based on the lowest level of significant input to the fair value measurement. The financial assets measured at fair value in the statement of net assets available for benefits are grouped into the fair value hierarchy as follows:

The Pension Plan's investment in Master Trust is classified as Level 2. The following table presents the classification of the investments held within the Master Trust and those held directly by the Pension Plan at December 31, 2016, using the fair value hierarchy:

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4. Investments (continued)

b) Fair value (continued)

	2016			2016 Market Value		
	Cost	Market Value	Unrealized Gain (Loss)	Level 1	Level 2	Level 3
	$	$	$	$	$	$
Cash	387,392	387,392	-	387,392	-	-
Short term notes and treasury bills	330,041	330,041	-	-	330,041	-
Canadian bonds and debentures	16,351,600	16,424,764	73,164	-	16,424,764	-
Canadian pooled bond fund	16,786,161	16,903,836	117,675	-	16,903,836	-
Canadian corporate shares	16,862,166	23,529,769	6,667,603	23,529,769	-	-
Canadian pooled equity fund	480,397	421,750	(58,647)	-	421,750	-
Foreign corporate shares	954,900	1,155,621	200,721	1,155,621	-	-
Foreign pooled equity fund	18,103,478	18,008,926	(94,552)	-	18,008,926	-
	70,256,135	77,162,099	6,905,964	25,072,782	52,089,317	-

	2015			2015 Market Value		
	Cost	Market Value	Unrealized Gain (Loss)	Level 1	Level 2	Level 3
	$	$	$	$	$	$
Cash	1,030,211	1,030,211	-	1,030,211	-	-
Short term notes and treasury bills	239,065	239,065	-	-	239,065	-
Canadian bonds and debentures	16,766,421	16,736,527	(29,894)	-	16,736,527	-
Canadian pooled bond fund	18,074,369	18,320,172	245,803	-	18,320,172	-
Canadian corporate shares	16,406,653	19,218,929	2,812,276	19,218,929	-	-
Canadian pooled equity fund	269,932	275,078	5,146	-	275,078	-
Foreign corporate shares	973,279	1,166,084	192,805	1,166,084	-	-
Foreign pooled equity fund	18,424,237	20,227,380	1,803,143	-	20,227,380	-
	72,184,167	77,213,446	5,029,279	21,415,224	55,798,222	-

The methods and valuation techniques used for the purpose of measuring fair value are unchanged compared to the previous reporting period. There were no changes in the classification of these financial instruments during the current year.

Notes to Financial Statements

DECEMBER 31, 2016

4. Investments (continued)

c) Investments – financial instrument risk

The Pension Plan's investment activities expose it to a variety of financial risks including credit risk, market price risk, currency risk, interest rate risk and liquidity risk.

Credit risk

Credit risk is the risk of loss arising from the failure of a counterparty to fully honour its financial obligations with the Pension Plan, including its inability or unwillingness to pay borrowed principal, interest or rent when they come due. Credit risk can also lead to losses when issuers and debtors are downgraded by credit rating agencies, usually leading to a fall in the market value of the debtors' obligations.

Fixed income investments include cash, short-term notes and treasury bills, Canadian bonds and debentures and Canadian pooled bond funds. As at December 31, 2016, the Pension Plan's fixed income investments exposure to credit risk is as follows:

Type	Credit Rating	2016 % of Total Fund	2016 Amount $	2015 % of Total Fund	2015 Amount $
Corporate	AAA/AA	2.6%	882,361	5.8%	2,095,265
	A	10.9%	3,727,227	13.3%	4,826,774
	BBB	3.1%	1,042,622	5.2%	1,871,896
Provincial	n/a	23.8%	8,116,598	17.9%	6,491,114
Federal	n/a	56.6%	19,264,332	54.1%	19,710,536
Cash	n/a	3.0%	1,012,893	3.7%	1,330,390
		100.0%	34,046,033	100.0%	36,325,975

The fixed income investments mature as follows; $717,434 within 1 year, $20,858,269 within 1-10 years and $12,470,330 in greater than 10 years.

Market price risk

Market price risk is the risk that the fair value of a financial instrument will fluctuate as a result of changes in the market prices caused by factors specific to the individual financial instruments, its issuer, or factors affecting similar financial instruments traded in the public capital markets. As at December 31, 2016, the Pension Plan's equity exposure of $43,116,066 (2015 - $40,887,471) represented 55.9% (2015 – 53.0%) of the Pension Plan's investments. As at December 31, 2016, if the prices of securities had increased or decreased by ten percent, the effect on the assets, with all other variables held constant, would be $4,311,607 (2015 - $4,088,747).

Notes to Financial Statements

DECEMBER 31, 2016

4. Investments (continued)

c) Investments – financial instrument risk (continued)

Currency risk

Investments denominated in currencies other than the Canadian dollar expose the Pension Plan to fluctuations in foreign exchange rates. Fluctuations in the relative value of the Canadian dollar against these foreign currencies can result in a positive or a negative effect on the fair value of the investments.

As at December 31, 2016, the Pension Plan's exposure to foreign currency, in Canadian dollars, is as follows:

Type	2016 % of Total Fund	2016 Amount $	2015 % of Total Fund	2015 Amount $
United States dollar	9.7%	7,521,294	20.6%	15,904,885
Euro	3.3%	2,540,377	1.4%	1,088,117
Pound sterling	2.7%	2,055,846	2.1%	1,582,793
Japanese yen	2.3%	1,804,700	1.2%	897,105
Swiss franc	1.1%	884,932	1.0%	802,431
South Korean won	1.0%	748,804	0.4%	281,645
New Taiwan dollar	0.8%	637,053	0.0%	-
Hong Kong dollar	0.6%	472,252	0.4%	280,208
Renminbi	0.5%	398,996	0.0%	-
Austrailian dollar	0.3%	259,812	0.0%	-
Indian rupee	0.3%	231,975	0.0%	-
Brazilian real	0.3%	225,975	0.1%	79,253
Russian ruble	0.3%	194,859	0.0%	-
New shekel	0.2%	185,270	0.0%	-
Swedish kronor	0.2%	167,290	0.3%	234,887
Mexican peso	0.2%	160,972	0.0%	-
Thai baht	0.1%	109,473	0.0%	-
Other foreign currencies	0.6%	564,667	0.4%	242,141
	24.5%	19,164,547	27.9%	21,393,465

Notes to Financial Statements

DECEMBER 31, 2016

4. Investments (continued)

c) Investments – financial instrument risk (continued)

As at December 31, 2016, if the Canadian dollar had strengthened/weakened by five percent in relation to other currencies, with all other variables held constant, the effect on the assets would be as follows:

Type	2016 Change in Currency	2016 Amount $	2015 Change in Currency	2015 Amount $
United States dollar	+/- 5%	376,065	+/- 5%	795,244
Euro		127,019		54,406
Pound sterling		102,792		79,140
Japanese yen		90,235		44,855
Swiss franc		44,247		40,122
South Korean won		37,440		14,082
New Taiwan dollar		31,853		-
Hong Kong dollar		23,613		14,010
Renminbi		19,950		-
Austrailian dollar		12,991		-
Indian rupee		11,599		-
Brazilian real		11,299		3,963
Russian ruble		9,743		-
New shekel		9,264		-
Swedish kronor		8,365		11,744
Mexican peso		8,049		-
Thai baht		5,474		-
Other foreign currencies		28,233		12,108
		958,231		1,069,674

Interest rate risk

Interest rate risk refers to the effect on the market value of the Pension Plan's assets and liabilities due to fluctuations in interest rates. As at December 31, 2016, the Pension Fund's fixed income investments with exposure to interest rate risk is $33,033,140 (2015 - $34,995,585). As at December 31, 2016, if the nominal interest rate had increased or decreased by one percent, the effect on the assets, with all other variables held constant, would be $4,961,578 (2015 - $5,231,355).

Liquidity risk

Liquidity risk is the exposure of the Pension Plan to the risk of not being able to meet its financial obligations as they become due. The Pension Plan maintains an investment policy which contains asset mix guidelines which help ensure the Pension Plan is able to liquidate investments to meet its pension benefit or other obligations.

Notes to Financial Statements

DECEMBER 31, 2016

4. Investments (continued)

d) Statutory disclosure

The following information is provided in respect of individual investments, including those held within the Master Trust, with a cost or fair value in excess of 1% of the cost or fair value of the Pension Plan's investments as required to meet disclosure requirements under the Pension Benefits Act (Ontario):

	Rate or Units	Maturity	Fair Value 2016 $
Canadian bonds and debentures			
Canada Real Return Bond	4.00%	12/01/2031	4,055,732
Canada Real Return Bond	4.25%	12/01/2021	3,947,756
Government of Canada Series	2.00%	12/01/2041	3,629,432
Government of Canada Real Return Bond	1.50%	12/01/2044	3,352,943
Government of Canada Unsec'd Inflation Linked	1.25%	12/01/2047	1,432,223
Canadian pooled bond fund			
TD Emerald Active Canadian Long Bond Pooled Fund	1,673,730		16,903,836
Canadian corporate shares			
Suncor Energy Inc.	25,455		1,117,484
Bank of Nova Scotia	14,340		1,072,094
Bank of Montreal	10,320		996,602
Canadian Natural Res. Limited	22,779		974,705
Toronto Dominion Bank	13,429		889,259
Royal Bank of Canada	9,718		883,083
Canadian and foreign pooled equity funds			
Aberdeen Canada Global Equity Fund	77,738		4,734,629
Global Equity Allocation Fund III	321,080		9,278,984
Brandes Canada Global Equity Unit Trust	335,251		4,326,041

Notes to Financial Statements

DECEMBER 31, 2016

5. Investment income

	2016 $	2015 $
Fixed income	938,172	1,140,608
Equities	3,021,368	2,915,384
Cash	22,792	36,727
	3,982,332	4,092,719

6. Administrative expenses and professional fees

	2016 $	2015 $
Actuarial fees	31,540	59,444
Trustee and legal fees	1,210	8,331
Administrative expenses	68,082	68,082
Investment management fees	226,422	225,769
Audit fees	7,232	6,513
	334,486	368,139

7. Related party transactions

During the year, The City of Hamilton charged administrative expenses to the Pension Plan in the amount of $68,082 (2015 - $68,082) in connection with the Pension Plan's unfunded liability as at the last actuarial valuation date of December 31, 2014 based on membership data as at October 2012. The next actuarial valuation should be performed with an effective date not later than December 31, 2017.

Notes to Financial Statements

8. Capital risk management

The main objective of the Pension Plan is to sustain a certain level of net assets in order to meet the pension obligations of the Hamilton Municipal Retirement Fund Pension Plan, which are not presented or discussed in these specified-purpose financial statements. The Pension Plan fulfils its primary objective by adhering to specific investment policies outlined in the Statement of Investment Policies and Procedures (the "SIP&P"), which is reviewed annually by the City. The inception date of the Master Trust and SIP&P is November 1, 1999. The SIP&P was last amended and approved on December 14, 2016. The most material change made to the Master Trust SIP&P complies with the amendment made to applicable pension legislation related to environmental, social and governance (ESG) factors. Effective January 1, 2016, a pension plan's SIP&P must state whether ESG factors are incorporated into the pension plan's investment policies and procedures, and if so, to include a description of how these factors are incorporated. The other significant changes in the Master Trust SIP&P were made to comply with the federal investment regulations as amended and/or for clarification purposes. Finally, the Master Trust SIP&P was updated with information on the status of the pension plan members, contributions, benefits and liabilities. The Pension Plan manages net assets by engaging knowledgeable investment managers who are charged with the responsibility of investing existing funds and new funds (current year employer contributions) in accordance with the approved SIP&P. Increases in net assets available for benefits are direct results of investment income generated by investments held by the Plan and contributions into the Plan by eligible employees and by the City. The main use of net assets available for benefits is for the benefit payments to eligible Plan members. Although there are no regulatory requirements relating to the level of assets, the funding to be maintained by the Plan is determined through triennial actuarial valuations. There were no contributions that were past due at December 31, 2016. The Pension Plan is required to file fund financial statements with FSCO.

The following table presents the asset allocation for each category, and total investments, along with benchmarks.

		Asset allocation (%)		
		SIP&P	As at December 31	
Asset categories	Benchmark	Target	2016	2015
Fixed income	DEX Long Term Bond Index	40.0%	44.1%	47.0%
Equities				
Canadian equity	S&P/TSX Composite	30.0%	31.1%	25.3%
Global equity	MSCI World Index (C$)	30.0%	24.8%	27.7%
Total investments	Composite index	100%	100%	100%

Appendix B
HMRF/MWRF Pension
Sub-Committee
Report 17-001

Supplemental Appendix (Unaudited)

This supplemental disclosure is attached as an unaudited appendix to the financial statements for reporting under FSCO disclosures requirements.

The following table presents the annual rate of investment return by asset category as determined by Aon Hewitt.

		Annual rate of investment return (%)	
		As at December 31	
Asset categories	Benchmark	2016	2015
Bonds	DEX Long Term Bond Index	3.0%	3.1%
Canadian equities	S&P/TSX Composite	24.1%	(5.3%)
Global equities	MSCI World Index (C$)	4.7%	10.4%

Financial Statements of the Hamilton-Wentworth Retirement Fund Pension Plan
December 31, 2016

Financial Statements
December 31, 2016

Contents

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INDEPENDENT AUDITORS' REPORT

To the Pension Committee of the Corporation of the City of Hamilton for the Hamilton-Wentworth Retirement Fund Pension Plan

We have audited the accompanying fund financial statements of the Pension Fund for the Hamilton-Wentworth Retirement Fund Pension Plan, which comprise the statement of net assets available for benefits as at December 31, 2016 and the statement of changes in net assets available for benefits for the year then ended, and notes, comprising a summary of significant accounting policies and other explanatory information. The fund financial statements have been prepared by management based on the financial reporting provisions of Section 76 of Regulation 909 of the Pension Benefits Act (Ontario).

Management's Responsibility for the Fund Financial Statements

Management is responsible for the preparation and fair presentation of these fund financial statements in accordance with the financial reporting provisions of Section 76 of Regulation 909 of the Pension Benefits Act (Ontario), and for such internal control as management determines is necessary to enable the preparation of fund financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these fund financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform an audit to obtain reasonable assurance about whether the fund financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the fund financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the fund financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the entity's preparation and fair presentation of the fund financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the fund financial statements.

KPMG

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the fund financial statements present fairly, in all material respects, the net assets available for benefits of the Hamilton-Wentworth Retirement Fund Pension Plan as at December 31, 2016 and the changes in net assets available for benefits for the year then ended in accordance with the financial reporting provisions of Section 76 of Regulation 909 of the Pension Benefits Act (Ontario).

Basis of Accounting and Restriction on Use

Without modifying our opinion, we draw attention to Note 2(a) to the fund financial statements, which describes the basis of accounting. The fund financial statements are prepared to assist the Hamilton-Wentworth Retirement Fund Pension Plan to meet the requirements of the Financial Services Commission of Ontario under Section 76 of Regulation 909 of the Pension Benefits Act (Ontario). As a result, the fund financial statements may not be suitable for another purpose.

Our report is intended solely for the Pension Committee of the Hamilton-Wentworth Retirement Fund Pension Plan and the Financial Services Commission of Ontario and should not be used by any other parties.

KPMG LLP

Chartered Professional Accountants, Licensed Public Accountants

June 20, 2017
Hamilton, Canada

Statement of Net Assets Available For Benefits

DECEMBER 31, 2016, with comparative information for 2015

	2016 $	2015 $
ASSETS		
Investments		
Investment in Master Trust (note 4a)	59,408,945	59,262,666
Cash in Plan (note 4a)	36,262	68,186
Accrued investment income	64,395	59,114
Sponsor and other receivables	-	228,417
	59,509,602	59,618,383
LIABILITIES		
Accrued liabilities	66,253	57,372
NET ASSETS AVAILABLE FOR BENEFITS	59,443,349	59,561,011

On behalf of the Pension Plan Administrator

The accompanying notes are an integral part of these financial statements.

Statement of Changes In Net Assets Available For Benefits

Year Ended DECEMBER 31, 2016, with comparative information for 2015

	2016 $	2015 $
INCREASE IN NET ASSETS		
Investment income (note 5)	3,067,987	3,137,027
Net realized gain on investments	733,888	1,972,446
Change in value of investments	1,456,212	-
	5,258,087	5,109,473
CONTRIBUTIONS		
Sponsor		
Special payment for unfunded liabilities (note 7)	1,630,692	2,741,004
DECREASE IN NET ASSETS		
Pension benefits	6,741,886	7,205,747
Change in value of investments	-	3,380,807
Administrative expenses and professional fees (note 6)	264,555	265,879
	7,006,441	10,852,433
NET DECREASE FOR THE YEAR	(117,662)	(3,001,956)
NET ASSETS AVAILABLE FOR BENEFITS AT THE BEGINNING OF THE YEAR	59,561,011	62,562,967
NET ASSETS AVAILABLE FOR BENEFITS AT THE END OF THE YEAR	59,443,349	59,561,011

The accompanying notes are an integral part of these financial statements.

Notes to Financial Statements

DECEMBER 31, 2016

1. Description of the Plan

The Hamilton-Wentworth Retirement Fund ("HWRF") Pension Plan (the "Pension Plan") is a contributory defined benefit pension plan. The Pension Plan is registered under the Pension Benefits Act, 1987 (Ontario) (the "Act"), Registration Number 1073352. In accordance with a provision of the Ontario Municipal Employees Retirement System (OMERS) all new employees of the Corporation of the City of Hamilton are included under OMERS rather than the Pension Plan. As a consequence, the membership of the Pension Plan has become closed to new entrants and will decrease as existing members terminate. The Pension Plan's head office is located at 71 Main Street West, Hamilton, Ontario.

These fund financial statements have been approved and authorized for issue by the Treasurer of the City, as plan sponsor of the Hamilton-Wentworth Retirement Fund Pension Plan on June 20, 2017.

The majority of the net assets of the Pension Plan are combined in a pooled fund under a Master Trust agreement administered by RBC Investor Services Trust.

RBC Investor Services Trust (the "Trustee") is the custodial trustee of the Pension Plan. Investment decisions are made by independent investment managers using guidelines established by the City of Hamilton's Pension Committee for the Pension Plan while AON Hewitt is the Pension Plan's actuary for the defined benefit plan.

The Master Trust is divided into units of equal value, without priority or preference. The Master Trust issues units to the individual pension plans representing their proportionate ownership of the total assets in the Master Trust. Each plan is credited with units each time contributions are made while disbursements from the individual plans result in reductions of their unit holdings. Investment income in the Master Trust does not result in additional units for the individual plans but serves to increase the value of the units.

2. Basis of preparation

a) Basis of presentation

As permitted by the Financial Services Commission of Ontario ("FSCO") these fund financial statements are prepared in accordance with Canadian accounting standards for pension plans excluding pension obligations and any resulting surplus or deficit.

The Pension Plan complies on a consistent basis with International Financial Reporting Standards ("IFRS") in Part 1 of the Chartered Professional Accountants ("CPA Canada") Handbook.

These fund financial statements have been prepared to assist the Administrator of the Pension Plan to comply with the requirements of the Financial Services Commission of Ontario ("FSCO") under section 76 of Regulation 909 of the Pension Benefits Act (Ontario). As a result, the fund financial statements may not be suitable for another purpose.

These fund financial statements of the Pension Plan do not purport to show the adequacy of the Pension Plan's assets to meet its pension obligation. Such an assessment requires additional information, such as the Pension Plan's actuarial reports and information about the City's financial health.

Notes to Financial Statements

DECEMBER 31, 2016

2. Basis of preparation (continued)

b) Basis of measurement

The financial statements have been prepared on the historical cost basis, except for financial instruments which are measured at fair value through the statement of changes in net assets available for benefits.

c) Functional and presentation currency

These fund financial statements are presented in Canadian dollars, which is the Pension Plan's Functional currency.

3. Significant accounting policies

a) Financial assets and financial liabilities

(i) *Non-derivative financial assets*

Financial assets are recognized initially on the trade date, which is the date that the Pension Plan becomes a party to the contractual provisions of the instrument. Transaction costs are not included in the fair value of investments either on initial recognition or on subsequent re-measurement. Transaction costs are included in the statement of changes in net assets available for benefits as part of administrative expenses and professional fees incurred for the period.

The Pension Plan measures all of its investments at fair value through the statement of changes in net assets available for benefits. All other non-derivative financial assets including accrued investment income, are measured at amortized cost.

The Pension Plan derecognizes a financial asset when the contractual rights to the cash flows from the asset expire, or it transfers the rights to receive the contractual cash flows in a transaction in which substantially all the risks and rewards of ownership of the financial asset are transferred or in which the Pension Plan neither transfers nor retains substantially all the risks and rewards of ownership and does not retain control of the financial asset.

On derecognition of a financial asset, the difference between the carrying amount of the asset and consideration received is recognized in the statement of changes in net assets available for benefits, as a net realized gain on investments.

Notes to Financial Statements

DECEMBER 31, 2016

3. Significant accounting policies (continued)

a) Financial assets and financial liabilities (continued)

(ii) Non-derivative financial liabilities

All financial liabilities are recognized initially on the trade date at which the Pension Plan becomes a party to the contractual provisions of the instrument. The Pension Plan derecognizes a financial liability when its contractual obligations are discharged, cancelled or expired.

Financial assets and liabilities are offset and the net amount presented in the statement of net assets available for benefits when, and only when, the Pension Plan has a legal right to offset the amounts and it intends either to settle on a net basis or to realize the asset and settle the liability simultaneously. The Pension Plan considers its accrued liabilities to be a non-derivative financial liability.

(iii) Derivative financial instruments

Derivative financial instruments are recognized initially at fair value and attributable transaction costs are recognized in the statement of changes in net assets available for benefits as incurred. Subsequent to initial recognition, derivatives are measured at fair value, and all changes are recognized immediately in the statement of changes in net assets available for benefits.

b) Fair value measurement

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between knowledgeable, willing parties in an arm's length transaction at the measurement date.

If an asset or a liability measured at fair value has a bid and an ask price, the price within the bid-ask spread that is the most representative of fair value in the circumstances shall be used to measure fair value. The Pension Plan uses closing market price as a practical expedient for fair value measurement.

When available, the Pension Plan measures the fair value of an instrument using quoted prices in an active market for that instrument. A market is regarded as active if quoted prices are readily and regularly available and represent actual and regularly occurring market transactions on an arm's length basis.

If a market for a financial instrument is not active, then the Pension Plan establishes fair value using a valuation technique. Valuation techniques include using recent arm's length transactions between knowledgeable, willing parties (if available), reference to the current fair value of other instruments that are substantially the same, discounted cash flow analyses and option pricing models.

Notes to Financial Statements

DECEMBER 31, 2016

3. Significant accounting policies (continued)

b) Fair value measurement (continued)

The best evidence of the fair value of a financial instrument at initial recognition is the transaction price, i.e. the fair value of the consideration given or received, unless the fair value of that instrument is evidenced by comparison with other observable current market transactions in the same instrument or based on a valuation technique whose variables include only data from observable markets. When transaction price provides the best evidence of fair value at initial recognition, the financial instrument is initially measured at the transaction price and any difference between this price and the value initially obtained from a valuation model is subsequently recognized in profit or loss on an appropriate basis over the life of the instrument but not later than when the valuation is supported wholly by observable market data or the transaction is closed out.

All changes in fair value, other than interest and dividend income and expense, are recognized in the statement of changes in net assets available for benefits as part of the change in value of investments.

Investments are stated at fair value. Fair value of investments including those held within the Master Trust is determined as follows:

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

(ii) Bonds and equities are valued at closing bid prices. Where quoted prices are not available, estimated fair values are calculated using comparable securities.

(iii) Pooled funds are valued at the unit value supplied by the pooled fund administrator and which represents the Pension Plan's proportionate share of the underlying net assets at fair value determined using closing bid prices.

c) Net investment income

Income from investments is recognized on an accrual basis and includes dividend and interest income.

d) Realized and unrealized gain (loss) on investments

Realized gains or losses on sales of investments is the difference between the proceeds received and the average cost of the investments sold.

Change in value of investments represents the change in the difference between the fair value and cost of investments at the beginning and end of the year.

e) Income taxes

The Pension Plan is a registered pension plan, as defined by the Income Tax Act (Canada) and, accordingly, is not subject to income taxes.

Notes to Financial Statements

DECEMBER 31, 2016

3. Significant accounting policies (continued)

f) Foreign currency

Transactions in foreign currencies are translated into Canadian dollars at the exchange rate at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies at the reporting date are retranslated into Canadian dollars at the exchange rate at that date.

Foreign currency differences arising on retranslation are recognized in the statement of changes in net assets available for benefits.

g) Use of estimates and judgments

The preparation of the fund financial statements requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets and liabilities at the date of the statement of net assets available for benefits and the reported amounts of changes in net assets available for benefits during the year. Actual results may differ from those estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future years affected.

4. *Investments*

a) Plan and Master Trust investments

The following table provides details of the underlying investments held by the Master Trust:

Master Trust	2016			2015		
	Cost	Market Value	Unrealized Gain (Loss)	Cost	Market Value	Unrealized Gain (Loss)
	$	$	$	$	$	$
Cash	1,504,484	1,504,484	-	4,006,929	4,006,929	-
Short term notes and treasury bills	1,411,950	1,411,950	-	992,484	992,484	-
Canadian bonds and debentures	69,953,807	70,266,809	313,002	69,606,294	69,482,186	(124,108)
Canadian pooled bond fund	71,812,905	72,316,329	503,424	75,036,278	76,056,739	1,020,461
Canadian corporate shares	72,138,062	100,662,744	28,524,682	68,112,707	79,787,954	11,675,247
Canadian pooled equity fund	2,055,186	1,804,290	(250,896)	1,120,629	1,141,996	21,367
Foreign corporate shares	4,085,160	4,943,866	858,706	4,040,596	4,841,035	800,439
Foreign pooled equity fund	77,448,520	77,044,017	(404,503)	76,488,765	83,974,567	7,485,802
	300,410,074	329,954,489	29,544,415	299,404,682	320,283,890	20,879,208

Notes to Financial Statements

DECEMBER 31, 2016

4. Investments (continued)

a) Plan and Master Trust investments (continued)

The following table provides details of the Pension Plan's proportionate interest of underlying investments held within the Master Trust:

Master Trust HWRF Shares	2016			2015		
	Cost	Market Value	Unrealized Gain (Loss)	Cost	Market Value	Unrealized Gain (Loss)
	$	$	$	$	$	$
Cash	270,885	270,885	-	741,409	741,409	-
Short term notes and treasury bills	254,224	254,224	-	183,641	183,641	-
Canadian bonds and debentures	12,595,319	12,651,675	56,356	12,879,369	12,856,405	(22,964)
Canadian pooled bond fund	12,930,053	13,020,695	90,642	13,884,088	14,072,906	188,818
Canadian corporate shares	12,988,598	18,124,522	5,135,924	12,603,008	14,763,299	2,160,291
Canadian pooled equity fund	370,040	324,866	(45,174)	207,352	211,306	3,954
Foreign corporate shares	735,541	890,153	154,612	747,638	895,745	148,107
Foreign pooled equity fund	13,944,756	13,871,925	(72,831)	14,152,844	15,537,955	1,385,111
	54,089,416	59,408,945	5,319,529	55,399,349	59,262,666	3,863,317

The Pension Plan also directly holds cash of $36,262 (2015 - $68,186).

b) Fair value

The following table presents financial assets measured at fair value in the statement of net assets available for benefits in accordance with the fair value hierarchy. This hierarchy groups financial assets into three levels based on the significance of inputs used in measuring the fair value of the financial assets. The fair value hierarchy has the following levels:

Level 1: Unadjusted quoted prices in active markets for identical assets or liabilities;

Level 2: Inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly; and

Level 3: Inputs for assets and liabilities that are not based on observable market data.

The level within which the financial asset is classified is determined based on the lowest level of significant input to the fair value measurement. The financial assets measured at fair value in the statement of net assets available for benefits are grouped into the fair value hierarchy as follows:

The Pension Plan's investment in Master Trust is classified as Level 2. The following table presents the classification of the investments held within the Master Trust and those held directly by the Pension Plan at December 31, 2016, using the fair value hierarchy:

Notes to Financial Statements

DECEMBER 31, 2016

4. Investments (continued)

b) Fair value (continued)

	2016			2016 Market Value		
	Cost	Market Value	Unrealized Gain (Loss)	Level 1	Level 2	Level 3
	$	$	$	$	$	$
Cash	307,147	307,147	-	307,147	-	-
Short term notes and treasury bills	254,224	254,224	-	-	254,224	-
Canadian bonds and debentures	12,595,319	12,651,675	56,356	-	12,651,675	-
Canadian pooled bond fund	12,930,053	13,020,695	90,642	-	13,020,695	-
Canadian corporate shares	12,988,598	18,124,522	5,135,924	18,124,522	-	-
Canadian pooled equity fund	370,040	324,866	(45,174)	-	324,866	-
Foreign corporate shares	735,541	890,153	154,612	890,153	-	-
Foreign pooled equity fund	13,944,756	13,871,925	(72,831)	-	13,871,925	-
	54,125,678	59,445,207	5,319,529	19,321,822	40,123,385	-

	2015			2015 Market Value		
	Cost	Market Value	Unrealized Gain (Loss)	Level 1	Level 2	Level 3
	$	$	$	$	$	$
Cash	809,595	809,595	-	809,595	-	-
Short term notes and treasury bills	183,641	183,641	-	-	183,641	-
Canadian bonds and debentures	12,879,369	12,856,405	(22,964)	-	12,856,405	-
Canadian pooled bond fund	13,884,088	14,072,906	188,818	-	14,072,906	-
Canadian corporate shares	12,603,008	14,763,299	2,160,291	14,763,299	-	-
Canadian pooled equity fund	207,352	211,306	3,954	-	211,306	-
Foreign corporate shares	747,638	895,745	148,107	895,745	-	-
Foreign pooled equity fund	14,152,844	15,537,955	1,385,111	-	15,537,955	-
	55,467,535	59,330,852	3,863,317	16,468,639	42,862,213	-

The methods and valuation techniques used for the purpose of measuring fair value are unchanged compared to the prior year reporting period. There were no changes in the classification of these financial instruments during the current year.

Notes to Financial Statements

DECEMBER 31, 2016

4. Investments (continued)

c) Investments – financial instrument risk

The Pension Plan's investment activities expose it to a variety of financial risks including credit risk, market price risk, currency risk, interest rate risk and liquidity risk.

Credit risk

Credit risk is the risk of loss arising from the failure of a counterparty to fully honour its financial obligations with the Pension Plan, including its inability or unwillingness to pay borrowed principal, interest or rent when they come due. Credit risk can also lead to losses when issuers and debtors are downgraded by credit rating agencies, usually leading to a fall in the market value of the debtors' obligations.

Fixed income investments include cash, short-term notes and treasury bills, Canadian bonds and debentures and Canadian pooled bond funds. As at December 31, 2016, the Pension Plan's fixed income investments exposure to credit risk is as follows:

Type	Credit Rating	2016 % of Total Fund	2016 Amount $	2015 % of Total Fund	2015 Amount $
Corporate	AAA/AA	2.6%	679,665	5.8%	1,609,508
	A	10.9%	2,871,010	13.3%	3,707,756
	BBB	3.1%	803,111	5.1%	1,437,924
Provincial	n/a	23.8%	6,252,057	17.9%	4,986,243
Federal	n/a	56.6%	14,838,940	54.2%	15,140,935
Cash	n/a	3.0%	788,958	3.7%	1,040,181
		100.0%	26,233,741	100.0%	27,922,547

The fixed income investments mature as follows; $561,372 within 1 year, $16,066,718 within 1-10 years and $9,605,651 in greater than 10 years.

Market price risk

Market price risk is the risk that the fair value of a financial instrument will fluctuate as a result of changes in the market prices caused by factors specific to the individual financial instruments, its issuer, or factors affecting similar financial instruments traded in the public capital markets. As at December 31, 2016, the Pension Plan's equity exposure of $33,211,466 (2015 - $31,408,305) represented 55.9% (2015 – 52.9%) of the Pension Plan's investments. As at December 31, 2016, if the prices of securities had increased or decreased by ten percent, the effect on the assets, with all other variables held constant, would be $3,321,147 (2015 - $3,140,830).

Notes to Financial Statements

DECEMBER 31, 2016

4. Investments (continued)

c) Investments – financial instrument risk (continued)

Currency risk

Investments denominated in currencies other than the Canadian dollar expose the Pension Plan to fluctuations in foreign exchange rates. Fluctuations in the relative value of the Canadian dollar against these foreign currencies can result in a positive or a negative effect on the fair value of the investments.

As at December 31, 2016, the Pension Plan's exposure to foreign currency, in Canadian dollars, is as follows:

Type	2016 % of Total Fund	2016 Amount $	2015 % of Total Fund	2015 Amount $
United States dollar	9.7%	5,793,507	20.6%	12,217,568
Euro	3.3%	1,956,803	1.4%	835,853
Pound sterling	2.7%	1,583,578	2.1%	1,215,845
Japanese yen	2.3%	1,390,125	1.2%	689,124
Swiss franc	1.1%	681,646	1.0%	616,399
South Korean won	1.0%	576,789	0.4%	216,350
New Taiwan dollar	0.8%	490,710	0.0%	-
Hong Kong dollar	0.6%	363,767	0.4%	215,246
Renminbi	0.5%	307,339	0.0%	-
Austrailian dollar	0.3%	200,128	0.0%	-
Indian rupee	0.3%	178,686	0.0%	-
Brazilian real	0.3%	174,064	0.1%	60,879
Russian ruble	0.3%	150,096	0.0%	-
New shekel	0.2%	142,710	0.0%	-
Swedish kronor	0.2%	128,860	0.3%	180,432
Mexican peso	0.2%	123,993	0.0%	-
Thai baht	0.1%	84,325	0.0%	-
Other foreign currencies	0.6%	434,952	0.4%	186,004
	24.5%	14,762,078	27.9%	16,433,700

Notes to Financial Statements

DECEMBER 31, 2016

4. Investments (continued)

c) Investments – financial instrument risk (continued)

As at December 31, 2016, if the Canadian dollar had strengthened/weakened by five percent in relation to other currencies, with all other variables held constant, the effect on the assets would be as follows:

Type	2016 Change in Currency	2016 Amount $	2015 Change in Currency	2015 Amount $
United States dollar	+/- 5%	289,675	+/- 5%	610,878
Euro		97,840		41,793
Pound sterling		79,179		60,792
Japanese yen		69,506		34,456
Swiss franc		34,082		30,820
South Korean won		28,839		10,818
New Taiwan dollar		24,536		-
Hong Kong dollar		18,188		10,762
Renminbi		15,367		-
Austrailian dollar		10,006		-
Indian rupee		8,934		-
Brazilian real		8,703		3,044
Russian ruble		7,505		-
New shekel		7,136		-
Swedish kronor		6,443		9,022
Mexican peso		6,200		-
Thai baht		4,216		-
Other foreign currencies		21,748		9,300
		738,103		821,685

Interest rate risk

Interest rate risk refers to the effect on the market value of the Pension Plan's assets and liabilities due to fluctuations in interest rates. As at December 31, 2016, the Pension Plan's fixed income investments with exposure to interest rate risk is $25,444,783 (2015 - $26,882,365). As at December 31, 2016, if the nominal interest rate had increased or decreased by one percent, the effect on the assets, with all other variables held constant, would be $3,821,806 (2015 - $4,018,541).

Liquidity risk

Liquidity risk is the exposure of the Pension Plan to the risk of not being able to meet its financial obligations as they become due. The Pension Plan maintains an investment policy which contains asset mix guidelines which help ensure the Pension Plan is able to liquidate investments to meet its pension benefit or other obligations.

Notes to Financial Statements

DECEMBER 31, 2016

4. Investments (continued)

d) Statutory disclosure

The following information is provided in respect of individual investments, including those held within the Master Trust, with a cost or fair value in excess of 1% of the cost or fair value of the Pension Plan's investments as required to meet disclosure requirements under the Pension Benefits Act (Ontario):

	Rate or Units	Maturity	Fair Value 2016 $
Canadian bonds and debentures			
Canada Real Return Bond	4.00%	12/01/2031	3,124,051
Canada Real Return Bond	4.25%	12/01/2021	3,040,880
Government of Canada Series	2.00%	12/01/2041	2,795,681
Government of Canada Real Return Bond	1.50%	12/01/2044	2,582,707
Government of Canada Unsec'd Inflation Linked	1.25%	12/01/2047	1,103,213
Canadian pooled bond fund			
TD Emerald Active Canadian Long Bond Pooled Fund	1,289,242		13,020,695
Canadian corporate shares			
Suncor Energy Inc.	19,608		860,776
Bank of Nova Scotia	11,046		825,813
Bank of Montreal	7,949		767,663
Canadian Natural Res. Limited	17,546		750,796
Toronto Dominion Bank	10,344		684,979
Royal Bank of Canada	7,486		680,222
Canadian and foreign pooled equity funds			
Aberdeen Canada Global Equity Fund	59,880		3,646,992
Global Equity Allocation Fund III	247,322		7,147,421
Brandes Canada Global Equity Unit Trust	258,237		3,332,265

Notes to Financial Statements

DECEMBER 31, 2016

5. Investment income

	2016 $	2015 $
Fixed income	722,589	874,580
Equities	2,327,261	2,233,848
Cash	18,137	28,599
	3,067,987	3,137,027

6. Administrative expenses and professional fees

	2016 $	2015 $
Actuarial fees	20,618	19,150
Trustee and legal fees	1,085	6,498
Administrative expenses	60,976	60,976
Investment management fees	174,418	172,539
Audit fees	7,458	6,716
	264,555	265,879

7. Related party transactions

During the year, The City of Hamilton charged administrative expenses to the Pension Plan in the amount of $60,976 (2015 - $60,976).

The City of Hamilton also made actuarial deficiency payments in the amount of $1,630,692 (2015 - $2,741,004) in connection with the Pension Plan's unfunded liability as at the last actuarial valuation date of December 31, 2013 based on membership data as at November 2014. The next actuarial valuation date is to occur no later than December 31, 2016.

Notes to Financial Statements

DECEMBER 31, 2016

8. Capital risk management

The main objective of the Pension Plan is to sustain a certain level of net assets in order to meet the pension obligations of the Hamilton-Wentworth Retirement Fund Pension Plan, which are not presented or discussed in these specified-purpose financial statements. The Pension Plan fulfils its primary objective by adhering to specific investment policies outlined in the Statement of Investment Policies and Procedures (the "SIP&P"), which is reviewed annually by the City. The inception date of the Master Trust and SIP&P is November 1, 1999. The SIP&P was last amended and approved on December 14, 2016. The most material change made to the Master Trust SIP&P complies with the amendment made to applicable pension legislation related to environmental, social and governance (ESG) factors. Effective January 1, 2016, a pension plan's SIP&P must state whether ESG factors are incorporated into the pension plan's investment policies and procedures, and if so, to include a description of how these factors are incorporated. The other significant changes in the Master Trust SIP&P were made to comply with the federal investment regulations as amended and/or for clarification purposes. Finally, the Master Trust SIP&P was updated with information on the status of the pension plan members, contributions, benefits and liabilities. The Pension Plan manages net assets by engaging knowledgeable investment managers who are charged with the responsibility of investing existing funds and new funds (current year employer contributions) in accordance with the approved SIP&P. Increases in net assets available for benefits are direct results of investment income generated by investments held by the Plan and contributions into the Plan by eligible employees and by the City. The main use of net assets available for benefits is for the benefit payments to eligible Plan members. Although there are no regulatory requirements relating to the level of assets, the funding to be maintained by the Plan is determined through triennial actuarial valuations. There were no contributions that were past due at December 31, 2016. The Pension Plan is required to file fund financial statements with FSCO.

The following table presents the asset allocation for each category, and total investments, along with benchmarks.

		Asset allocation (%)		
		SIP&P	As at December 31	
Asset categories	Benchmark	Target	2016	2015
Fixed income	DEX Long Term Bond Index	40.0%	44.1%	47.0%
Equities				
Canadian equity	S&P/TSX Composite	30.0%	31.1%	25.3%
Global equity	MSCI World Index (C$)	30.0%	24.8%	27.7%
Total investments	Composite index	100%	100%	100%

Appendix B
HMRF/MWRF Pension
Sub-Committee
Report 17-001

Supplemental Appendix
(Unaudited)

This supplemental disclosure is attached as an unaudited appendix to the financial statements for reporting under FSCO disclosures requirements.

The following table presents the annual rate of investment return by asset category as determined by Aon Hewitt.

		Annual rate of investment return (%)	
		As at December 31	
Asset categories	Benchmark	2016	2015
Bonds	DEX Long Term Bond Index	3.0%	3.1%
Canadian equities	S&P/TSX Composite	24.1%	(5.3%)
Global equities	MSCI World Index (C$)	4.7%	10.4%

Hamilton

CITY OF HAMILTON
CORPORATE SERVICES DEPARTMENT
Financial Services Division

TO:	Chair and Members HMRF/HWRF Pension Administration Committee
COMMITTEE DATE:	November 30, 2017
SUBJECT/REPORT NO:	Hamilton-Wentworth Retirement Fund (HWRF) Valuation at December 31, 2016 (FCS17095) (City Wide)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Barb Howe (905) 546-2424 Ext. 5599
SUBMITTED BY: **SIGNATURE:**	Mike Zegarac General Manager Finance and Corporate Services Department

RECOMMENDATION

That the December 31, 2016 actuarial valuation for the Hamilton Wentworth Retirement Fund (HWRF), attached as Appendix "B" to Report FCS17095, be received for information.

EXECUTIVE SUMMARY

The December 31, 2016 Valuation for the Hamilton Wentworth Retirement Fund (HWRF), attached as Appendix "B" to Report FCS17095, has shown improvement since the last valuation.

The funded status of the plan on a going concern basis has improved from a deficit position of $2.1 million to a $4 million surplus. However, on a solvency basis the plan continues to be in a deficit position with a current deficit of $3.6 million down from its previous deficit of $8.3 million.

Since the ratio of solvency assets to solvency liabilities is equal to 0.94, there are no solvency concerns; consequently a new valuation will not be required until December

31, 2019. However, the current solvency deficit requires minimum annual payments totalling $3.89 million over the 3 year period. The 2017 minimum annual payment of $1.1 million is provided for in the current budget.

Alternatives for Consideration – Not Applicable.

FINANCIAL – STAFFING – LEGAL IMPLICATIONS

Financial: Although the plan text includes a provision for indexation, the value of the indexation can be excluded from the valuation both on a going concern basis and on a solvency basis. The estimated cost to fund future indexation is approximately $8.8 million and is not reflected in the going concern surplus position of the plan. However, the Financial Services Commission of Ontario (FSCO) does require that the value of the current year's indexation be funded in the year granted. This means, with all else being equal, that each year the required annual special payment will increase by the cost of the annual indexation granted for the year.

Based on the 2016 valuation, the minimum contributions for 2017 and the estimated minimum contributions for 2018 and 2019, which includes an estimate for annual pension increases are as follows:

	2017	2018	2019
Minimum annual special payment	$1,094,400	$1,333,100	$1,465,900

The 2018 to 2019 minimum annual special payments includes an amount of $130,200 and $263,000, respectively, for the estimated impact of indexation in each year. Appendix "A" to Report FCS17095 contains a more detailed breakdown of the HWRF annual special payments requiredduring the period 2017-2019.

Since the City elected to defer any new solvency special payments by 12 months, the amortization of the new solvency payments will begin in 2018. These special payments can be provided for in the current budget.

On May 19, 2017, the Ontario government announced proposed changes to pension plan funding rules which may eliminate the need to fund solvency deficits, however these changes are not expected to become effective until 2018.

Below is a summary of the current funding rules and the proposed funding rules:

Type of Funding	Current Rules	Proposed Rules
Solvency Funding	Must fund to 100% Deficit up to 100% must be funded over 5 years	Must fund to 85%. Therefore no solvency funding if transfer ratio is 0.85 or better. Deficit up to 85% must be funded over 5 years
Going Concern Funding	Must fund to 100% Deficit up to 100% must be funded over 15 years	Must fund in excess of 100%. The excess is a cushion referred to as a Provision for Adverse Deviation (PfAD). Deficit funded over 10 years and past deficits can be consolidated.

Based on the latest valuation, the HWRF plan is currently funded at 94% and all of the minimum required special payments per this valuation are due to the solvency deficit. Therefore the required solvency special payments could be eliminated under the proposed new rules; however the going concern valuation would be enhanced. The going concern amortization period will be shortened and a reserve or cushion (i.e. PfAD) must be funded. The size of the required reserve has not yet been determined by the government.

Staff will be monitoring these changes in conjunction with the plan's Actuary to determine whether it will be beneficial to file a new valuation in 2018.

Staffing: None.

Legal: Under legislation, an actuarial valuation must be filed within nine months of thevaluation date. Therefore, the December 31, 2016, valuation should be filed by September 30, 2017. Prior to the filing date, the City applied to FSCO for a filing extension to October 31, 2017. Due to this time constraint, the December 31, 2016, valuation has been filed with the legislated authorities.

HISTORICAL BACKGROUND

The last valuation filed was as at December 31, 2013, and a new valuation is required no later than every three years. Under the Pension Benefits Act, if a report indicates solvency concerns, whereby the ratio of solvency assets to the solvency liabilities is less than 0.85, then actuarial valuations must be completed annually. Since, the solvency ratio at December 31, 2016, was 0.94, there are no solvency concerns; therefore, a valuation will not be required until December 31, 2019.

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

(i) Going Concern Basis – this valuation assumes that the plan will continue until the last beneficiary is paid based on current assumptions. In other words, the plan will run its normal life;

(ii) Solvency Basis – this valuation assumes that the plan would be wound up at December 31, 2016, and, as permitted by the Pension Benefits Act, certain benefits can be excluded from the solvency liability, such as post-retirement indexing;

(iii) Wind-up Basis – similar to the solvency basis, this valuation assumes that the plan would be wound up at December 31, 2016, but includes <u>all benefit</u> obligations, such as post-retirement indexing.

POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS

Pension plans are governed by the Pension Benefits Act, R.S.O, 1990. As required by legislation, valuations are filed with the Financial Services Commission of Ontario (FSCO) and Canada Revenue Agency (CRA).

RELEVANT CONSULTATION

Actuaries from the firm Aon Hewitt prepared the December 31, 2016 Actuarial Valuation.

ANALYSIS AND RATIONALE FOR RECOMMENDATION

The HWRF plan is a closed plan and is comprised mainly of police personnel and some non-police former City of Hamilton employees hired prior to July 1, 1965. The following chart provides a synopsis of the plan position and membership data as of December 31, 2016, for the respective groups and a comparison of the total to the previous valuation at December 31, 2013:

	($ in millions)			
	December 31, 2016			**December 31, 2013**
	Police	**Others**	**Total**	**Total**
Going Concern Basis				
Value of Assets	$59.1	$0.3	$59.4	$61.0
Total Liabilities	$55.0	$0.2	$55.2	$63.1
Actuarial Surplus(Deficit)[1]	$4.1	$0.1	$ 4.2	$(2.1)
Solvency Basis				
Value of Assets	$59.0	$0.4	$59.4	$60.9
Solvency Liabilities	$62.8	$0.2	$63.0	$69.2
Solvency Position	$(3.8)	$0.2	$(3.6)	$(8.3)
Solvency Ratio			.94	.88
Wind-up Basis				
Value of Assets	$59.0	$0.4	$59.4	$60.9
Wind-up Liabilities	$79.6	$0.3	$79.9	$90.7
Wind-up Surplus(Deficit)	$20.6	$0.1	$(20.5)	$(29.8)
# of members	166	5	171	207

[1] excludes future cost of indexation estimated at $8.8 million

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 FCS17095 - Schedule of Amortization Payments.
Appendix "B" to Report FCS17095 - HWRF Actuarial Valuation at December 31, 2016

Schedule of Amortization Payments
HWRF Pension Plan
Based on the December 31, 2016 Valuation

Description	Finance Report	2017	2018	2019	Date of last payment
December 31, 2016 going concern deficit		0.00	0.00	0.00	
Special Payments required for Going Concern purposes		$ -	$ -	$ -	
December 31, 2013 solvency deficit[2]	FCS14081	1,094,400	1,094,400	1,094,400	Dec-2019
December 31, 2016 solvency deficit[1]	FCS17095	-	108,500	108,500	Dec-2022
Special Payments required for solvency purposes		**$ 1,094,400**	**$ 1,202,900**	**$ 1,202,900**	
Total Special Payments		**$ 1,094,400**	**$ 1,202,900**	**$ 1,202,900**	
Funding of Curreent Year's Pension Indexation		-	130,200	263,000	
Minimum Special Payments Required for 2017-2019		**$ 1,094,400**	**$ 1,333,100**	**$ 1,465,900**	

[1] Annual special payment deferred by 12 months

[2] Per FSCO annual special payment previously reported in FCS14081 was increased by $6000. This resulted in a retroactive payment in 2017 of $12,800 to cover the shortfall, with interest, for 2015 and 2016

Appendix C
HMRF/MWRF Pension
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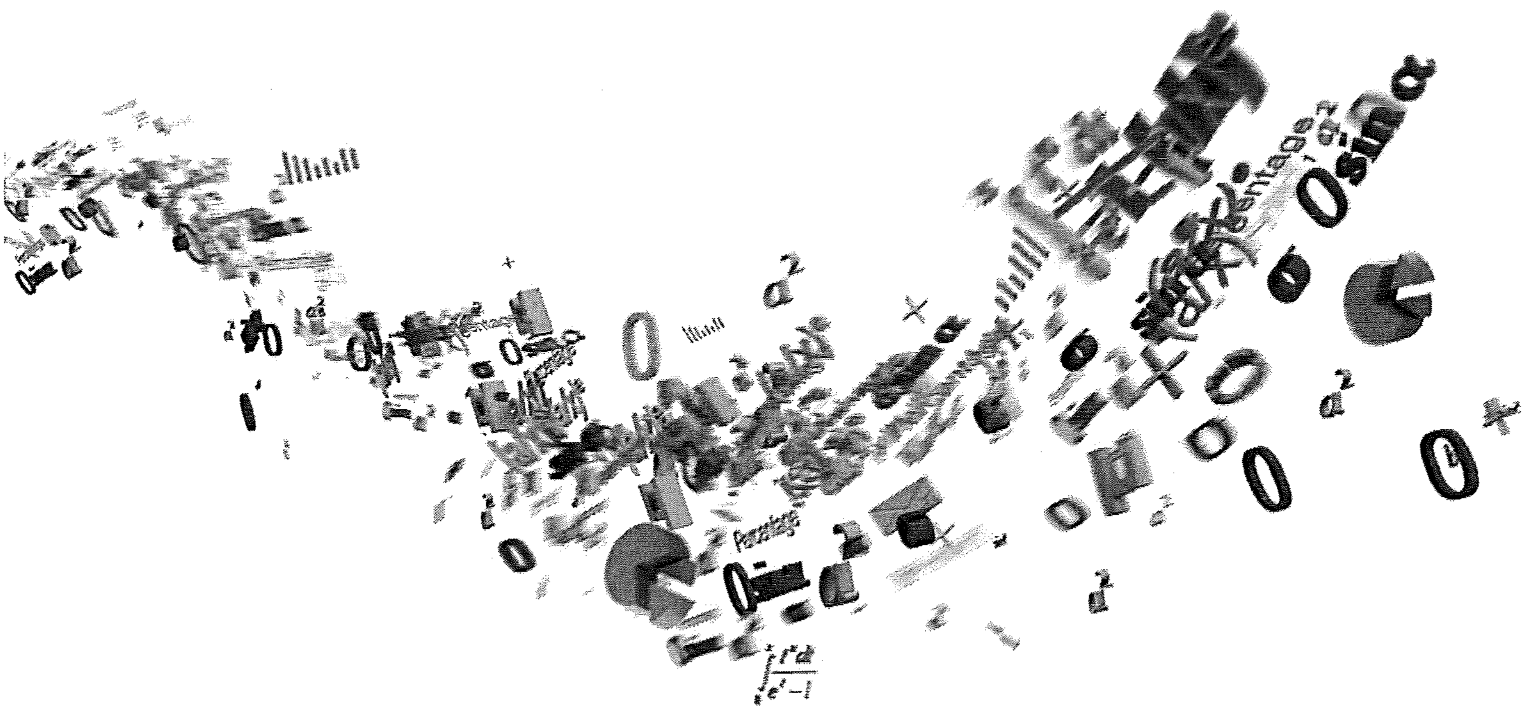

Actuarial Valuation as at December 31, 2016 for Hamilton-Wentworth Retirement Fund

Canada Revenue Agency Registration Number: 1073352

Provincial Registration Number: 1073352

October 2017

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Table of Contents

Executive Summary

An actuarial valuation has been prepared for the Hamilton-Wentworth Retirement Fund (the "Plan") as at December 31, 2016 for the primary purpose of establishing a funding range in accordance with legislative requirements for the Plan until the next actuarial valuation is performed. This section provides an overview of the important results and the key valuation assumptions which have had a bearing on these results. The next actuarial valuation for the purposes of developing funding requirements should be performed no later than as at December 31, 2019.

Summary of Principal Results

Financial Position

December 31, 2016	Going Concern	Solvency	Hypothetical Wind Up
Assets	$ 59,443,000	$ 59,373,000[1]	$ 59,373,000[1]
Liabilities	55,249,000	63,005,000	79,884,000
Financial position	$ 4,194,000	$ (3,632,000)	$ (20,511,000)
Adjustments[2]	-	3,142,000	-
Surplus/(Unfunded Liability)	**$ 4,194,000**	**$ (490,000)**	**$ (20,511,000)**

December 31, 2013	Going Concern	Solvency	Hypothetical Wind Up
Assets	$ 60,959,000	$ 60,889,000[1]	$ 60,889,000[1]
Liabilities	63,097,000	69,199,000	90,658,000
Financial position	$ (2,138,000)	$ (8,310,000)	$ (29,769,000)
Adjustments[2]	-	3,505,000	-
Surplus/(Unfunded Liability)	**$ (2,138,000)**	**$ (4,805,000)**	**$ (29,769,000)**

[1] Net of estimated wind up expenses
[2] Adjustments include prior year credit balance, and all solvency liability and solvency asset adjustments, where applicable

Legislative Ratios

	December 31, 2016	December 31, 2013
Solvency ratio	0.94	0.88
Transfer ratio	0.74	0.67

Minimum Contribution Requirements

Considering the funding and solvency status of the Plan, the minimum Company contributions for the period from December 31, 2016 to December 31, 2019 in accordance with legislative requirements, are as follows:

	Jan 1, 2017 to Dec 31, 2017	Jan 1, 2018 to Dec 31, 2018	Jan 1, 2019 to Dec 31, 2019
Company normal cost	$ -	$ 130,200	$ 263,000
Special payments toward amortizing unfunded liability	1,094,400	1,202,900	1,202,900
Adjustments	-	-	-
Minimum Required Company Contribution	**$ 1,094,400**	**$ 1,333,100**	**$ 1,465,900**

The Company normal cost shown above is to fund the cost of future indexation of pensions in payment.

Key Assumptions

The principal assumptions to which the valuation results are most sensitive are outlined in the following table.

December 31, 2016	Going Concern	Solvency/ Hypothetical Wind Up
Discount rate	4.50% per year	Solvency Annuity purchases: 2.91% per year Transfers: Not applicable Hypothetical Wind Up Annuity purchases: -0.09% per year Transfers: Not applicable
Inflation rate	2.25% per year	Not applicable
Indexing rate	0.00% per year	Not applicable
Mortality table	2014 Canadian Pensioner Public Mortality ("CPM2014PUB") with generational improvements using Scale B2D ("CPM-B")	2014 Canadian Pensioner Mortality Table ("CPM2014") with generational improvements using CPM Scale B2D ("CPM-B")
Retirement rates	Not Applicable	Not Applicable

December 31, 2013	Going Concern	Solvency/ Hypothetical Wind Up
Discount rate	5.75% per year	Solvency Annuity purchases: 3.63% per year Transfers: Not applicable Hypothetical Wind Up Annuity purchases: 0.15% per year Transfers: Not applicable
Inflation rate	2.25% per year	Not applicable
Indexing rate	0.00% per year	Not applicable
Mortality table	2014 Canadian Pensioner Public Mortality ("CPM2014PUB") with generational improvements using Scale B2D ("CPM-B")	UP94 Mortality Table with generational improvements using Scale AA
Retirement rates	Not applicable	Not applicable

Section 1: Introduction

Purpose and Terms of Engagement

We have been engaged by Corporation of the City of Hamilton, and hereafter referred to as the City, to conduct an actuarial valuation of the Plan, registered in Ontario, as at December 31, 2016 for the general purpose of determining the minimum and maximum funding contributions required by pension standards, based on the actuarial assumptions and methods summarized herein. Specifically, the purposes of the valuation are to:

- Determine the financial position of the Plan on a going concern basis as at December 31, 2016;
- Determine the financial position of the Plan as at December 31, 2016 on a solvency and hypothetical wind up basis;
- Determine the funding requirements of the Plan as at December 31, 2016 with consideration of the 2016 multi-jurisdictional agreement; and
- Provide the necessary actuarial certification required under the *Pension Benefits Act (Ontario)* (the "*Act*") and the *Income Tax Act.*

The results of this report may not be appropriate for accounting purposes or any other purposes not listed above.

The next required valuation will be as at December 31, 2019.

Summary of Changes Since the Last Valuation

The last such actuarial valuation in respect of the Plan was performed as at December 31, 2013. Since the time of the last valuation, we note that the following events have occurred:

- There were post-retirement pension increases of 1.80% effective January 1, 2015, 1.16% effective January 1, 2016 and 1.45% effective January 1, 2017. These increases have been reflected in the results presented in this valuation report.
- The Canadian Institute of Actuaries ("CIA") made revisions to the guidance for assumptions for hypothetical wind up and solvency valuations effective December 31, 2015. The key changes to the guidance are to use CPM2014 with generational improvements using CPM-B to determine the annuity purchase liabilities.

Company Information and Inputs

In order to prepare our valuation, we have relied upon the following information:

- A copy of the previous valuation report as at December 31, 2013;
- A copy of the Statement of Investment Policies and Procedures for the City;
- A copy of the funding policy for the City;
- Membership data compiled as at December 31, 2016 by the City;
- Asset data taken from the Plan's audited financial statements and
- A copy of the latest Plan text and amendments up to and including December 31, 2016.

Furthermore, our actuarial assumptions and methods have been chosen to reflect our understanding of the City's desired funding objectives with due respect to accepted actuarial practice and regulatory constraints.

Subsequent Events

As of the date of this report, we have not been made aware of any subsequent events which would have an effect on the results of this valuation. However, the following points should be noted in this regard:

- Actual experience deviating from expected after December 31, 2016 will result in gains or losses which will be reflected in the next actuarial valuation report.
- To the best of our knowledge, the results contained in this report are based on the regulatory and legal environment in effect at the date of this report and do not take into consideration any potential changes that may be currently under review. To the extent that actual changes in the regulatory and legal environment transpire, any financial impact on the Plan as a result of such changes will be reflected in future valuations.

Section 2: Going Concern Valuation Results

Going Concern Financial Position of the Plan

The going concern valuation provides an assessment of the Plan's financial position at the valuation date on the premise that the Plan continues on into the future indefinitely.

The selection of the applicable actuarial assumptions and methods reflect the Plan's funding objectives, as communicated by the City, actuarial standards of practice, and pension standards.

On the basis of the Plan provisions, membership data, going concern assumptions and methods, and asset information described in the Appendices, the going concern financial position of the Plan as at December 31, 2016 is shown in the following table. The results as at December 31, 2013 are also shown for comparison purposes.

Going Concern Financial Position

	December 31, 2016	December 31, 2013
Actuarial Value of Assets	**$ 59,443,000**	**$ 60,959,000**
Going Concern Liabilities		
Retirees	$ 40,526,000	$ 48,675,000
Beneficiaries	14,723,000	14,422,000
Total Liabilities	**$ 55,249,000**	**$ 63,097,000**
Surplus/(Unfunded Liability)	**$ 4,194,000**	**$ (2,138,000)**
Funded Ratio	**1.08**	**0.97**

Going Concern Financial Position Breakdown

	Police	Others	Total
Actuarial Value of Assets	**$ 59,086,000**	**$ 357,000**	**$ 59,443,000**
Going Concern Liabilities			
Retirees	$ 40,430,000	$ 96,000	$ 40,526,000
Beneficiaries	14,611,000	112,000	14,723,000
Total Liabilities	**$ 55,041,000**	**$ 208,000**	**$ 55,249,000**
Surplus/(Unfunded Liability)	***$ 4,045,000***	***$ 149,000***	***$ 4,194,000***

Future indexation has been excluded from the going concern liabilities. The cost of future indexation on a going concern basis, assuming indexing at the rate of 2.25% per annum, is $8,769,000. This is equal to a 15.9% increase in liabilities.

Change in Financial Position

The major components of the change in the Surplus/(Unfunded Liability) for the period from December 31, 2013 to December 31, 2016 are summarized in the following table.

Surplus/(Unfunded Liability) as at December 31, 2013	**$**	**(2,138,000)**
Expected interest on Surplus/(Unfunded Liability)	$	(390,000)
Special payments made in interim valuation period, including interest		5,576,000
Surplus/(Unfunded Liability) as at December 31, 2016	**$**	**3,048,000**
Change in liabilities due to experience gains/(losses)		
Gain/(loss) from investment earnings greater/lower than expected	$	4,741,000
Gain/(loss) due to indexation experience		(1,464,000)
Gain/(loss) due to mortality experience		2,551,000
Gain/(loss) due to expense experience		(84,000)
Net gain/(loss) due to other experience and miscellaneous items		(495,000)
Surplus/(Unfunded Liability) After Experience Gains/(Losses) as at December 31, 2016	**$**	**8,297,000**
Change in liabilities due to changes in actuarial assumptions		(4,103,000)
Surplus/(Unfunded Liability) as at December 31, 2016	**$**	**4,194,000**

Discussion of Changes in Assumptions

Effective December 31, 2016, the nominal discount rate has been changed from 5.75% per year to 4.50% per year. This change increased the going concern liabilities by $4,103,000.

Plan Amendments

There were no Plan amendments during the last three years that had a bearing on the results of this valuation.

Going Concern Valuation Sensitivity Results

In accordance with the CIA Standards of Practice specific to pension plans, the table below presents the sensitivity of the going concern liabilities and the total normal cost of using a discount rate 1% lower and 1% higher than that used for the going concern valuation.

		Effect	
December 31, 2016		**$**	**%**
Going concern liabilities	$ 55,249,000		
Going concern liabilities (discount rate – 1%)	$ 59,001,000	$ 3,752,000	6.8%
Going concern liabilities (discount rate + 1%)	$ 51,919,000	$ (3,330,000)	(6.0)%
Normal cost	$ -		
Normal cost (discount rate – 1%)	$ -	$ -	N/A
Normal cost (discount rate + 1%)	$ -	$ -	N/A

There is no Normal Cost relating to benefits accruing as there are no active members.

Section 3: Solvency Valuation Results

Solvency Financial Position of the Plan

The solvency valuation is a financial assessment of the Plan that is required by the *Act* and is performed in accordance with requirements prescribed by that legislation. It is intended to provide an assessment of the Plan's financial position at the valuation date on the premise that certain obligations as prescribed by the *Act* are settled on the valuation date for all members. The liabilities must be calculated based on a postulated scenario that maximizes liabilities on wind up of the Plan. Contingent benefits are included in the liabilities that would be payable under the postulated scenario, unless permitted to be omitted under the definition of solvency liabilities under the Regulations to the *Act*. All assumptions for the solvency valuation are listed in Appendix D.

On the basis of the Plan provisions, membership data, solvency assumptions and methods and asset information described in the Appendices, as well as the requirements of the *Act*, the solvency financial position of the Plan as at December 31, 2016 is shown in the following table. The solvency financial position of the Plan as at December 31, 2013 is shown for comparison purposes.

Solvency Financial Position

	December 31, 2016	December 31, 2013
Assets		
Solvency assets	$ 59,443,000	$ 60,959,000
Estimated wind up expenses	(70,000)	(70,000)
Total Assets	**$ 59,373,000**	**$ 60,889,000**
Solvency Liabilities		
Retirees	$ 46,544,000	$ 53,925,000
Beneficiaries	16,461,000	15,274,000
Total Liabilities	**$ 63,005,000**	**$ 69,199,000**
Solvency Position	**$ (3,632,000)**	**$ (8,310,000)**
Prior year credit balance	-	-
Solvency asset adjustment		
Present value of special payments	3,142,000	3,505,000
Solvency asset smoothing	-	-
Solvency liability adjustment	-	-
Solvency Surplus/(Deficiency)	**$ (490,000)**	**$ (4,805,000)**
Solvency ratio	0.94	0.88

Solvency Financial Position Breakdown

		Police		Others		Total
Solvency assets	$	59,086,000	$	357,000	$	59,443,000
Present value of special payments		3,123,000		19,000		3,142,000
Estimated wind up expenses		(70,000)		-		(70,000)
Total Assets	**$**	**62,139,000**	**$**	**376,000**	**$**	**62,515,000**
Solvency Liabilities						
Retirees	$	46,437,000	$	107,000	$	46,544,000
Beneficiaries		16,341,000		120,000		16,461,000
Total Liabilities	**$**	**62,778,000**	**$**	**227,000**	**$**	**63,005,000**
Surplus/(Unfunded Liability)	**$**	**(639,000)**	**$**	**149,000**	**$**	**(490,000)**

Solvency Concerns

A report indicates solvency concerns under the *Act* if the ratio of the solvency assets to solvency liabilities is less than 0.85.

Where a report indicates solvency concerns, the effective date of the next valuation that needs to be filed under the *Act* is one year from the valuation date of the valuation that gave rise to the solvency concerns.

Since the ratio of solvency assets to solvency liabilities ($59,443,000/ $63,005,000) is equal to 0.94, this report does not indicate solvency concerns.

Solvency Asset Adjustment

The present value of scheduled special payments for solvency valuation purposes has been calculated by discounting the annual special payments to be remitted up to the end of their amortization period (to a maximum of six years), at the solvency discount rate of 2.91% per year compounded monthly in arrears.

Nature of Deficiency	Effective Date	End Date	Annual Special Payment	Present Value as of December 31, 2016
Solvency	December 31, 2014	December 31, 2019	$ 1,094,400[1]	$ 3,142,000
Present Value of Special Payments				**$ 3,142,000**

[1] This special payment was amended to $91,200 per month from $90,700 per month following discussions with FSCO

Solvency Valuation Sensitivity Results

In accordance with the CIA Standards of Practice specific to pension plans, the table below presents the sensitivity of the solvency liabilities to using a discount rate of 1% lower and 1% higher than that used for the solvency valuation.

		Effect	
December 31, 2016		**$**	**%**
Solvency liabilities	$ 63,005,000		
Solvency liabilities (discount rate – 1%)	$ 67,860,000	$ 4,855,000	7.7%
Solvency liabilities (discount rate + 1%)	$ 58,749,000	$ (4,256,000)	(6.8)%

Incremental Cost on a Solvency Basis

The incremental cost on a solvency basis represents the present value at December 31, 2016 of the expected aggregate change in the solvency liabilities between December 31, 2016 and the next calculation date, that is, December 31, 2019. Appendix D gives more details on the calculation methodology and on assumptions.

Based on this methodology and on these assumptions, the incremental cost on a solvency basis can be found in the following table.

	Jan 1, 2017 to Dec 31, 2017	**Jan 1, 2018 to Dec 31, 2018**	**Jan 1, 2019 to Dec 31, 2019**
Incremental cost on a solvency basis	$ 1,058,000	$ 977,000	$ 898,000

Pension Benefits Guarantee Fund ("PBGF")

A PBGF assessment is not required under Article 47(1) of Regulation 909 of the *Act*.

Section 4: Hypothetical Wind Up Valuation Results

Hypothetical Wind Up Financial Position of the Plan

A hypothetical wind up valuation is performed to determine the financial position of the Plan as at the valuation date on a wind up basis, reflecting market settlement rates as of the valuation date. Unlike the solvency valuation, all benefits (including post-retirement indexation) are included that would be payable under the postulated scenario that would maximize benefits. The hypothetical wind up valuation is determined using benefit entitlements on the assumption that the Plan has neither a surplus nor a deficit. Contingent benefits are included in the liabilities that would be payable under the postulated scenario. Assets are set equal to market value net of estimated wind up expenses. All assumptions for the hypothetical wind up valuation are listed in Appendix D.

On the basis of Plan provisions, membership data, hypothetical wind up assumptions and methods, and asset information described in the Appendices, as well as the requirements of the *Act*, the hypothetical wind up financial position of the Plan as at December 31, 2016 is shown in the following table. The hypothetical wind up financial position of the Plan as at December 31, 2013 is shown for comparison purposes.

Hypothetical Wind Up Financial Position

	December 31, 2016	December 31, 2013
Assets		
Hypothetical wind up assets	$ 59,443,000	$ 60,959,000
Estimated wind up expenses	(70,000)	(70,000)
Total Assets	**$ 59,373,000**	**$ 60,889,000**
Hypothetical Wind Up Liabilities		
Retirees	$ 60,003,000	$ 71,688,000
Beneficiaries	19,881,000	18,970,000
Total Liabilities	**$ 79,884,000**	**$ 90,658,000**
Hypothetical Wind Up Surplus/(Deficiency)	**$ (20,511,000)**	**$ (29,769,000)**

Wind Up Financial Position Breakdown

	Police	Others	Total
Hypothetical wind up assets	$ 59,086,000	$ 357,000	$ 59,443,000
Estimated wind up expenses	(70,000)	-	(70,000)
Total Assets	**$ 59,016,000**	**$ 357,000**	**$ 59,373,000**
Hypothetical Wind Up Liabilities			
Retirees	$ 59,875,000	$ 128,000	$ 60,003,000
Beneficiaries	19,747,000	134,000	19,881,000
Total Liabilities	**$ 79,622,000**	**$ 262,000**	**$ 79,884,000**
Surplus/(Unfunded Liability)	**$ (20,606,000)**	**$ 95,000**	**$ (20,511,000)**

Transfer Ratio

The transfer ratio is determined as follows:

		December 31, 2016	December 31, 2013
(1) Hypothetical wind up assets		$ 59,443,000	$ 60,959,000
Prior year credit balance	(A)	$ -	$ -
Total company normal cost and required special payments until next mandated valuation	(B)	$ 3,893,400	$ 5,820,000
(2) Asset adjustment	Lesser of (A) and (B)	$ -	$ -
(3) Hypothetical wind up liabilities		$ 79,884,000	$ 90,658,000
Transfer Ratio [(1)-(2)] / (3)		**0.74**	**0.67**

Section 5: Contribution Requirements

Contribution Requirements in Respect of the Normal Cost

There are no active members in the Plan, and as such, there are no current service contributions for the purposes of this valuation, except that actual pension increases due to indexation in 2018 and 2019 are to be included as part of the current service cost for those years.

Development of Special Payments

The following table summarizes previously established amortization schedules of special payments before adjustment to reflect any gains or losses due to the going concern and solvency valuation results.

Nature of Deficiency	Effective Date	End Date	Annual Special Payment
Going concern	December 31, 2006	December 31, 2021	$ 97,200
Going concern	December 31, 2014[1]	December 31, 2029	158,400
Solvency	December 31, 2014	December 31, 2019	1,094,400[2]
			$ 1,350,000

The following table summarizes the amortization schedules of special payments after adjustment to reflect any gains or losses due to the going concern and solvency valuation results.

				Present Value as of December 31, 2016	
Nature of Deficiency	Effective Date	Revised End Date	Revised Annual Special Payment	For Going Concern Valuation	For Solvency Valuation[3]
Solvency	December 31, 2014[1]	December 31, 2019	$ 1,094,400	n/a	$ 3,142,000
Solvency	December 31, 2017[4]	December 31, 2022	108,500	n/a	490,000
			$ 1,202,900	-	$ 3,632,000

1 In accordance with Regulation, the City has decided to defer new going concern and solvency special payments established as at December 31, 2013 by 12 months
2 This special payment was amended to $91,200 per month from $90,700 per month following discussions with FSCO
3 The values in the table were developed using the solvency interest rate of 2.91% per year compounded monthly in arrears
4 In accordance with Regulation, the City has decided to defer new going concern and solvency special payments established at December 31, 2016 by 12 months

Prior Year Credit Balance ("PYCB")

The PYCB is nil.

Excess Surplus

The *Income Tax Act* requires that any excess surplus first be applied to reduce or eliminate the company contribution requirements. Excess surplus is defined in Section 147.2(2)(d) of the *Income Tax Act*, as the portion of surplus (if any) that exceeds 25% of the going concern liabilities.

Since the surplus is less than 25% of the going concern liabilities, there is no excess surplus and therefore it does not impact the development of the company contribution requirements.

Development of Minimum Required Company Contribution

The table below presents the development of the minimum required company contribution for each of the plan years covered by this report.

	Jan 1, 2017 to Dec 31, 2017	Jan 1, 2018 to Dec 31, 2018	Jan 1, 2019 to Dec 31, 2019
Company normal cost[1]	$ -	$ 130,200	$ 263,000
Special payments toward amortizing unfunded liability	-	-	-
Special payments toward amortizing solvency deficiency	1,094,400	1,202,900	1,202,900
Required application of excess surplus	-	-	-
Permitted application of surplus	-	-	-
Minimum Required Company Contribution, Prior to Application of PYCB	**$ 1,094,400**	**$ 1,333,100**	**$ 1,465,900**

The City normal cost for 2018 and 2019 include assumed pension increases of 2% as at January 1, 2018 and January 1, 2019.

Development of Maximum Deductible Company Contribution

The table below presents the development of the maximum deductible company contribution for each of the plan years covered by this report.

The maximum deductible company contribution presented in the table below for a given plan year is calculated assuming that the City makes the maximum deductible company contribution in the first plan year covered by this report.

	Jan 1, 2017 to Dec 31, 2017	Jan 1, 2018 to Dec 31, 2018	Jan 1, 2019 to Dec 31, 2019
Company normal cost[2]	$ -	$ -	$ -
Greater of the unfunded liability and the hypothetical wind up deficiency	20,511,000	-	-
Required application of excess surplus	-	-	-
Maximum Deductible Company Contribution	**$ 20,511,000**	**$ -**	**$ -**

If the City wishes to make the maximum deductible company contribution, it is advisable to contact the Plan's actuary before making such contribution to ensure that the contribution will be permissible and deductible and that any regulatory requirements are considered.

[1] Includes the expected cost of increases to pensions in payment at January 1, 2018 and January 1, 2019 (assumed at 2%)
[2] Excludes the funding of the indexation via the normal cost as this is already accounted for in the hypothetical wind up value

Section 6: Actuarial Certificate

Actuarial Opinion, Advice and Certification for the Hamilton-Wentworth Retirement Fund

Canada Revenue Agency Registration Number: 1073352
Provincial Registration Number: 1073352

Opinion

This actuarial certification forms an integral part of the actuarial valuation report for the Plan as at December 31, 2016. I confirm that I have prepared an actuarial valuation of the Plan as at December 31, 2016 for the purposes outlined in the Introduction section to this report and consequently:

My advice on funding is the following:

- The City should contribute the amounts within the range of minimum and maximum contribution amounts as outlined in Section 5 of this report, in accordance with legislative requirements.
- The next actuarial valuation for the purpose of developing funding requirements should be performed no later than as at December 31, 2019.

I hereby certify that, in my opinion:

- The contribution range as outlined in this report is expected to be sufficient to satisfy the Plan's funding requirements.
- The company contribution range outlined in this report qualifies as eligible contributions under Section 147.2(2) of the *Income Tax Act.*
- The pre-1990 maximum pension restrictions in Subsection 8504(6) of the Regulations to the *Income Tax Act* do not apply to any members of the Plan
- For the purposes of the valuation:
  - The data on which this valuation is based are sufficient and reliable;
  - The assumptions used are appropriate; and
  - The actuarial cost methods and the asset valuation methods used are appropriate.
- This report and its associated work have been prepared, and my opinion given, in accordance with accepted actuarial practice in Canada and in compliance with the requirements outlined in subparagraphs 147.2(2)(a)(iii) and (iv) of the *Income Tax Act.*

- Notwithstanding the above certifications, emerging experience differing from the assumptions will result in gains or losses that will be revealed in subsequent valuations.

Mark Pearson, FCIA, FSA
Senior Consultant

Aon
225 King Street West, Suite 1600
Toronto, Ontario M5V 3M2

October 2017

Appendix A: Assets

Asset Data

The Plan's assets are combined in a pooled fund under a Master Trust agreement administered by RBC Investor Services Trust and are managed by a number of different investment managers. This type of arrangement governs only the investment of the assets deposited into the trust fund and in no way "guarantees" the benefits provided under the Plan or the costs of providing such benefits. The asset information presented in this report is based on the audited financial statements of the pension fund prepared by KPMG LLP.

Tests of the sufficiency and reliability of the asset data were performed and the results were satisfactory. The tests included:

- A reconciliation of actual cash flow with expected cash flow from the previous actuarial report; and
- A reconciliation of any anticipated benefit payments (for retirees, terminated or deceased employees) against the financial statements of the pension fund for confirmation of payments.

Market Value of Assets

The following is a summary of the composition of the Plan's assets by asset type as reported by the Plan's audited financial statements as at December 31, 2016. For comparison purposes, the composition at the previous valuation date of December 31, 2013 is also shown.

	December 31, 2016		December 31, 2013	
	$	**%**	**$**	**%**
Cash and short term	$ 559,513	0.9%	$ 852,894	1.4%
Canadian fixed income	25,672,370	43.2%	19,617,690	32.1%
Canadian equities	18,449,388	31.1%	20,813,004	34.1%
Foreign equities	14,762,078	24.8%	19,751,744	32.4%
Total Invested Assets	**$ 59,443,349**	**100.0%**	**$ 61,035,332**	**100.0%**

Target Asset Mix

The target asset mix of the Plan is contained in the Plan's Statement of Investment Policies and Procedures dated September 2016. The Plan is currently on a glide path based on the funded ratio on a wind-up basis. As the funded ratio increases, the target mix changes in increments with an increase to fixed income and a corresponding decrease to return seeking equities. The below is the current target asset mix based on the wind-up results:

	Target
Fixed income	40.0%
Canadian equities	30.0%
Foreign equities	30.0%
Cash	0.0%
	100.0%

Reconciliation of Changes in Adjusted Market Value of Assets

The table below reconciles changes in the market value of assets between December 31, 2013 and December 31, 2016.

	Jan 1, 2014 to Dec 31, 2014	Jan 1, 2015 to Dec 31, 2015	Jan 1, 2016 to Dec 31, 2016
Adjusted Market Value of Assets, Beginning of Plan Year	**$ 60,958,902**	**$ 62,562,967**	**$ 59,561,011**
Cash Flows During Plan Year			
City contributions	$ 1,343,400	$ 2,741,004	$ 1,630,692
Benefit disbursements	(7,383,362)	(7,205,747)	(6,741,886)
Investment fees/expenses	(219,263)	(172,539)	(174,418)
Non-investment fees/expenses	(118,883)	(93,340)	(90,137)
Total	**$ (6,378,108)**	**$ (4,730,622)**	**$ (5,375,749)**
Investment Income	**$ 7,982,173**	**$ 1,728,666**	**$ 5,258,087**
Adjusted Market Value of Assets, End of Plan Year	**$ 62,562,967**	**$ 59,561,011**	**$ 59,443,349**
Rate of return, net of fees/expenses	13.2%	2.4%	8.8%

Development of Actuarial Value of Assets

The actuarial value of assets is equal to the adjusted market value of assets.

Appendix B: Membership Data

Source of Data

This valuation was based on member data provided by the Company as of December 31, 2016. Tests of the sufficiency and reliability of the member data were performed and the results were satisfactory. The tests included:

- A reconciliation of membership status against the membership status at the last valuation. This test was performed to ensure that all members were accounted for. A summary of this reconciliation follows on the next page;
- A reconciliation of birth, hire, and participation dates against the corresponding dates provided for the last valuation to ensure consistency of data;
- A reconciliation of any stated benefit payments in 2014, 2015 and 2016 against the financial statements of the pension fund for confirmation of the payments; and
- A reconciliation of inactive member benefit amounts against the corresponding amounts provided for the last valuation to ensure consistency of data.

A copy of the administrator certification certifying the accuracy and completeness of the member data (and the Plan provisions summarized in this report) is included in Appendix G of this report.

Membership Reconciliation

The table below reconciles the number of members as of December 31, 2016 with the number of members as of December 31, 2013 and the changes due to experience in the period.

	Retirees	Beneficiaries	Total
As at December 31, 2013	123	84	207
New members	0	0	0
Terminations	0	0	0
Deceased with spouse	(17)	17	0
Deceased or benefits ended	(14)	(22)	(36)
Data corrections	0	0	0
As at December 31, 2016	92	79	171

Membership Summary

Below is a summary of information as at December 31, 2016.

Retirees

	December 31, 2016*			December 31, 2013**		
Group	Police	Other	Total	Police	Others	Total
Number of members	89	3	92	115	8	123
Average age	81.2	92.1	81.5	79.7	94.4	80.7
Average annual pension (excluding bridge)	$ 48,215	$ 5,704	$ 46,829	$ 46,308	$ 10,656	$ 43,989
Proportion female	4%	67%	7%	3%	25%	4%

Beneficiaries

	December 31, 2016*			December 31, 2013**		
Group	Police	Other	Total	Police	Others	Total
Number of members	77	2	79	80	4	84
Average age	84.7	90.5	84.9	83.3	88.3	83.5
Average annual pension (excluding bridge)	$ 28,274	$ 12,137	$ 27,865	$ 26,129	$ 9,425	$ 25,334
Proportion female	96%	100%	96%	96%	100%	96%

*Pension includes increase of 1.45% granted January 1 of the following year
**Pension includes increase of 0.90% granted January 1 of the following year

Retirees and Beneficiaries

The following table provides a breakdown of the information used at December 31, 2016. The table shows the number and total monthly lifetime pension of retirees and beneficiaries as at December 31, 2016, grouped by age and number of years of retirement.

	Years Retired					
Age	**10 - 14.9**	**15 - 19.9**	**20 - 24.9**	**25 29.9**	**>30**	**Grand Total**
60 - 64.9						
65 - 69.9		3				3
		$ 10,905				$ 10,905
70 - 74.9	1	2	12		3	18
	*	*	$ 52,070		$ 6,466	$ 70,635
75 - 84.9		1	23	7	3	34
		*	$ 91,032	$ 19,008	*	$ 121,052
80 - 84.9			13	21	7	41
			$ 51,462	$ 68,992	$ 17,549	$ 138,002
85 - 89.9			3	21	26	50
			$ 11,741	$ 70,082	$ 60,132	$ 141,955
90 - 94.9				3	18	21
				$ 4,279	$ 47,197	$ 51,476
95 - 99.9					4	4
					$ 8,446	$ 8,446
100 - +						
Count	**1**	**6**	**51**	**52**	**61**	**171**
Total Monthly Lifetime Pension*	*	*	**$ 206,305**	**$162,361**	**$ 147,104**	**$ 542,471**

* *Data suppressed for confidentiality reasons*

Appendix C: Going Concern Assumptions and Methods

Assumptions and Methods

A member's entitlements under a pension plan are generally funded during the period over which service is accrued by the member. The cost of each member's benefits is allocated in some fashion over the member's service. An actuarial valuation provides an assessment of the extent to which allocations relating to periods prior to a valuation date (often referred to as the actuarial liabilities) are covered by the plan's assets.

The going concern valuation provides an assessment of a pension plan on the premise that the plan continues on into the future indefinitely based on assumptions in respect of future events upon which a plan's benefits are contingent and methods that effectively determine the way in which a plan's costs will be allocated over the members' service. The true cost of a plan, however, will emerge only as experience develops, investment earnings are received, and benefit payments are made.

This appendix summarizes the going concern assumptions and methods that have been used for the going concern valuation of the Plan at the valuation date. The going concern assumptions and methods have been chosen to reflect our understanding of the Plan's funding objectives with due respect to accepted actuarial practice and regulatory constraints. For purposes of this valuation, the going concern methods and assumptions were reviewed and changes as indicated were made.

The actuarial assumptions and methods used in the current and previous valuations are summarized below and described on the following pages.

	December 31, 2016	December 31, 2013
Economic Assumptions		
Discount rate	4.50% per year	5.75% per year
Inflation rate	2.25% per year	Same
Indexing rate	0.00% per year	Same
Investment expenses	Taken into account in the discount rate assumption	Same
Non-investment expenses	Included above	Same
Margin for adverse deviation	Included above	Same
Demographic Assumptions		
Mortality table	2014 Canadian Pensioners Mortality Table Scale B (Public)[1]	Same
Retirement rates	Not relevant	Same
Termination rates	Not relevant	Same
Disability rates	Not relevant	Same
Proportion married		
Non-retired proportion with spouse	Not relevant	Same
Non-retired spousal age differential	Not relevant	Same
Retired members	Actual marital status and ages are used	Same
Margin for adverse deviation	Included above	Same
Methods		
Actuarial cost method	Unit credit	Same
Asset valuation method	Market value of assets adjusted to reflect contributions, benefit payments, transfers and fees/expenses in transit as of the valuation date	Same

[1] No preretirement mortality was applied.

Justification of Actuarial Assumptions and Methods

Margins for Adverse Deviations

Margins for conservatism or provisions for adverse deviation have been built into the going concern assumptions where appropriate.

The margins have been chosen so as to balance the need for financial security for existing Plan members against overly conservative contribution requirements that potentially result in intergenerational inequity among members and unnecessary financial strain on the Plan sponsor.

The actuary has discussed the Plan's experience with the Company and compared it to the expected experience. This review indicates that there is a need for use of margins for adverse deviations. The margins for adverse deviations incorporated in the assumptions reflect this review and the Company's desire to maintain safety cushions. The actuary has discussed with the Company the implications of incorporating margins for adverse deviations and the Company is fully cognizant and supports incorporating margins for adverse deviations.

A margin for adverse deviations of 0.30% has been reflected in the interest rate assumption.

Economic Assumptions

Discount Rate

The overall expected return ("best-estimate") was developed using best-estimate returns for each major asset class in which the pension fund is invested. A Monte Carlo simulation is performed where the portfolio returns are projected assuming annual rebalancing. Expected plan cash flows are projected for a maximum of 30 years reflecting the plan's time horizon and discounted using the simulated returns. The internal rate of return is then calculated for each scenario and the average is used to develop an overall best-estimate rate of return for the entire pension fund. Gains from rebalancing and diversification are implicit to this return.

In determining the expected return, we have taken into account the current target asset mix of 60% equities / 40% fixed income (including all details of asset categories) as well as the City's policy of intending to increase the investment in bonds and decrease the investment in equities as the funded position of the plan improves. Based on an estimated projection of the financial position of the plan, we have assumed that the plan's investment will be 58% equities / 42% fixed income in three years and 54% equities / 46% fixed income in seven years and have reflected this projected change in asset mix in the expected return.

The above determined rate of return has been established based on the City's investment policy and its funding policy (whether formal or informal) and objectives. There may be some barriers to achieving this return such as inflation higher than expected, asset returns lower than expected, and assets and liabilities that are mismatched. We have derived a going concern discount rate which reflects the City's investment policy combined with a margin for adverse deviation so as to account for the variables mentioned above. The following table lays out the adjustments that have been made to the overall expected rate of return in order to arrive at our going concern discount rate assumption:

Development of Discount Rate

Overall expected return				5.08%
Non-investment expenses				(0.17)%
Investment expenses				
Passive	(1)	(0.07)%		
Actively managed	(2)	(0.20)%		
			(1)+(2)	(0.27)%
Additional returns due to active management				0.20%
Margin for adverse deviations				(0.30)%
Unrounded Discount Rate				**4.54%**
Rounded Discount Rate				**4.50%**

Inflation Rate

The inflation rate is assumed to be 2.25% per year. This reflects our best estimate of future inflation considering current economic and financial market conditions.

Increases in the Maximum Pension Limit

Pensions are limited to the maximum limits under the *Income Tax Act*. The *Income Tax Act* specifies both a dollar limit, and in addition pensions cannot exceed 2% of indexed highest average compensation per year of credited service. The assumed increase in the dollar limit reflects the assumed rate of inflation plus the productivity increase assumption.

Expenses

Since the discount rate has been established net of all expenses, no explicit assumption is required for expenses.

Demographic Assumptions

Mortality

During 2014, the CIA completed a study of Canadian pensioner mortality levels and trends. The 2014 study published mortality rates split by sector and included Public, Private and Combined tables, as well as possible pension size adjustment factors. A generational projection scale, CPM-B, was also developed to allow for improvements in mortality after 2014. The continued use of the Public Sector mortality table and projection scale are considered reasonable.

We have not made any adjustments for pension size.

Retirement

As all members are retired, a retirement age assumption is not needed.

Termination of Employment

As all members are retired, an assumption regarding pre-retirement termination is not needed.

Other

Actuarial Cost Method

An actuarial cost method is a technique used to allocate in a systematic and consistent manner the expected cost of a pension plan over the years of service during which Plan members earn benefits under the Plan. By funding the cost of a pension plan in an orderly and rational manner, the security of benefits provided under the terms of the Plan in respect of service that has already been rendered is significantly enhanced.

The accrued benefit (or unit credit) actuarial cost method has been used for this valuation. Under this method, the accrued liability at the valuation date is determined as the lump sum required to provide the accrued pension benefit earned to that date. The normal cost for the Plan is the amount required to fund the benefits expected to accrue in the year following the valuation date.

The pattern of future contributions necessary to pre-fund future benefit accruals for any one particular individual will increase steadily as the individual approaches retirement. For a stable population (i.e., one where the average demographics of the group remain relatively constant from year to year), the normal cost will increase modestly over time. The accrued benefit actuarial cost method, therefore, allocates contributions among different periods in an orderly and rational manner for a stable population group.

In the event of future adverse experience, contributions in addition to the normal cost calculated under the accrued benefit actuarial cost method may be required to ensure that the Plan's assets are adequate to provide the benefits. Conversely, favourable experience may generate surplus which may serve to reduce future contribution requirements.

Asset Valuation Method

Market value, adjusted by in-transit cash flows was used as the actuarial value of assets for this valuation. Asset-smoothing techniques are often used to reduce volatility in the City's contribution requirements. However, since this Plan's contributions are primarily being driven by the solvency valuation, we deemed it unnecessary to use an asset-smoothing technique for the going concern valuation.

Appendix D: Solvency and Hypothetical Wind Up Assumptions and Methods

Valuation Assumptions

	December 31, 2016	December 31, 2013
Economic Assumptions		
Discount Rate for Solvency		
Transfer value basis	Not applicable	Same
Annuity purchase basis	2.91% per year	3.63% per year
Duration used to determine annuity purchase basis	7.1	7.4
Discount Rate for Hypothetical Wind Up		
Transfer value basis	Not applicable	Same
Annuity purchase basis	-0.09% per year	0.15% per year
Income Tax Act dollar limit	$2,914.44 per year	$2,770.00 per year
Blended rate used to determine solvency special payments	2.91% per year	3.63% per year
Demographic Assumptions		
Mortality table	CPM2014 with generational improvements using Scale CPM-B[1] (sex-distinct rates)	1994 Uninsured Pensioner Mortality Table with fully generational projection Scale AA (sex-distinct rates)
Withdrawal rates	Not applicable	Same
Retirement age	Not applicable	Same
Termination of employment	Not applicable	Same
Marital status		
Non-retired spousal proportion	Not applicable	Same
Non-retired spousal age differential	Not applicable	Same
Retired members	Actual marital status and ages are used	Same

[1] No preretirement mortality was applied

	December 31, 2016	December 31, 2013
Other		
Wind up expenses	$70,000	Same
Actuarial cost method	Unit credit	Same
Asset valuation method	Market value of assets adjusted to reflect contributions, benefit payments, transfers and fees/expenses in transit as of the valuation date	Same
Incremental Cost		
The assumptions for the expected benefit payments and decrement probabilities, service accruals, and projected changes in benefits and/or pensionable earnings	Same as going concern	Same

Based on the CIA's Guidance and information such as pension legislation, Plan provisions and Plan experience, we have made the following assumptions regarding how the Plan's benefits would be settled on Plan wind up:

	Percent of Liability Assumed to be Settled By Purchase of Annuities	Percent of Liability Assumed to be Settled By Lump-Sum Transfer
Active Members		
Not retirement eligible	Not applicable	Not applicable
Retirement eligible	Not applicable	Not applicable
Deferred Vested Members		
Not retirement eligible	Not applicable	Not applicable
Retirement eligible	Not applicable	Not applicable
Retired Members and Beneficiaries	**100%**	**0%**

Postulated Scenario

The postulated scenario is the assumption of immediate termination of employment for the active group at the valuation date. Therefore, no allowance for future salary increases or demographic experience are reflected.

Benefits Valued

	Solvency Valuation	Hypothetical Wind Up Valuation
Vesting	We have treated all accrued benefits as vested on Plan wind up.	We have treated all accrued benefits as vested on Plan wind up.
Grow-in Benefits	No longer relevant	No longer relevant
Exclusions	Post-retirement indexing was excluded from the valuation	No Plan benefits were excluded from the valuation
Post-valuation Date Benefit Increases	None were assumed	None were assumed
Indexing	Excluded from the valuation	Included in the valuation

Justification for Valuation Assumptions

Solvency annuity purchase discount rate	= V39062 + Duration Adjustment
	= 2.21% + 0.70%
	= 2.91% per year

We have set the aforementioned assumptions based on guidance prepared by the CIA Committee on Pension Plan Financial Reporting ("PPFRC") in the Educational Note Assumptions for Hypothetical Wind Up and Solvency Valuations with Effective Dates Between December 31, 2016 and December 30, 2017 ("CIA Guidance") released on March 1, 2017

For benefit entitlements that are expected to be settled by lump-sum transfer, we based the assumptions on Section 3500 (Pension Commuted Values) of the CIA Standards of Practice, using rates corresponding to a valuation date of December 31, 2016.

For benefit entitlements that are expected to be settled by purchase of annuities, we based the assumptions on information compiled by the PPFRC from insurance companies active in the group annuity market as described in the educational note.

Mortality Table

The derivation of the discount rate above is in conjunction with CPM2014 in accordance with the CIA Guidance

Preretirement Mortality

We have made no allowance for preretirement mortality as all members are retired.

Assumptions Not Needed

The following are not relevant to the solvency or hypothetical wind up valuation:

- Increases in pensionable earnings;
- Termination of employment rates;
- Increases in CPP and OAS benefits;
- Increases in *Income Tax Act* maximum pension limit (we used the 2017 maximum); and
- Disability rates.

Estimated Wind Up Expenses

Plan wind up expenses would normally include such items as fees related to preparation of the actuarial wind up report, fees imposed by a pension supervisory authority, legal fees, administration, custodial and investment management expenses. We have assumed these fees would be $70,000.

Calculation of Special Solvency Payments

We used a discount rate of 2.91% per year to calculate the special payments necessary to liquidate the solvency deficiency.

Actuarial Cost Methods

Unit credit (accrued benefit) cost method as prescribed.

Asset Valuation Method Considerations

For purposes of the solvency valuation, assets were valued at market value, adjusted by in-transit cash flows.

Incremental Cost

The incremental cost represents the present value, at the calculation date (time 0), of the expected aggregate change in the liabilities between time 0 and the next calculation date (time t), adjusted upwards for expected benefit payments between time 0 and time t.

An educational note was published in December 2010 by the CIA Committee on PPFRC to provide guidance for actuaries on the calculation of this new information.

The calculation methodology can be summarized as follows:

- The present value at time 0 of expected benefit payments between time 0 and time t, discounted to time 0,

  plus

- Projected liabilities at time t, discounted to time 0, allowing for, if applicable to the pension plan being valued:
  - expected decrements and related changes in membership status between time 0 and time t,
  - accrual of service to time t,
  - expected changes in benefits to time t,
  - a projection of pensionable earnings to time t,

  minus

- The liabilities at time 0.

The projection calculations take into account the following assumptions and additional considerations:

- The assumptions for the expected benefit payments and decrement probabilities, service accruals, and projected changes in benefits and/or pensionable earnings would be consistent with the assumptions used in the pension plan's going concern valuation.
- The assumptions used to calculate the projected liability at time t are consistent with the assumptions for the liabilities at time 0, assuming that interest rates remain at the levels applicable at time 0, that the select period is reset at time t for interest rate assumptions that are select and ultimate and that the Standards of Practice for the calculation of commuted values and the guidance for estimated annuity purchase costs in effect at time 0 remain in effect at time t.
  - Active and inactive Plan members as of time 0 are considered in calculating the incremental cost.

Appendix E: Summary of Plan Provisions

The following is a brief summary of the provisions of the Plan as at December 31, 2016.

Normal Retirement Age

Age 60 for Police employees, 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 Benefits

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

Pension Increases

The Plan was amended effective January 1, 2008 to provide indexation equal to the inflation related adjustment formula used to increase pension benefits, pensions and deferred pensions under the Ontario Municipal Employees Retirement System Act, 2006, as amended from time to time. Such inflation adjustment shall not be less than zero no more than 6%. Any inflation adjustment in excess of 6% shall be carried forward for use in a subsequent year.

Bridge Benefit

A bridge benefit is payable on early retirement in the amount of the estimated CPP benefit until age 65.

Appendix F: Glossary of Terms

- The **actuarial value of assets** is the asset value used for going concern valuation purposes. Smoothing methods are sometimes used to smooth investment gains and losses over a certain period.
- The **estimated wind up expenses** is an estimate of the administrative and other expenses expected to be charged against the pension fund if the Plan were to terminate on the valuation date.
- The **going concern liabilities** are the actuarial present value of benefits earned in respect of service prior to the valuation date. The actuary may choose to omit indexing liabilities (i.e., "escalated adjustments") from the going concern liabilities as per Section 11(1) of the *Act.* However, if escalated adjustments are omitted from the going concern liabilities, the amount of payment of an escalated adjustment that is made from the pension fund, to the extent that it has not been funded, must be included in the normal cost pursuant to Section 11(2) of the Regulation to the *Act.* The going concern liabilities are calculated using the going concern assumptions and methods summarized in Appendix C of this report.
- The **going concern position** is the difference between the actuarial value of assets and the going concern liabilities. Escalated adjustments may be omitted from the determination of the surplus/(unfunded liability) pursuant to Section 11(3) of the Regulation to the *Act.*
- The **maximum deductible company contribution** refers to an eligible contribution pursuant to Section 147.2(2) of the *Income Tax Act.* Under Subsection 8502(b) of the Regulations to the *Income Tax Act*, each Company contribution made after January 1, 1991 in respect of a defined benefit provision of a registered pension plan must be such eligible contribution.

  In a company's fiscal year, the following contributions are eligible under Section 147.2(2) of the *Income Tax Act.*

  – The company normal cost, eligible under Section 147.2(2) subject to certification by the actuary and approval by the Canada Revenue Agency; plus

  – Special payments eligible under Section 147.2(2) up to the amount of the unfunded liability, the solvency deficiency, or the hypothetical wind up deficiency, whichever is greater, subject to certification by the actuary and approval by the Canada Revenue Agency; less

  – Required application of excess surplus.

  The company normal cost and special payments for this Plan will be deductible under Section 147.2(2) of the *Income Tax Act*, subject to the approval of the Canada Revenue Agency.

  Note that contributions to a plan are still permissible and deductible if there is an excess surplus, providing there is simultaneously a solvency or hypothetical wind up deficiency in the Plan or the contributions are required as minimum contributions under provincial or federal *Act* legislation, pursuant to Subsections 8516(2) and (3) of the Regulations to the Income *Tax Act.*

One restriction under the *Income Tax Act* is that if there is an excess surplus, and a solvency or hypothetical wind up deficiency, the maximum deductible contribution is restricted to the full amount of the deficiency without allowance for interest or any other contributions such as company normal cost and/or transfer deficiency payments.

In order to be deductible in a given fiscal year, company contributions must be made not later than 120 days after the end of the fiscal year.

- The **minimum required company contribution** for each plan year is equal to:
  - The company normal cost; plus
  - Special payments toward amortizing any unfunded liability over 15 years beginning no later than 12 months from the date on which the unfunded liability was established; plus
  - Special payments toward amortizing any solvency deficiency over five years beginning no later than 12 months (24 months if the company elected temporary funding relief option 8) from the date on which the solvency deficiency was established (this period of years may be longer if the company has elected temporary funding relief options 3, 5 and/or 7); less
  - Required application of excess surplus; less
  - Permitted application of surplus; less
  - Permitted application of PYCB.

  In order to satisfy the requirements of the *Act* and its Regulations, contributions to the fund must be made in accordance with the following rules:
  - Required member contributions (if any) must be remitted to the pension fund within 30 days following the month in which the contributions were received from the member or deducted from his or her remuneration.
  - Company normal cost contributions must be remitted to the pension fund within 30 days after the end of the month for which the contributions are payable.
  - Special payments must be remitted to the pension fund in the month for which they are payable.
- The **prior year credit balance** is
  - The PYCB stated in the last report in respect of the Plan under the Regulation; plus
  - The total amount of contributions made to the Plan by the Company after the valuation date of the last report in respect of the Plan and before the valuation date for the report being prepared; less
  - The total minimum amount of contributions required to have been made after the valuation date of the last report in respect of the Plan and before the valuation date for the report being prepared, if the contributions had been calculated without reference to any PYCB.

  The Company may choose to set the PYCB between nil and the amount as calculated above, but may not recapture the amount forfeited at any time.
- **Solvency/Hypothetical wind up assets** are the market value of pension fund assets adjusted to reflect contributions, benefit payments, transfers and fees/expenses in-transit at the valuation date.

- The **solvency asset adjustment** is an adjustment that may be made to the solvency assets to reflect:
  - The impact of using an averaging method that stabilizes short-term fluctuations in the market value of the Plan's assets calculated over a period of not more than five years; plus
  - The present value of any remaining special payments required to liquidate any unfunded liability (for service not previously recognized for benefit determination purposes) established after December 31, 1987; plus
  - The present value of any remaining special payments other than those above that are scheduled for payment within six years after the valuation date. This period of years may be longer if the Company has elected temporary funding relief options 3, 5, 7 and/or 8.
- The **solvency liabilities** are the actuarial present value of benefits earned in respect of service prior to the valuation date determined as if the Plan were wound up on the valuation date and taking into account Section 74 of the *Act* (i.e., grow-in). In calculating the solvency liabilities, which includes plant closure benefits or permanent layoff benefits that would be immediately payable if the Plan sponsor's business was discontinued on the valuation date, the *Act* and its Regulations permit the exclusion of the following benefits:
  - Any escalated adjustments;
  - "Excluded plant closure benefits" that the City elected on November 26, 1992 to exclude;
  - "Excluded permanent layoff benefits" that the City elected on November 26, 1992 to exclude;
  - Special allowances other than those where the member has met all age and service eligibility requirements;
  - Consent benefits other than those where the member has met all eligibility requirements except the consent of the employer, or in the case of a jointly sponsored pension plan, the consent of the employer or the administrator;
  - Prospective benefit increases;
  - Potential early retirement window benefit values; and
  - Pension and ancillary benefits payable under a qualifying annuity contract.

  The solvency liabilities are determined using benefit entitlements on the assumption that the Plan has neither a surplus nor a deficit. The solvency liabilities are calculated using the solvency valuation assumptions summarized in Appendix D of this report.
- The **solvency liability adjustment** is an adjustment that may be made to the solvency liabilities to reflect the impact of using a solvency valuation discount rate for discounting the liability that is the average of market discount rates calculated over the same period of time as that used in the calculation of the solvency asset adjustment.
- The **solvency position** is the difference between the solvency assets (net of estimated wind up expenses) and the solvency liabilities.
- The **solvency ratio** compares the solvency assets to the solvency liabilities for purposes of Subsections 14(2) and (3) of the Regulations of the *Act* to determine the latest effective date of the next required valuation.
- The **solvency surplus/(deficiency)** is the solvency position, increased by the solvency asset adjustment and the solvency liability adjustment, then decreased by the PYCB.

- The **special payments** are payments required to liquidate the unfunded liability and/or solvency deficiency:
  - The going concern special payments are payments required to liquidate the unfunded liability, with interest at the going concern valuation discount rate, by equal monthly instalments over a period of 15 years beginning no later than 12 months from the valuation date of the report in which the going concern unfunded liability was determined.
  - The solvency special payments are payments required to liquidate the solvency deficiency, with interest at the solvency valuation discount rate, by equal monthly instalments over a period of five years beginning no later than 12 months (24 months if the company elected temporary funding relief option 8) from the valuation date of the report in which the solvency deficiency was determined. This period of years may be longer if the company has elected temporary funding relief options 3, 5 and/or 7.
- The **surplus/(unfunded liability)** is the difference between the actuarial value of assets and the sum of the going concern liabilities and the PYCB.
- The **total normal cost** is the actuarial present value of benefits expected to be earned in respect of service for each year starting on the valuation date. Required member contributions (if any) are deducted from the total normal cost to determine the company normal cost. The total normal cost is calculated using the going concern valuation assumptions and methods summarized in Appendix C of this report.
- The **transfer ratio** compares the solvency assets, minus the lesser of the PYCB and the required company contributions until the next required valuation (before application of the PYCB), to the solvency liabilities plus the liability of any excluded benefits (except for pension benefits and ancillary benefits payable under a qualifying annuity contract). If the transfer ratio is less than 1.00, lump-sum transfers from the pension fund under Section 42 of the *Act* are limited to the commuted value of the member's pension multiplied by the transfer ratio. The administrator may transfer the entire commuted value if:
  - The administrator is satisfied that an amount equal to the transfer deficiency has been remitted to the pension fund; or
  - The aggregate of transfer deficiencies for all transfers made since the last valuation date does not exceed 5% of the Plan's assets at that time.

  In June 2009, Subsection 19 of the Regulations of the *Act* was amended and Policy T800-402 was released. The Policy imposes additional restrictions for payment of commuted values under certain circumstances.

Appendix G: Administrator Certification

With respect to the Hamilton-Wentworth Retirement Fund, forming part of the actuarial report as at December 31, 2016, I hereby certify that, to the best of my knowledge and belief:

- The asset data provided or made available to the actuary is complete and accurate;
- The membership data and subsequent query answers provided or made available to the actuary are complete and accurate for all persons who are entitled to benefits under the terms of the Plan in respect of service up to the date of the valuation;
- The Plan provisions provided or made available to the actuary are complete and accurate;
- The actuary has been notified of all relevant events subsequent to the valuation measurement date; and
- The terms of engagement contained in Section 1 of this report are accurate and reflect the plan administrator's direction.

Richard Male

Name (print) of Authorized Signatory

Title: Director Financial Services, Taxation & Corporate Controller

Signature

Date: Oct 24, 2017

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Hamilton

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

TO:	Chair and Members HMRF/HWRF Pension Administration Sub-Committee
COMMITTEE DATE:	November 30, 2017
SUBJECT/REPORT NO:	2017 Master Trust Pension Statement of Investment Policies and Procedures (FCS17079) (City Wide)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Rosaria Morelli (905) 546-2424 Ext. 1390
SUBMITTED BY: **SIGNATURE:**	Brian McMullen Director, Financial Planning, Administration and Policy Corporate Services Department

RECOMMENDATIONS

(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.

EXECUTIVE SUMMARY

The Statement of Investment Policies and Procedures for the City of Hamilton Defined Benefit Pension Plans Master Trust (the "Master Trust SIPP") has been revised as a result of the formal annual review, as required by legislation. The revised Master Trust SIPP is attached as Appendix "A" to Report FCS17079.

The review confirmed there have been no legislative changes impacting the Master Trust SIPP since the last formal review completed in 2016.

The 2017 Master Trust SIPP contains three minor amendments made to enhance clarity and other amendments made to reflect new information on plan members and liabilities. All of the amendments are detailed in Appendix "B" to Report FCS17079.

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 the Hamilton Municipal Retirement Fund ("HMRF"). These assets 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 formal policy review of the Master Trust SIPP has been completed annually (with the exception of the fiscal years 2010, 2011 and 2013). For each review, the existing Master Trust SIPP, at that time, was replaced with the Council approved revised version. Details of each review can be found in the following staff reports: Report FCS07096; Report FCS08111; Report FCS09093; Report FCS12084; Report FCS14080; Report FCS15083; and Report FCS16081.

POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS

Ontario Regulation 909 (the "Regulation") made under the *Pension Benefits Act* 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. The Regulation also requires that every pension plan's statement of investment policies and procedures be reviewed at a minimum once every year.

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 Services Division in the preparation of this Report.

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

ANALYSIS AND RATIONALE FOR RECOMMENDATIONS

The review confirmed that there have been no legislative changes impacting the Master Trust SIPP since the last formal review completed in 2016.

The 2017 Master Trust SIPP contains three minor amendments made to enhance clarity and other amendments made to reflect new information on plan members and liabilities. All of the amendments are detailed in Appendix "B" to Report FCS17079.

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, October 2017

Appendix "B" – List of Amendments – 2017 Master Trust Pension Statement of Investment Policies and Procedures

RM/dt

Statement of Investment Policies and Procedures

City of Hamilton Defined Benefit Pension Plans Master Trust

October 2017

APPROVED on this day of , 2017

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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.

(b) <u>Return-Seeking Assets:</u> 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) <u>Liability-Hedging Assets:</u> 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) <u>Sub-Allocations and Rebalancing Ranges</u>: 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).

(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;

(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 TMX 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 TMX 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.

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, 2014, there were no active members, 3 deferred members and 219 retirees and beneficiaries.

As of December 31, 2014, the going-concern liability of the plan was $77,821,100 compared to the actuarial value of assets of $82,150,100. On a solvency basis, the liability was $76,623,200, while the assets (at market) were $82,050,100.

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 the average of the YMPE for the last thirty-six months of plan membership.

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		
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
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	
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:**____________________

Hamilton

INFORMATION REPORT

TO:	Chair and Members HMRF/HWRF Pension Administration Sub-Committee
COMMITTEE DATE:	November 30, 2017
SUBJECT/REPORT NO:	Master Trust Pension Investment Performance Report June 30, 2017 (FCS17088) (City Wide)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Gerald T. Boychuk 905-546-4321
SUBMITTED BY: **SIGNATURE:**	Brian McMullen Director, Financial Planning, Administration and Policy Corporate Services Department

Council Direction:

Not Applicable.

Information:

Attached as Appendix "A" to Report FCS17088 are the first 10 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 at June 30, 2017. 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, 2017 of 9.0% outperformed its benchmark of 7.5% by 1.5%. The market value of the assets of the Plan totalled $334.3 M compared to June 30, 2016 of $324.4 M, an increase of $9.9 M.

The funded ratio increased to 70.3% and would have to increase to 75%, at which point, bond holdings would be increased and equity holdings decreased. Currently, a funding ratio of 70.3% enables a range of 30% to 50% for the Liability Matching Component (LMC) and the fund is at 42.5% (Fixed Income). The plan should be decreasing equities and possibly increasing bonds which are limited to 50% going forward with due regard to current market conditions in both markets.

Table 1 below 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

	12 Months ended Jun.30/17	12 Months ended Jun.30/16	12 Months ended Jun.30/15	12 Months ended Jun.30/14	12 Months ended Jun.30/13
Plan Return	9.0%	3.2%	6.3%	19.8%	9.6%
Benchmark	7.5%	3.8%	8.3%	19.1%	6.5%
Value Added	1.5%	-0.6%	-2.0%	0.7%	3.1%
Market Value ($ Million)	$334.3	$324.4	$333.6	$334.2	$299.5
Funded Status	70.3%	64.1%	70.0%	74.3%	71.4%

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, RBC reports its universe of pension funds, which totals C$650 B and a median return of 1.4% in the quarter ended June 30, 2017. The Plan's annual return of 9.0% and quarterly return of 1.4% matched the median's annual return of approximately 9.0% and quarterly return of 1.4%.

Asset Mix:
Table 2 below shows the percentage of Plan assets in each asset class as at June 30, 2017 compared to December 31, 2016.

Table 2

	Percentage of Plan Assets in Each Asset Class			
Asset Class	Jun.30, 2017	Dec.31, 2016	Change	Benchmark
Canadian Equity	31.9%	32.6%	-0.7%	30.0%
Global Equity	25.1%	23.8%	1.3%	30.0%
Total Equity	57.0%	56.4%	0.6%	
Cash	0.5%	0.5%	0.0%	
TDAM Long Bonds	22.4%	21.9%	0.5%	20%
TD Real Return Bonds	20.1%	21.3%	-1.2%	20%
Total Fixed Income	43.0%	43.7%	-0.7%	

Note: Anomelies due to rounding

Managers' Performance:

Managers' investment performance relative to their benchmark is summarized in Table 3, shown below. One-year rates of return are all as at June 30, 2017.

Table 3
Managers' Performance

One-Year Period Ended June 30, 2017	Manager Return	Benchmark Return	Value Added (Manager Return Less Benchmark Return)
Canadian Equity:			
Guardian	11.7%	11.0%	0.7%
Letko	21.5%	11.0%	10.5%
Global Equity:			
Brandes	22.2%	18.2%	4.0%
Aberdeen	16.4%	18.2%	-1.8%
GMO	20.0%	18.2%	1.8%
Fixed Income:			
TDAM Long Bonds	0.3%	0.4%	-0.1%
TDAM Real Return Bonds	-2.9%	-2.7%	-0.2%

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.

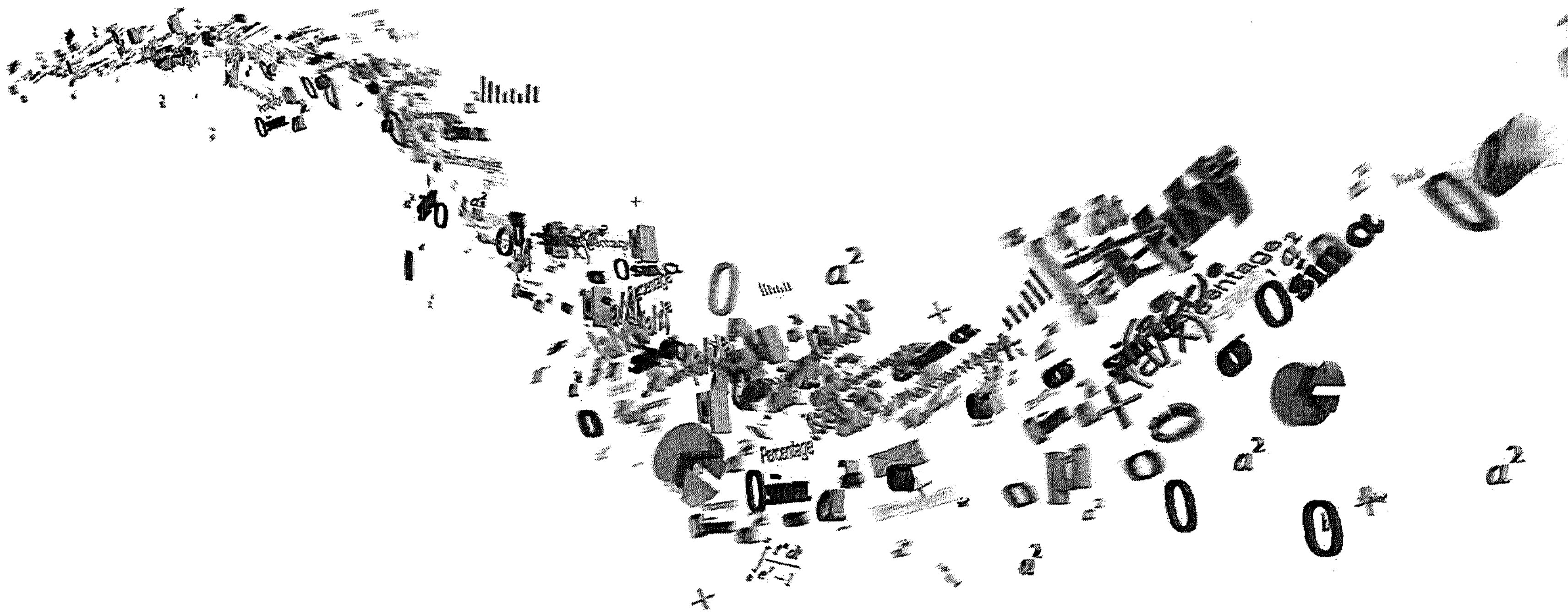
The potential transfer of legacy plans in the municipal sector to OMERS is in process as Toronto and Ottawa have been reviewing the feasibility over the past year. OMERS has presented business cases to their boards on the consolidation of their legacy plans in 2016. Toronto has agreed with OMERS to a discount rate and is in the process of receiving a proposal soon and negotiating a final process. Hamilton will likely be receiving its own proposal next year.

Appendices and Schedules Attached

Appendix “A” – Pages 1 to 9 of The City of Hamilton Master Trust Defined Benefit Plan – Second Quarter 2017

Appendix “B” – RBC Investor & Treasury Services News Release: Canadian pension returns post fifth consecutive quarter of gains

GB/dt



The City of Hamilton Master Trust Defined Benefit Plan | Second Quarter 2017

Quarterly Investment Review

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

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Commentary and Recommendations

As of 30 June 2017

Mandate	Comments	Recommendations
Total Fund	▪ The Total Fund's return of 1.4% outperformed the benchmark return by 30 basis points. ▪ Strong results in Canadian and Global equities added value while an overweight position in Canadian equities slightly detracted value. ▪ The funded ratio decreased to 70.3% (from 70.5%) at 30 June 2017. ▪ The bond allocation as of 30 June 2017 was within the range determined acceptable for the current funded ratio of 70.3%; therefore, the asset mix does not require rebalancing.	▪ Continue to monitor.
Guardian	▪ Guardian's Q2 return of -1.7% underperformed the Index by 10 basis points. ▪ Strong picks in the Materials (Franco-Nevada, Agnico, West Fraser) and Financials (Brookfield, Intact) sectors were offset by weak relative performance in the Energy (Shawcor, Cameco, Vermillion) sector. ▪ Sector allocation had a slightly negative impact as an overweight to Info Tech was offset by underweights to Telecomm, Health Care and an overweight to Energy.	▪ No action required.
Letko	▪ Letko's Q2 return of -0.6% was 100 basis points above the Index return. ▪ Sector allocation added value as an overweight to Consumer Discretionary and Industrials and an underweight to Energy, the worst performing sector, were partially offset by an underweight to Financials and an overweight to Materials. ▪ Stock selection had a neutral impact as strong picks in Industrials and Materials were offset by weak picks in the Energy sector.	▪ No action required.

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Aberdeen	▪ Aberdeen's Q2 return of 3.3% was 200 basis points higher than the Index return. ▪ Aberdeen's outperformance was mainly due to stock selection, as strong picks within several sectors, most notably Info Tech (Samsung) and Consumer Staples added value. Weak picks in Energy (EOG Resource) detracted from value. ▪ Sector allocation had a slightly negative impact with no significant impacts from any particular sectors.	▪ Aberdeen announced £2.0 billion in net outflows from its equity strategies in the first calendar quarter of 2017. This is in addition to the £6.6 billion outflow from equity strategies in the fourth quarter. The first quarter of 2017 marks the 16th consecutive quarter of net outflows. – Second quarter data has not been provided yet as the company has not announced its Q2 results. ▪ We believe the level of net outflows experienced to date is still manageable for Aberdeen's business. In 2016, Aberdeen's relative equity performance was positive, making it more likely that outflows will slow down in the medium term. We continue to monitor Aberdeen closely as it has already lost some staff and further outflows are likely to have a negative impact on staff morale and dampen the equity business' profitability. ▪ Our rating for the global equity strategies remains 'Qualified' at this time, but we will continue to monitor the situation closely and will keep you informed of any change in our views. ▪ Aberdeen has experienced some senior staff departures including Chong Yoon-Chou (Investment Director in the Asian equity team), John Brett (Head of Global Distribution) and Anne Richards (CIO). ▪ It was announced on 6 March 2017 that Standard Life and Aberdeen have agreed in principle to the terms of a merger. The merger will be subject to shareholder and regulatory approvals and the firms are targeting Q3 2017 to complete it. ▪ Monitor performance and the manager carefully.
Brandes	▪ Brandes' Q2 return of 1.1% underperformed the Index by 20 basis points. ▪ Brandes' underperformance was due to both sector allocation decisions and stock selection. Overweights to Energy and Cash detracted from value while overweights to Financials and Health Care added value. ▪ Stock selection also detracted as weak picks in Health Care, Industrials and Consumer Discretionary more than offset strong picks in Financials and Info Tech.	▪ No action required.

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GMO	▪ GMO's return of 2.4% outperformed the Index by 110 basis points. ▪ Stock selection added the most value as portfolio holdings in eight of eleven sectors, most notably Financials, the Consumer sectors and Energy outperformed. ▪ GMO's regional allocation to equities had a slightly positive impact. Positive allocation to Emerging Markets and Europe was largely offset by weak performance in High Quality (80% domiciled in the U.S.) relative to the benchmark.	▪ No action required ▪ Effective 30 June 2017, GMO's Global Equity team assumed portfolio management responsibilities for the strategies previously managed by the International Active team.
TDAM	▪ TDAM long bond portfolio's return of 4.0% underperformed the Index return by 10 basis points. ▪ TDAM's real return bond return of 1.4% matched the Index return for the quarter.	▪ No action required.

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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 Hewitt's global research. For more details, please contact your Aon Hewitt Investment Consultant.

Topic	Summary
Canadian Real Estate Benchmarking	The REALpac/IPD Canada Quarterly Property Index (IPD) is currently the most readily available and generally accepted index of direct real estate performance in Canada. Over the last several years an effort has been underway to produce the REALpac /IPD Canada Quarterly Property Fund Index (PFI). This paper looks at some of the key differences between the IPD and the PFI. http://www.aon.com/canada/attachments/thought-leadership/report-ic-Canadian-Real-Estate-Benchmarking.pdf
***Making Portfolios More* Fee Efficient**	*Investment management fees are highly relevant to portfolio performance. Making portfolios more fee-efficient is not necessarily* about reducing fees; rather it is about paying for things that add value. This paper, written in the U.S., describes a toolkit of approaches for making portfolios more fee-efficient. www.aon.com/canada/attachments/thought-leadership/report-IC-Making-Portfolios-More-Fee-Efficient.pdf
Managed Futures	Investors looking to improve the quality of returns in their portfolio often look to make allocations to strategies that have low correlations to their other holdings. One such strategy to consider is a managed futures strategy. Managed Futures offer potential risk, historical performance and diversification opportunities, as a standalone investment or within a wider mandate. This paper, written in the United Kingdom, was inspired by a more in-depth paper produced last quarter, and provides an introduction to managed futures. http://www.aon.com/canada/attachments/thought-leadership/report_IC_Managed_Futures_July_2017.pdf
T + 2 Settlement	The North American securities markets will be moving to a maximum security settlement cycle of T+2 (trade date plus two days) from the current T+3 settlement cycle on September 5, 2017. This paper briefly discusses the parties impacted by the move to T+2 settlement and how clients may be impacted. http://www.aon.com/canada/attachments/thought-leadership/infobulletin/pub_infobulletin_T2Settlement_Newsletter.pdf

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Trailing Period Performance

As of 30 June 2017

	Allocation		Performance (%)						
	Market Value ($000)	%	1 Quarter	1 Year	2 Years	3 Years	4 Years	5 Years	10 Years
Total Fund	334,262	100.0	1.4 (12)	9.0 (81)	6.1 (49)	6.2 (67)	9.4 (63)	9.4 (85)	5.2 (94)
Benchmark			1.1 (18)	7.5 (92)	5.6 (72)	6.5 (54)	9.5 (59)	8.9 (93)	5.5 (91)
Value Added			0.3	1.5	0.5	-0.3	-0.1	0.5	-0.3
Canadian Equity	106,643	31.9	-1.1 (44)	17.7 (3)	9.6 (9)	6.7 (15)	12.0 (12)	13.4 (6)	6.4 (23)
Guardian (including cash)	40,487	12.1	-1.7 (59)	11.7 (58)	7.4 (32)	5.1 (31)	10.2 (54)	10.0 (69)	4.8 (63)
S&P/TSX Composite			-1.6 (58)	11.0 (65)	5.3 (70)	3.1 (71)	9.0 (78)	8.7 (90)	3.9 (85)
Value Added			-0.1	0.7	2.1	2.0	1.2	1.3	0.9
Letko	66,157	19.8	-0.6 (32)	21.5 (1)	11.1 (2)	7.7 (11)	13.2 (4)	15.3 (1)	7.6 (12)
S&P/TSX Composite			-1.6 (58)	11.0 (65)	5.3 (70)	3.1 (71)	9.0 (78)	8.7 (90)	3.9 (85)
Value Added			1.0	10.5	5.8	4.6	4.2	6.6	3.7
Global Equities	84,063	25.1	2.3 (45)	19.4 (53)	7.4 (83)	8.4 (94)	12.1 (93)	13.4 (94)	2.6 (99)
Aberdeen	22,370	6.7	3.3 (29)	16.4 (72)	7.4 (83)	7.4 (97)	10.9 (97)	12.1 (99)	-
MSCI World (Net) (CAD)			1.3 (71)	18.2 (60)	9.3 (55)	12.4 (60)	15.5 (59)	16.9 (66)	6.1 (77)
Value Added			2.0	-1.8	-1.9	-5.0	-4.6	-4.8	-
Brandes	18,006	5.4	1.1 (77)	22.2 (30)	6.7 (88)	9.5 (87)	14.7 (74)	17.1 (61)	3.8 (95)
MSCI World (Net) (CAD)			1.3 (71)	18.2 (60)	9.3 (55)	12.4 (60)	15.5 (59)	16.9 (66)	6.1 (77)
Value Added			-0.2	4.0	-2.6	-2.9	-0.8	0.2	-2.3
GMO	43,688	13.1	2.4 (44)	20.0 (47)	8.0 (75)	9.3 (89)	12.7 (92)	14.0 (92)	-
MSCI World (Net) (CAD)			1.3 (71)	18.2 (60)	9.3 (55)	12.4 (60)	15.5 (59)	16.9 (66)	6.1 (77)
Value Added			1.1	1.8	-1.3	-3.1	-2.8	-2.9	-
Bonds	142,083	42.5	2.7	-1.2	3.2	4.6	5.5	3.5	5.4
TDAM Long Bonds	74,717	22.4	4.0	0.3	5.1	6.4	6.8	5.0	-
FTSE TMX Long Term Bond			4.1	0.4	5.0	6.7	6.9	4.9	7.2
Value Added			-0.1	-0.1	0.1	-0.3	-0.1	0.1	-
TDAM Real Return Bonds	67,298	20.1	1.4	-2.9	1.1	2.7	4.0	1.4	-
FTSE TMX Real Return Bond			1.4	-2.7	1.2	2.6	4.0	1.1	5.4
Value Added			0.0	-0.2	-0.1	0.1	0.0	0.3	-

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

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Trailing Period Performance

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	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Total Fund	9.0 (81)	3.2 (40)	6.3 (75)	19.8 (29)	9.6 (73)	2.3 (18)	12.1 (91)	7.7 (48)	-9.4 (57)	-5.4 (89)	17.6 (4)
Benchmark	7.5 (92)	3.8 (29)	8.3 (48)	19.1 (42)	6.5 (96)	1.4 (29)	13.2 (69)	8.1 (44)	-10.6 (68)	0.3 (33)	14.6 (50)
Value Added	1.5	-0.6	-2.0	0.7	3.1	0.9	-1.1	-0.4	1.2	-5.7	3.0
Canadian Equities	17.7 (3)	2.1 (49)	1.1 (46)	29.7 (52)	19.0 (14)	-5.9 (31)	21.4 (49)	11.0 (59)	-21.1 (42)	-0.6 (69)	30.6 (10)
Guardian (including cash)	11.7 (58)	3.3 (30)	0.7 (50)	26.7 (78)	9.3 (82)	-3.1 (17)	21.6 (46)	4.6 (100)	-22.3 (48)	4.0 (44)	29.0 (13)
S&P/TSX Composite	11.0 (65)	-0.2 (63)	-1.2 (65)	28.7 (65)	7.9 (93)	-10.3 (64)	20.9 (57)	12.0 (54)	-25.7 (67)	6.7 (32)	22.7 (63)
Value Added	0.7	3.5	1.9	-2.0	1.4	7.2	0.7	-7.4	3.4	-2.7	6.3
Letko (including cash)	21.5 (1)	1.5 (53)	1.4 (43)	31.1 (36)	24.2 (2)	-6.9 (34)	20.4 (64)	14.2 (31)	-17.4 (19)	-3.1 (76)	29.7 (13)
S&P/TSX Composite	11.0 (65)	-0.2 (63)	-1.2 (65)	28.7 (65)	7.9 (93)	-10.3 (64)	20.9 (57)	12.0 (54)	-25.7 (67)	6.7 (32)	22.7 (63)
Value Added	10.5	1.7	2.6	2.4	16.3	3.4	-0.5	2.2	8.3	-9.8	7.0
Global Equities	19.4 (53)	-3.4 (77)	10.5 (92)	23.9 (65)	18.7 (85)	2.0 (40)	17.6 (68)	-0.1 (85)	-21.2 (74)	-27.0 (99)	23.1 (28)
Aberdeen	16.4 (72)	-1.0 (59)	7.6 (96)	22.0 (79)	17.2 (91)	4.3 (26)	18.3 (59)	-	-	-	-
MSCI World (Net) (CAD)	18.2 (60)	1.1 (42)	18.9 (59)	25.2 (53)	22.7 (57)	0.4 (52)	18.5 (58)	0.8 (76)	-19.3 (62)	-14.8 (61)	18.2 (69)
Value Added	-1.8	-2.1	-11.3	-3.2	-5.5	3.9	-0.2	-	-	-	-
Brandes	22.2 (30)	-6.8 (91)	15.3 (78)	31.6 (7)	27.3 (24)	-1.5 (64)	17.2 (72)	-0.4 (87)	-21.2 (74)	-27.5 (99)	25.9 (13)
MSCI World (Net) (CAD)	18.2 (60)	1.1 (42)	18.9 (59)	25.2 (53)	22.7 (57)	0.4 (52)	18.5 (58)	0.8 (76)	-19.3 (62)	-14.8 (61)	18.2 (69)
Value Added	4.0	-7.9	-3.6	6.4	4.6	-1.9	-1.3	-1.2	-1.9	-12.7	7.7
GMO	20.0 (47)	-2.8 (72)	11.9 (90)	23.8 (65)	19.0 (83)	2.9 (33)	16.6 (75)	-	-	-	-
MSCI World (Net) (CAD)	18.2 (60)	1.1 (42)	18.9 (59)	25.2 (53)	22.7 (57)	0.4 (52)	18.5 (58)	0.8 (76)	-19.3 (62)	-14.8 (61)	18.2 (69)
Value Added	1.8	-3.9	-7.0	-1.4	-3.7	2.5	-1.9	-	-	-	-
Bonds	-1.2	7.8	7.5	8.1	-3.9	10.4	5.0	7.8	6.9	6.6	4.7
TDAM Long Bonds	0.3 (85)	10.2 (29)	9.0 (89)	8.0 (39)	-2.0 (26)	-	-	-	-	-	-
FTSE TMX Long Term Bond	0.4 (72)	9.9 (51)	10.1 (30)	7.6 (72)	-2.9 (89)	18.8 (23)	7.0 (70)	10.9 (72)	4.6 (76)	6.9 (65)	6.2 (78)
Value Added	-0.1	0.3	-1.1	0.4	0.9	-	-	-	-	-	-
TDAM Real Return Bonds	-2.9	5.4	5.8	8.2	-8.5	-	-	-	-	-	-
FTSE TMX Real Return Bond	-2.7	5.3	5.6	8.1	-9.9	14.9	11.7	12.2	-3.8	15.2	0.1
Value Added	-0.2	0.1	0.2	0.1	1.4	-	-	-	-	-	

Parentheses contain percentile rankings.

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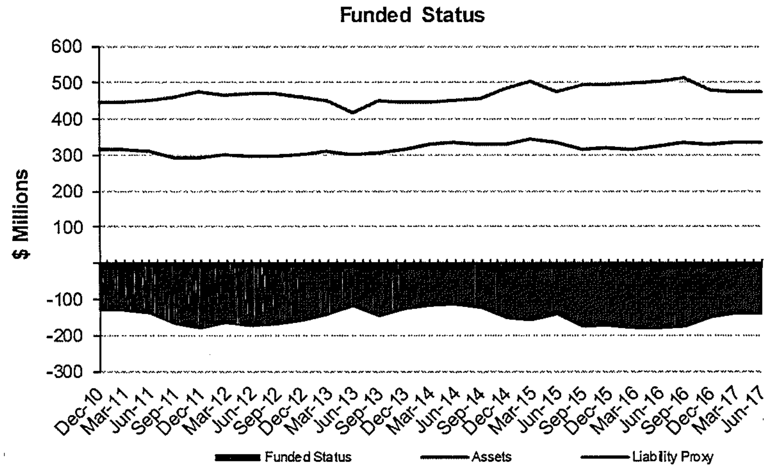
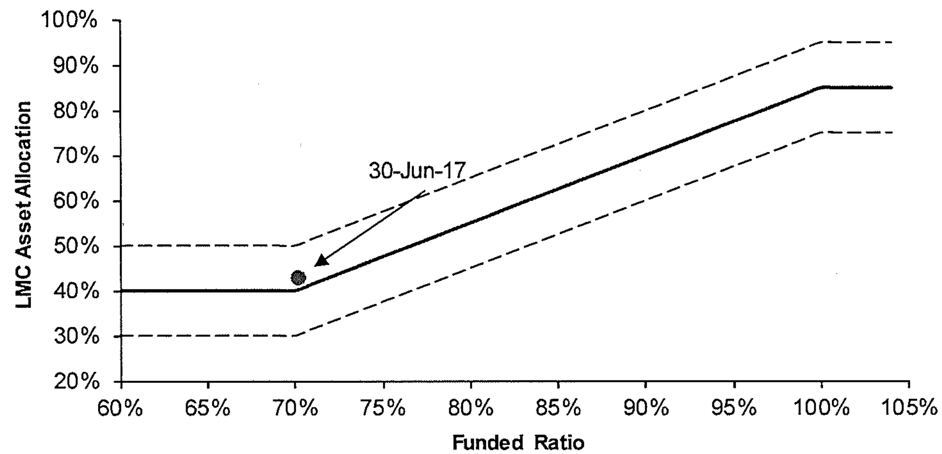
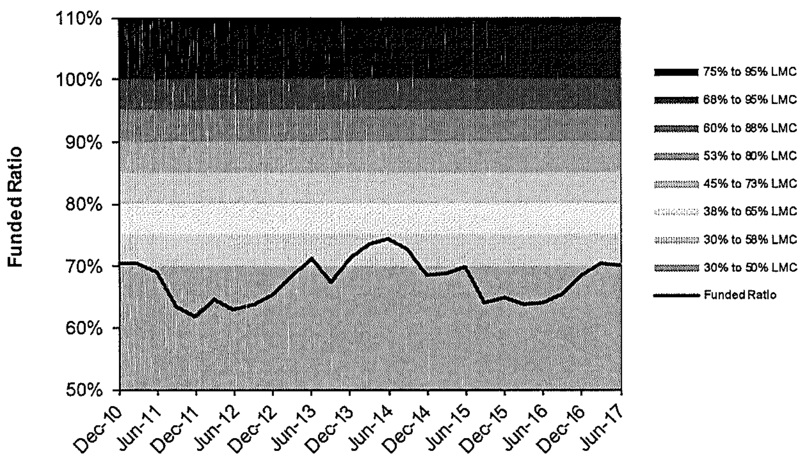
Funded Status and Glide Path Information

As of June 30, 2017







Snapshot (Wind-Up)	30-Sep-16	31-Dec-16	31-Mar-17	30-Jun-17
Market value of assets ($ Millions)	$334.8	$330.3	$335.6	$334.3
Liability proxy ($ Millions)	$511.9	$481.8	$476.1	$475.5
Funded status ($ Millions)	($177.1)	($151.5)	($140.5)	($141.2)
Funded ratio	65.4%	68.6%	70.5%	70.3%
Current LMC Asset Allocation	46.4%	43.2%	42.1%	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 30, 2017 is within the range determined acceptable for the current funded ratio (70%), the asset mix does not require rebalancing

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RBC Investor &
Treasury Services

Canadian pension returns post fifth consecutive quarter of gains: RBC Investor & Treasury Services

Canadian equities struggled during Q2 2017, losing -1.9 per cent while total returns for Q2 2017 sit at 1.4 per cent

Toronto, August 8, 2017 – *Canadian defined benefit pension plans remained resilient in the face of* weakening domestic equities, with second quarter returns of 1.4 per cent, according to Q2 2017 figures from RBC. Tracking $650 billion of assets under management, the RBC Investor & Treasury Services All Plan Universe is the most comprehensive overview of Canadian Defined Benefit pension plans.

Canadian equity returns slipped into negative territory with returns of -1.9 per cent in Q2 2017, compared with 2.3 per cent for the previous quarter, mirroring the TSX Composite Index which reported -1.6 per cent in Q2 2017, down from previous gains of 2.4 per cent.

"Despite positive economic indicators of a healthy Canadian economy, depressed energy and commodities were amongst the poorest performing sectors to drag on domestic equities," said James Rausch, Head of Client Coverage, Canada, RBC Investor & Treasury Services, as oil prices fell over 15 per cent since the beginning of the year and reserves of oil remain above average.

"Nevertheless, Canadian pension fund managers have continued to prudently manage portfolio allocations, remaining underweight in Canadian equities compared to domestic fixed income and global equities and generating yet another positive overall return for the quarter," Rausch said.

Although global equities moved off their strong returns of 6.2 per cent in Q1 2017, posting just 2.3 per cent for the quarter, stocks continued to respond to continued positive global economic data, such as encouraging signs of a stable recovery in Europe and healthy quarterly earnings. Any enthusiasm was dampened, however, by disappointing growth numbers and political risk factors from the U.S., along with considerations that the recovery in most equities is approaching its natural ceiling; the MSCI World Index slipping from 5.8 per cent to 1.3 per cent in Q2 2017.

After their foray into negative territory in Q4 2016 (-3.4 per cent), Canadian fixed income returns consolidated their recovery from the previous quarter, again posting gains of 1.4 per cent. This was against a general backdrop of weakness in global bond markets, as central banks increasingly consider calling time on stimulus packages and preparing the ground for possible rises in interest rates, prompting a slight bounce in bond yields in anticipation of a move in that direction by the Bank of Canada. The FTSE TMX Universe Canadian bond index also remained positive, gaining 1.1 per cent for the quarter.

The strengthening Canadian dollar continued to put pressure on stocks and bonds over the quarter; the US dollar continued its slide against the Canadian dollar, falling further into the red at -2.62 per cent, down from -0.6 per cent in Q1 2017.

HISTORIC PERFORMANCE

Period	Return (%)	Period	Return (%)
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
Q1 2016	0.0	Q4 2013	6.1
Q4 2015	3.1	Q3 2013	3.6
Q3 2015	-2.0	Q2 2013	0.0
Q2 2015	-1.6	Q1 2013	4.4

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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 19 countries across North America, Europe, Asia and Australia, delivering services to safeguard client assets and maximize liquidity. Rated by our clients as the #1 global custodian for six consecutive years (Global Custody Survey, Global Investor ISF, 2011 to 2016), RBC I&TS is trusted with over CAD 4 trillion in client assets under administration as at April 30, 2017.

About RBC

Royal Bank of Canada is Canada's largest bank, and one of the largest banks in the world, based on market capitalization. We are one of North America's leading diversified financial services companies, and provide personal and commercial banking, wealth management, insurance, investor services and capital markets products and services on a global basis. We have over 80,000 full- and part-time employees who serve more than 16 million personal, business, public sector and institutional clients through offices in Canada, the U.S. and 35 other countries. For more information, please visit http://www.rbc.com/.

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