

Performance Review

University of Guelph Pension Plans

3rd Quarter 2018

UNIVERSITY
of GUELPH

CHANGING LIVES
IMPROVING LIFE

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Pension Plans Results Overview

(Net of fees returns for the 12 months ended September 30th, 2018)

The Total Plan gained 7.1% over the last 12 months, underperforming both the unhedged and hedged benchmarks by 0.6%.

Canadian Equity

- The Canadian equity portfolio underperformed the S&P/TSX index return by 0.6% over the past year.
- All three large cap managers lagged the S&P/TSX. Burgundy, CC&L, and Sionna underperformed the index by 1.1%, 0.2% and 0.5% respectively.
- The plan's Canadian small cap manager (Sionna) gained 5.3% over the last year, beating the BMO Small Cap index by 3.7%.

Global/Non-North American Equity

- In Canadian dollars, non-North American equities in developed markets outperformed Canada (5.9%) and underperformed the U.S. (21.9%) with a return of 6.7%.
- LSV and Tweedy Browne lagged the MSCI EAFE index by 4.0% and 0.1% respectively. As a result, the plan's Non-North American equity underperformance during the past year was 2.1%.
- Global equities, as measured by the MSCI World ex-Canada index, returned 15.9% over the last year. The pension plan's only Global equity manager, Acadian, beat the index 1-year return by 3.8%.

U.S. Equity

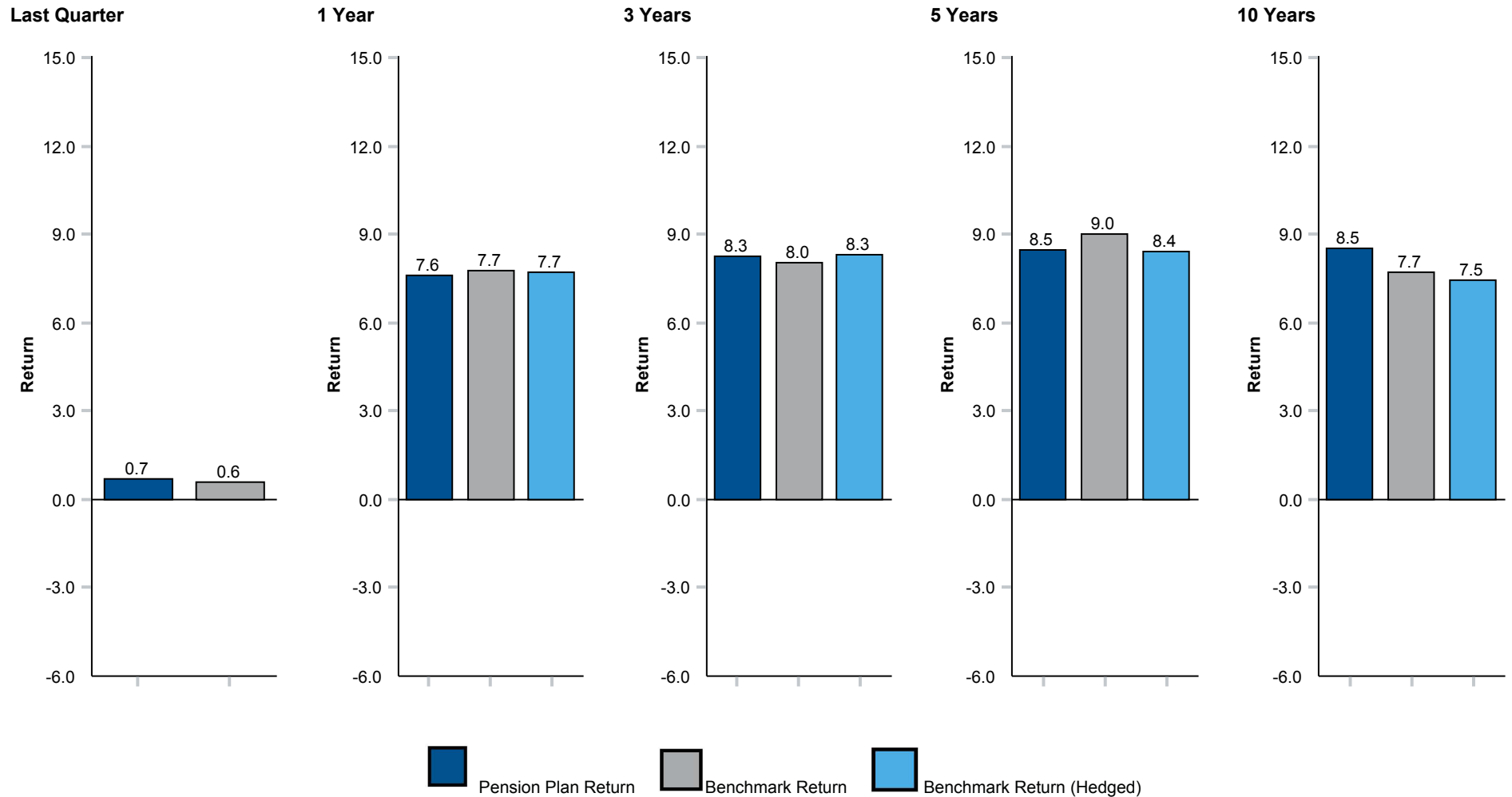
- U.S. large caps had strong performance as the S&P 500 returned 21.9% in Canadian dollar terms over the last year.
- The plan's U.S. equity investments (including U.S. small- and mid-caps) generated a return of 14.8%, underperforming the S&P 500 by 7.1%.
- The plan's large cap manager (Barrow) beat the Russell 1000 Value index by 5.8%. The mid-cap portfolio managed by Wedge underperformed by 1.2% versus its index and the firm's small-cap strategy lagged the Russell 2000 Value Index by 3.1%.

Fixed Income

- The total fixed income portfolio outperformed its benchmark by 0.6%.
- Both CIBC Long-Term and Short-Term Bond strategies matched their benchmarks returns over the last year, while Addenda Mortgage and Robeco Global High Yield Bonds outperformed their indices by 2.0% and 1.8% respectively.
- The real estate portfolio managed by Greystone beat its index by 1.7%, while the new infrastructure investment managed by Brookfield beat its index by 7.5%. Short-term returns should be interpreted with caution due to the long-term nature and illiquidity of the investment.

Total Pension Portfolio Vs Composite Benchmark

As of September 30, 2018 (Gross of Fees, Annualized for Periods over 1 Year)



Returns are presented gross of fees in CAD. Current Composite Benchmark: 9.7% S&P/TSX Comp Capped + 17.4% MSCI EAFE Net (\$CAD) + 16.7% S&P 500 (\$CAD) + 7.5% MSCI EM Net (\$CAD) + 12.3% FTSE TMX ST Bond Index + 17.2% FTSE TMX LT Bond Index + 7.5% Barclays Global High Yield Index Hedged to CAD + 4.8% IPD Canada Annual Property Index + 5% CPI+5% + 1.9% FTSE TMX 91 Day T-Bill. The Hedged Benchmark has the same composition as the Composite Benchmark, but all foreign indices are 50% hedged back to Canadian dollars from December 2011 to March 2017, 37.5% hedged from April to June 2017, 25% hedged from July to September 2017, 12.5% hedged from October to December 2017, 0% hedged since January 2018.

Asset Class Performance

As of September 30, 2018 (Gross of Fees)

	Allocation		Annualized Performance(%)					Annual Performance(%)				
	Market Value (\$)	% of portfolio	Quarter To Date	1 Year	3 Years	5 Years	10 Years	1 Year Ending Sep-2017	1 Year Ending Sep-2016	1 Year Ending Sep-2015	1 Year Ending Sep-2014	1 Year Ending Sep-2013
Canadian Equity	175,766,802	11.3	-0.3	5.8	10.0	7.9	7.8	9.6	14.9	-8.8	20.5	16.6
S&P/TSX Composite Index			-0.6	5.9	9.7	7.8	6.3	9.2	14.2	-8.4	20.4	7.1
<i>Relative Performance</i>			<i>0.3</i>	<i>-0.1</i>	<i>0.3</i>	<i>0.1</i>	<i>1.5</i>	<i>0.4</i>	<i>0.7</i>	<i>-0.4</i>	<i>0.1</i>	<i>9.5</i>
US Equity	231,695,504	14.9	3.3	15.4	12.5	16.9	14.1	11.8	10.4	20.8	26.6	33.0
S&P 500 Index (CAD)			5.8	21.9	15.9	19.3	14.2	12.9	13.2	19.2	30.2	24.7
<i>Relative Performance</i>			<i>-2.5</i>	<i>-6.5</i>	<i>-3.4</i>	<i>-2.4</i>	<i>-0.1</i>	<i>-1.1</i>	<i>-2.8</i>	<i>1.6</i>	<i>-3.6</i>	<i>8.3</i>
Non-North American Equity	243,506,438	15.7	0.1	5.5	8.9	10.4	10.4	15.2	6.2	9.2	16.4	29.4
MSCI EAFE Composite			-0.4	6.7	8.4	9.8	8.0	13.8	4.9	10.0	13.8	29.8
<i>Relative Performance</i>			<i>0.5</i>	<i>-1.2</i>	<i>0.5</i>	<i>0.6</i>	<i>2.4</i>	<i>1.4</i>	<i>1.3</i>	<i>-0.8</i>	<i>2.6</i>	<i>-0.4</i>
Global Equity	125,012,787	8.0	4.4	20.4	14.3	16.7	12.0	14.1	8.7	14.8	26.2	26.4
MSCI World Ex Canada			3.4	15.9	12.9	15.3	11.6	13.2	9.7	15.5	22.7	27.3
<i>Relative Performance</i>			<i>1.0</i>	<i>4.5</i>	<i>1.4</i>	<i>1.4</i>	<i>0.4</i>	<i>0.9</i>	<i>-1.0</i>	<i>-0.7</i>	<i>3.5</i>	<i>-0.9</i>
Emerging Market Equity	102,332,111	6.6										
Fixed Income	533,865,658	34.3	-0.7	3.1	2.1	3.6	4.6	-3.0	6.4	5.3	6.4	-1.2
Fixed Income Benchmark			-0.9	2.4	2.1	3.6	4.6	-2.2	6.3	5.3	6.3	-1.3
<i>Relative Performance</i>			<i>0.2</i>	<i>0.7</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>-0.8</i>	<i>0.1</i>	<i>0.0</i>	<i>0.1</i>	<i>0.1</i>
Real Estate	77,059,603	5.0	2.4	11.2	9.4	8.4	--	10.9	6.1	5.7	8.3	10.7
IPD Canadian Property Index			2.1	8.6	7.5	7.7	8.7	6.8	7.2	7.1	8.8	12.4
<i>Relative Performance</i>			<i>0.3</i>	<i>2.6</i>	<i>1.9</i>	<i>0.7</i>	<i>--</i>	<i>4.1</i>	<i>-1.1</i>	<i>-1.4</i>	<i>-0.5</i>	<i>-1.7</i>
Infrastructure	39,004,138	2.5	5.4	18.9	--	--	--	16.3	--	--	--	--
CPI + 5%			1.3	7.2	6.7	6.7	6.5	6.6	6.3	6.0	7.1	6.1
<i>Relative Performance</i>			<i>4.1</i>	<i>11.7</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>9.7</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>

*Cash amounts and percentages presented exclude residual manager cash balances and FX overlay (currency hedging). However, they include the proceeds of the former Banyan Private Equity position, which explains its high 3-year return. All returns are reported gross of fees in CAD except for the Total Pension Plan where returns are displayed both net and gross of fees. EAFE Stands for Europe, Australasia and Far East. The IPD Canadian Property Index is published quarterly with a 2-month lag, it is approximated by CIBC Mellon.

Asset Class Performance

As of September 30, 2018 (Gross of Fees)

	Allocation		Quarter To Date	Annualized Performance(%)					Annual Performance(%)				
	Market Value (\$)	% of portfolio		1 Year	3 Years	5 Years	10 Years	1 Year Ending Sep-2017	1 Year Ending Sep-2016	1 Year Ending Sep-2015	1 Year Ending Sep-2014	1 Year Ending Sep-2013	
Internal Cash (STIF)*	26,282,538	1.7	-0.2	1.5	2.6	2.9	0.9	2.1	4.3	0.6	6.0	-0.1	
FTSE TMX Canada 91 Day T-Bill			0.3	1.2	0.7	0.8	0.8	0.5	0.5	0.8	0.9	1.1	
<i>Relative Performance</i>			<i>-0.5</i>	<i>0.3</i>	<i>1.9</i>	<i>2.1</i>	<i>0.1</i>	<i>1.6</i>	<i>3.8</i>	<i>-0.2</i>	<i>5.1</i>	<i>-1.2</i>	
Total Pension													
Gross of Fees	1,554,525,577	100.0	0.7	7.6	8.3	8.5	8.5	7.9	9.4	2.5	15.5	15.8	
Net of Fees			0.6	7.1	7.7	8.0	8.0	7.3	8.8	2.1	15.0	15.4	
<i>Relative Performance</i>			<i>0.1</i>	<i>0.5</i>	<i>0.6</i>	<i>0.5</i>	<i>0.5</i>	<i>0.6</i>	<i>0.6</i>	<i>0.4</i>	<i>0.5</i>	<i>0.4</i>	
Composite Benchmark (Hedged)			0.6	7.7	8.3	8.4	7.5	7.7	9.6	2.6	14.9	11.6	
<i>Relative Performance</i>			<i>0.1</i>	<i>-0.1</i>	<i>0.0</i>	<i>0.1</i>	<i>1.0</i>	<i>0.2</i>	<i>-0.2</i>	<i>-0.1</i>	<i>0.6</i>	<i>4.2</i>	
Total Pension (Gross of Fees)	1,554,525,577	100.0	0.7	7.6	8.3	8.5	8.5	7.9	9.4	2.5	15.5	15.8	
Total Pension ex. FX overlay			0.7	7.7	8.0	9.2	--	7.3	9.1	5.5	16.8	16.5	
<i>Relative Performance</i>			<i>0.0</i>	<i>-0.1</i>	<i>0.3</i>	<i>-0.7</i>	<i>--</i>	<i>0.6</i>	<i>0.3</i>	<i>-3.0</i>	<i>-1.3</i>	<i>-0.7</i>	

Current Fixed Income Benchmark: 33.2% FTSE TMX ST Bond Index + 46.5% FTSE TMX LT Bond Index + 20.3% Barclays Global High Yield Hedged to CAD.

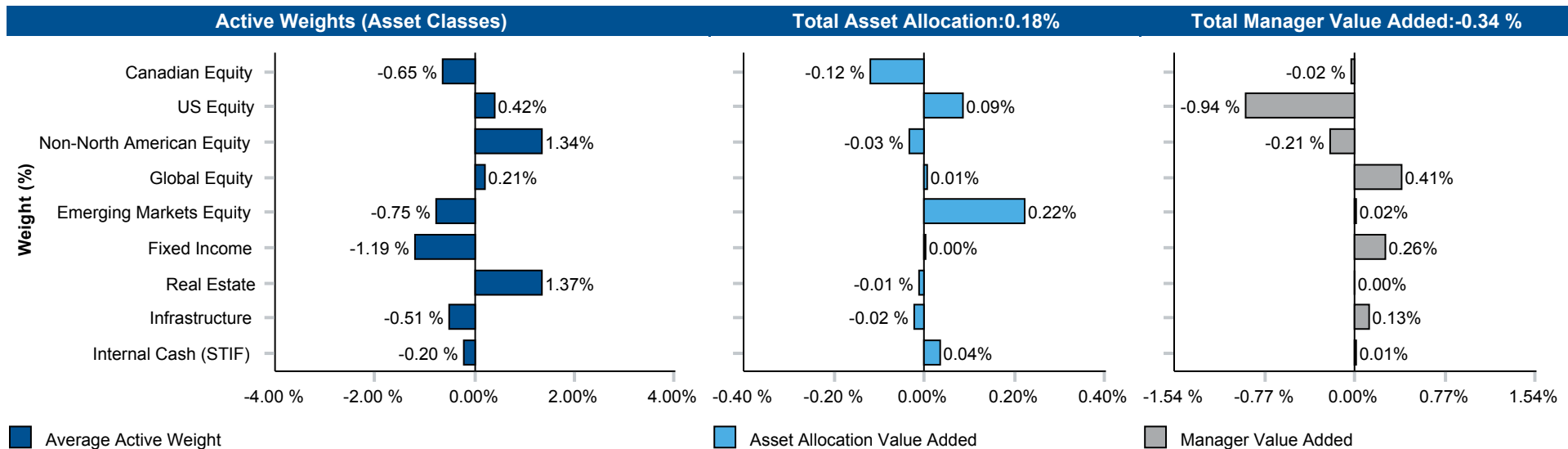
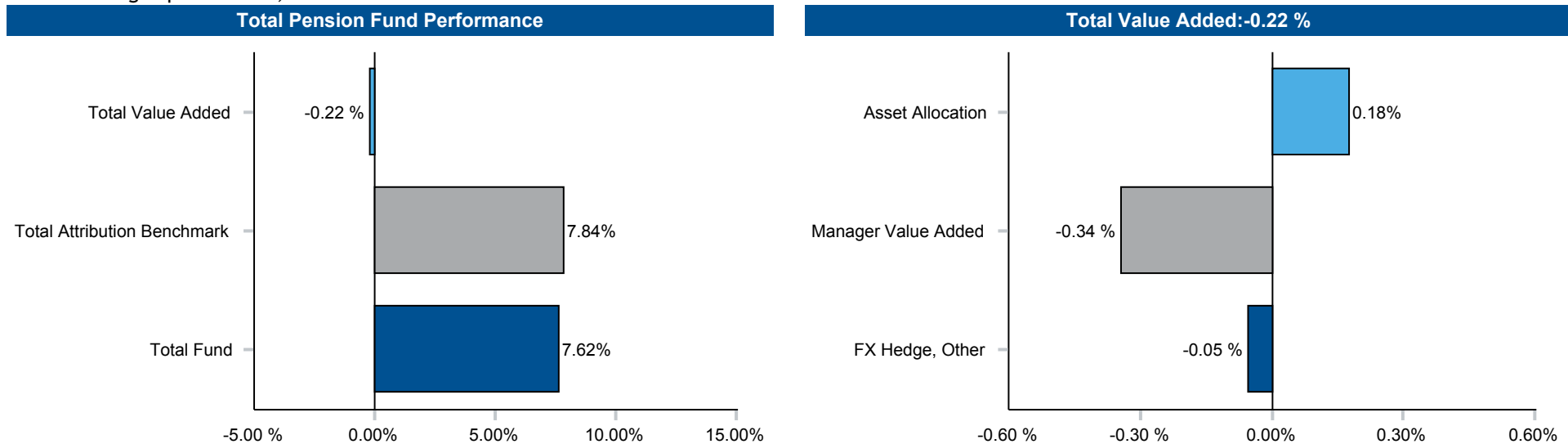
Current Composite Benchmark: 9.7% S&P/TSX Comp Capped + 17.4% MSCI EAFE Net (\$CAD) + 16.7% S&P 500 (\$CAD) + 7.5% MSCI EM Net (\$CAD) + 12.3% FTSE TMX ST Bond Index + 17.2% FTSE TMX LT Bond Index + 7.5% Barclays Global High Yield Index Hedged to CAD + 4.8% IPD Canada Annual Property Index + 5% CPI+5% + 1.9% FTSE TMX 91 Day T-Bill. The Hedged Benchmark has the same composition as the Composite Benchmark, but all foreign indices are 50% hedged back to Canadian dollars from December 2011 to March 2017, 37.5% hedged from April to June 2017, 25% hedged from July to September 2017, 12.5% hedged from October to December 2017, 0% hedged since January 2018.

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Performance Attribution

Total Pension Plans Vs Attribution Benchmark

1 Year Ending September 30, 2018



Returns are presented gross of fees in CAD.

The Attribution Benchmark was created to account for small variations of asset allocation between the Total Pension Plans and their Composite Benchmark. Its composition is as follow: 9.7% S&P/TSX Comp Capped + 12.3% S&P 500 (SCAD) + 14.5% MSCI EAFE Net (SCAD) + 7.3% MSCI World + 7.5 MSCI EM Net (SCAD) + 12.3% FTSE TMX ST Bond Index + 17.2% FTSE TMX LT Bond Index + 7.5% Barclays Global High Yield Hedged to CAD + 4.8% IPD Canada Annual Property Index + 5% CPI+5% + 1.9% FTSE TMX 91 Day T-Bill.

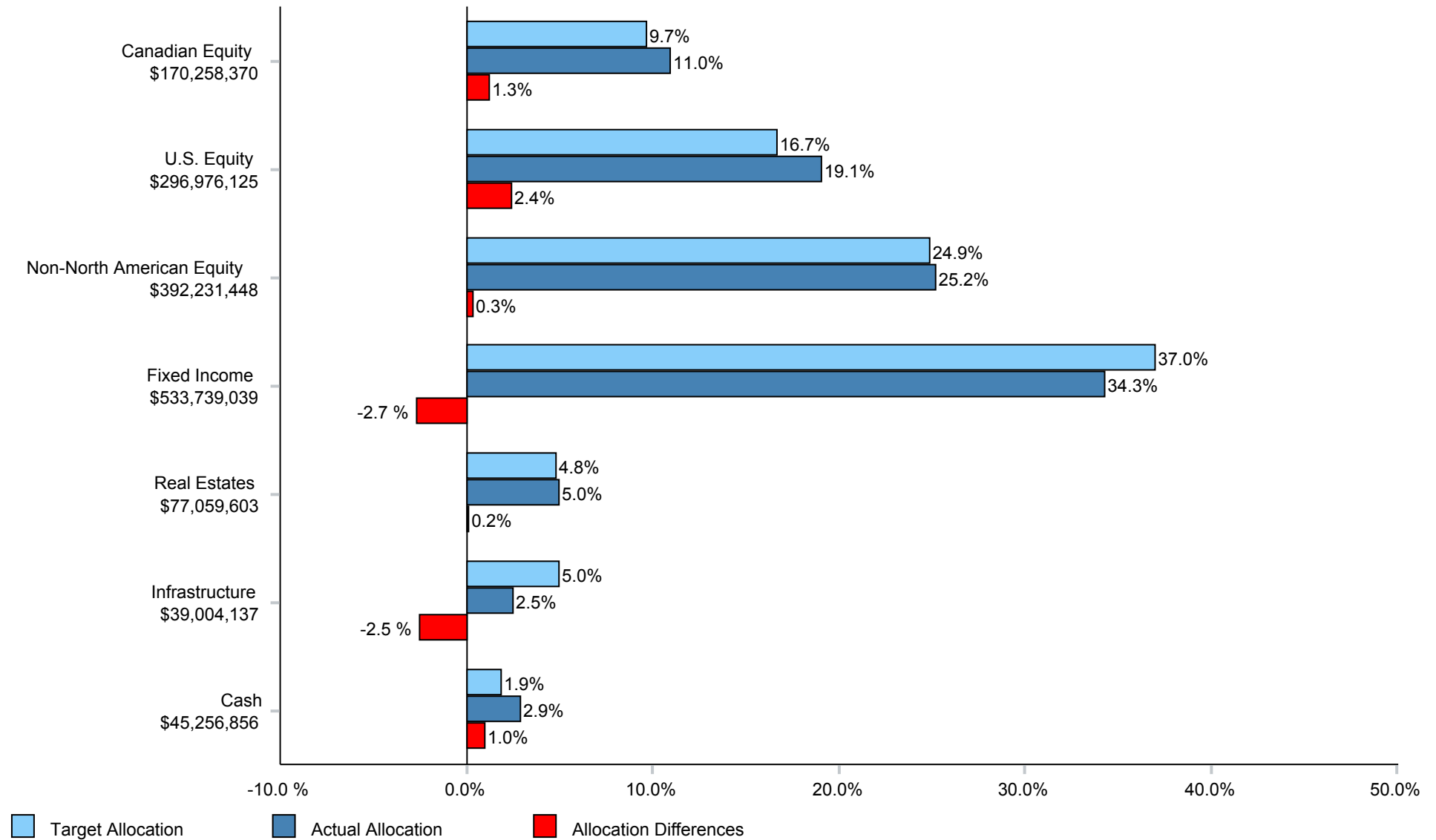
“Other” includes the effects of all other factors on the Total Pensions Plans' relative return, including rebalancing and residual trading returns.

Pension Plans Asset Mix

Actual Allocation vs. Investment Policy Allocation

As of September 30, 2018

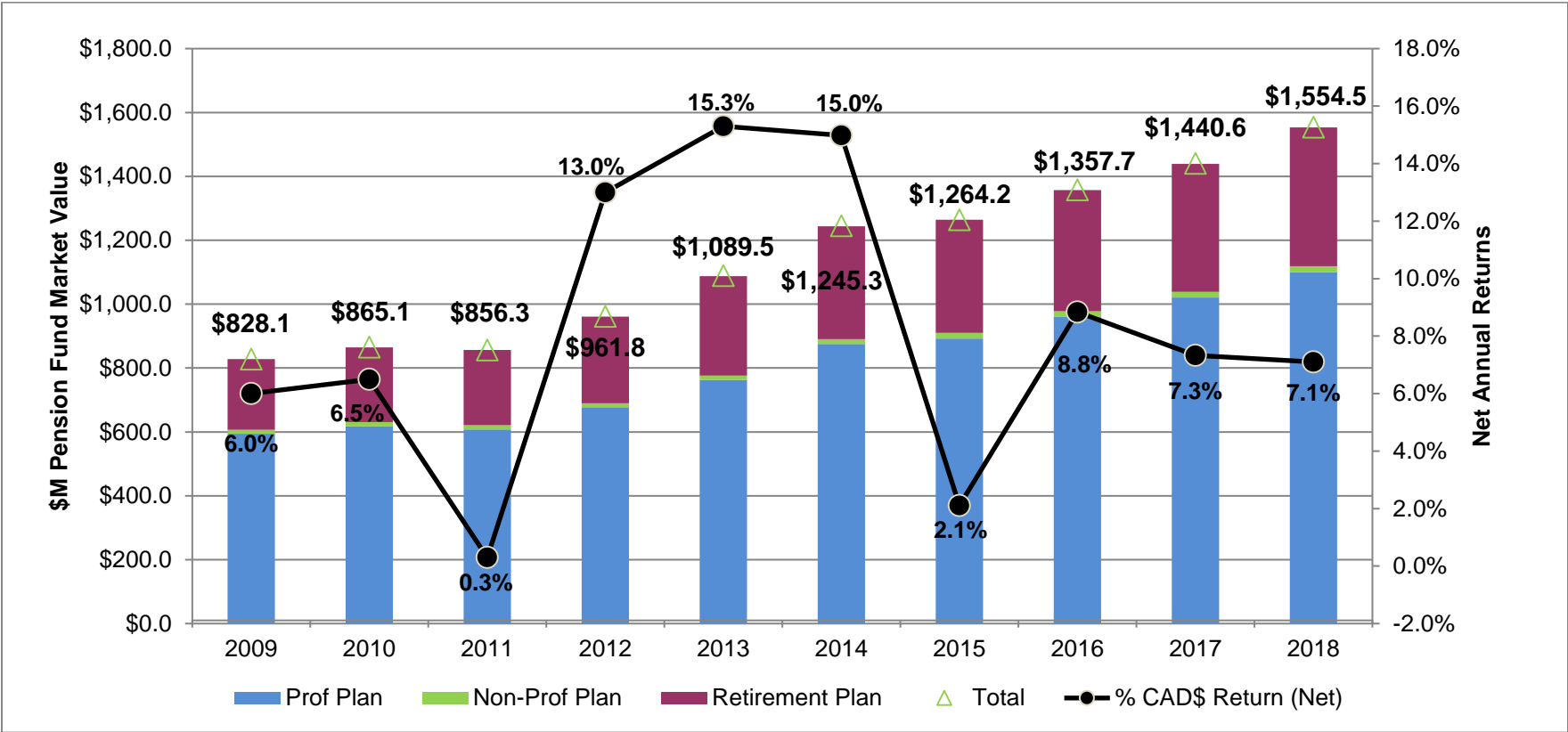
September 30, 2018 : \$1,554,525,577



Note: This actual allocation displays the aggregate managers' holdings regardless of their mandate. Cash presented includes internal cash (STIF) and manager residual cash balances (data from CIBC Mellon).

Growth of Pension Assets

September Market Values and Net 1-year Returns to September 30th of Each Year



Over the last 12 months the Total Pension portfolio increased from \$1,440.6 M to \$1,554.5 M consisting of:

- Total contributions of \$88.6 M and disbursements of \$74.7 M.
- 1-year return (net of investment management fees) of 7.1% compared to 7.3% one year ago.