York University Endowment Fund

Annual Investment Report
Board of Governors

For Year Ended December 31, 2018

York University Endowment Fund

Annual Investment Report
For Year Ended December 31, 2018

The Endowment Fund (the Fund) is a pool of commingled assets held for the endowments in long-term investments. The endowments are permanent gifts and bequests to York University from donors, enhanced where eligible with matching capital provided by University and government programs. Annual distributions are generated by the Fund investments for support of scholarships and academic chairs.

The Fund is governed by objectives and constraints as documented in the Statement of Investment Policies and Procedures (the Policy). The Board of Governors annually approves the Policy and any changes to the investment strategy or asset mix as proposed by the Investment Committee. The Investment Committee oversees the investments, portfolio managers and implementation of investment strategy.

The Fund assets are allocated for investment to nine portfolio managers each assigned with distinct mandates. All mandates are actively managed with the exception of one-half of the Canadian bonds which are invested passively to track an index.

The Fund in Review - 2018

The market value of the Fund as at December 31, 2018 was $464.2 million, a decrease of $12.5 million relative to the December 31, 2017 valuation of $476.7 million. The decrease in 2018 was the net effect from combined inflows, outflows and depreciation. Inflows of $6.0 million in contributed capital plus income increased the value of the fund while investment expenses ($2.8 million), fund distributions ($9.7 million) and a negative return on invested assets ($6.0 million) decreased the fund's value.

Distributions to support endowment beneficiaries form the greatest part of the withdrawals. Over the past four years, $62.3 million has been directed specifically to the purposes established by the University's donors.

The Fund one-year rate of return as of December 31, 2018 was -1.25%, compared to the returns of 8.6% and 7.7% for the 1 year periods ending December 31, 2017 and 2016 respectively. The Fund performance for 2018 exceeded the benchmark one-year rate of return of -1.3% by 0.05%.

The Fund four-year rate of return as of December 31, 2018 of 4.94% trailed the annualized benchmark performance, for the same period, of 5.88% by 0.94%.

Major equity markets during 2018 corrected over concerns of central bank rate normalization, culminating in the US Federal Reserve embarking on quantitative tightening and hiking the Federal Funds target rate from 2.25% to 2.50% on December 19, 2019. The global equity market, measured by the MSCI ACWI Index, lost 1.3% in Canadian dollar terms while Canadian equity benchmark (S&P/TSX Composite) declined 8.9%. The US small-mid cap index, represented by the Russel 2500, declined 2.0% during calendar 2018.

Fixed income market returns were muted as the Bank of Canada raised its key benchmark overnight target rate by 25 basis points, in January, July, and October 2018 to bring it to

1.75% versus 1.0% at the beginning of the year. The Canadian yield curve, particularly the yields between 2 and 10 years, has been flattening since 2017. The Canadian 10-2 year treasury yield spread has often been a leading indicator for broad economic growth and the expectations of a possible yield curve inversion into 2019 led forecasters to predict a slowdown –if not outright recession—in 2019.[1] The broad Canadian bond market measured by the FTSE TMX Universe Bond Index returned 1.4% while at the short end, the representative Canadian bond index returned 1.9%.

In 2017, the US dollar depreciated 10% relative to a basket of major currencies but rebounded strongly in 2018 against both developed and emerging market currencies, appreciating against British pound 6.4%, Euro 4.8%, Chinese renminbi 5.7%, and South African rand 16.7%. The rise of USD in 2018 was down to factors such as US fiscal stimulus, economic growth slowdown outside of the US, political crises in Europe and emerging markets, and a rise in trade tensions.

During 2018, the Fund return of -1.25% was driven by its asset allocation (beating the benchmark return of -1.3%). The 0.05% performance over benchmark was a function of outperformance in Global equities versus underperformance in three categories; primarily US Small/Mid cap equity and Canadian equities which comprised 34.22% of total assets, and Global High Yield bonds, which comprised 9.94% of assets.

The passive currency hedging strategy had a negative impact and decreased the value of total fund by 0.5% in 2018. The rate of return was driven by the CAD depreciation of 7.6% vs the USD, with 5.6% of that coming in Q4 2019.

Direct expenses charged to the Fund for investment management, custody, performance measurement and investment consulting services during calendar 2018 were $2.8 million for a total expense ratio of 0.59%. The 2018 expenses and expense ratio were consistent with levels during the prior year, which were $2.7 million and 0.58% respectively. The increase was primarily the result of increased fees for investment managers Landmark, Stone Harbor, Foyston Gordon & Payne (FGP), and consultant Aon, which were partially offset by lower fees paid to Pier 21.

The balance of this Report reviews the investments, asset mix and manager allocations. Performance of the Fund to December 31, 2018 is reviewed in absolute, relative and comparative terms. The Investment Committee's activities conducted during calendar 2018 are summarized in the last section.

Asset Mix

The Policy asset mix (Figure 1) effective throughout 2018, summarizes the asset class weights set out in the Statement of Investment Policies and Procedures.

[1] The spread between the yields on the two- and ten-year Canadian bonds or US Treasury Notes are an important gauge regarding the current "shape" of the yield curve. The yield curve is a graph with plotted points that represent the yields over time on bonds of varying maturities— typically from three months to 30 years.

Figure 1

Policy Asset Mix

Asset Class	Target Weight	
Equities		
Canadian	15%	
US Small/Mid Cap	20%	
Global	30%	**65%**
Fixed Income		
Canadian Universe Bonds	10%	
Canadian Short Term Bonds	10%	
Global High Yield Bonds	10%	**30%**
Real Estate		
Canadian Real Estate	5%	**5%**

The Policy asset mix, determined through a periodic process involving an asset-liability study that incorporates projections for capital markets returns over a ten-year horizon, is selected for its expected ability to meet the Fund's investment objective of funding endowment commitments each year, into perpetuity. The asset mix is geared to provide income to the University for the annual payouts to support endowed spending and to preserve the value of endowed capital.

The Fund's actual asset mix compared to the Policy target weights effective throughout 2018, including currency overlay, as at December 31, 2018, is shown in Figure 2.

Figure 2

Actual Versus Target Asset Class Weights - December 31, 2018

Asset Class	Market Value ($Mil)		Actual Weight		Target Weight		Over/Under	
Equities								
Canadian	$ 67.0		14.4%		15.0%		-0.6%	
US Small/Mid Cap	92.3		19.9%		20.0%		-0.1%	
Global	146.1	**$305.4**	31.5%	**65.8%**	30.0%	**65.0%**	1.5%	**0.8%**
Real Assets								
Canadian Real Estate	34.0	**34.0**	7.3%	**7.3%**	5.0%	**5.0%**	2.3%	**2.3%**
Fixed Income								
Canadian Universe Bonds	37.1		8.0%		10.0%		-2.0%	
Canadian Short Term Bonds	36.8		7.9%		10.0%		-2.1%	
Global High Yield Bonds	46.3		10.0%		10.0%		0.0%	
Short-Term Investments	6.0	**126.2**	1.3%	**27.2%**	0.0%	**30.0%**	1.3%	**-2.8%**
Currency Hedge	(1.4)	**(1.4)**	-0.3%	**-0.3%**	0.0%	**0.0%**	-0.3%	**-0.3%**
		$464.2		**100.0%**		**100.0%**		

Asset class weights are permitted to vary within a range of +/- 5% of the target weights and are rebalanced periodically back to the target. The allocation in 2018 to Canadian direct real estate is accorded a 5% weight in the composite benchmark which shall be the case until the allocation reaches a meaningful level (10%), a function of manager capital calls.

The University has engaged nine investment managers to manage eleven specialty investment mandates including an allocation to handle operating liquidity held in a short-term investment fund. The managers have been selected to provide specific investment expertise. A specialty mandate is established for each that describes the asset class, investment objectives, constraints, and performance benchmark for that portfolio. The managers, their mandates, market values and fund weights are shown in Figure 3. The currency hedge applies to 50% of the USD exposure contained in the high yield bonds and global real estates. The passive overlay is composed of liquid three-month foreign exchange forward contracts and reported on a marked-to-market basis.

Figure 3

Specialty Mandates and Asset Allocations - December 31, 2017

Investment Manager	Mandate	Market Value ($ Mil)	Weight
	Equities		
Foyston, Gordon & Payne	Canadian	32.9	7.1%
Mawer	Canadian	34.1	7.3%
Westwood	US Small/Mid Cap	92.3	19.9%
Pier 21 - C Worldwide	Global Equity	73.8	15.9%
TDAM Epoch	Global Equity	72.3	15.6%
	Real Assets		
Bentall Kennedy	Canadian Real Estate	28.5	6.1%
Landmark VIII	Global Real Estate	5.5	1.2%
	Fixed Income		
TD Asset Management	Canadian Universe Bonds	37.1	8.0%
TD Asset Management	Canadian Short Term Bonds	36.8	7.9%
Stone Harbor	Global High Yield Bonds	46.3	10.0%
TD Asset Management	Short-Term Investments	6.0	1.3%
TD Asset Management	**Currency Hedge**	(1.4)	-0.3%
		$ 464.2	100.0%

Performance Objectives

The Fund’s return objective is quantified in the form of a performance benchmark, which is a weighted composite of specified capital markets indices. Each asset class is assigned a specific index or index-relative target for performance measurement and evaluation. For portfolios of publicly-traded securities, representing 95% of the Fund, each component index is broadly representative of a specified market, and is a transparent and reproducible sample of publicly-traded investable equities or bonds. For assets in privately-held portfolios, specifically Canadian real estate, the target benchmark is based on a premium of 2% above the return generated by the broad fixed income market.

The Canadian real estate benchmark index was introduced in October 2016 coinciding with the allocation to real estate investments and the attainment of the measurable level of 5% of total fund.

The performance benchmark in effect throughout 2018 follows in Figure 4.

Figure 4

Performance Benchmark 2018

Asset Class	Weight	Index
Canadian Equities	15%	S&P/TSX Composite
Small/Mid Cap US Equities	20%	Russell 2500
Global Equities	30%	MSCI ACWI
Canadian Universe Bonds	10%	FTSE TMX Canada Bond Universe
Canadian Short Term Bonds	10%	FTSE TMX Short Term Bond
Global High Yield Bonds	10%	Citigroup High Yield Market Capped
Canadian Real Estate	5%	Canada Bond Universe + 2%

The Fund return objective is to meet or exceed the four-year annualized rate of return of the Policy composite benchmark for the same period over most four-year annualized periods as measured year to year.

Fund performance is expressed as a total rate of return, gross of fees, in Canadian dollars. Fund rates of return are calculated by an independent performance measurement provider, CIBC Mellon.

Evaluating Absolute Performance

Performance evaluation is conducted regularly on a monthly basis. The total fund rate of return is compared to the return of the composite benchmark and reported for intervals spanning one month to ten years. A formal performance evaluation is conducted semi-annually for review by the Committee that focuses on one-year and four-year returns to assess recent performance and longer-term success toward meeting Policy objectives. The results of individual portfolios and managers are reviewed, incorporating comparisons to performance statistics for portfolio risk and return and to the objectives and targets specified in each of the manager mandates.

Figure 5 presents the Fund's performance record for 2018 and successive annualized periods out to ten years (2009-2018), providing a snapshot of the longer-term success of the investment program.

Figure 5

Endowment Fund Long-Term Performance

	Annualized Returns for Periods Ended December 31, 2018									
	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	6 Yrs	7 Yrs	8 Yrs	9 Yrs	10 Yrs
Fund	-1.3%	3.5%	4.9%	4.9%	5.9%	7.7%	8.4%	7.4%	8.0%	9.3%
Benchmark	-1.3%	3.6%	5.5%	5.9%	6.8%	8.6%	9.0%	7.6%	8.2%	9.4%
	0.0%	0.0%	-0.6%	-0.9%	-0.9%	-0.9%	-0.6%	-0.2%	-0.2%	-0.1%

In absolute terms, on a ten-year annualized basis, the 9.3% performance of the Fund has covered the sum of the approximated real spending target of 4.0%, expenses of 0.5%, and inflation of 2.0%.

The Endowment Fund's investment program is fluid and developed in response to shifts in the investment environment, changes in the cash flows and evolving risks affecting various components of the Fund. The Committee has concentrated on revisiting the target asset mix that align with the investment objectives of preserving capital through a range of capital market outcomes and providing annual distributions for inflation-adjusted spending. The target mix will be changed effective

Measuring Relative Performance

Figure 6 shows annual one-year returns for eleven years, 2008 to 2017, and the four-year annualized return to December 31, 2018 relative to the Policy benchmark approved by the Board that prevailed for each of those past years. Currency strategy was introduced as an integral element of investment strategy in 2010.

Figure 6

Endowment Performance - Annual Returns

	One-Year Returns as at December 31											Annualized Four Years
	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2015-18
Fund	-1.3%	8.6%	7.7%	5.0%	9.7%	17.3%	12.5%	0.8%	12.8%	21.7%	-19.1%	**5.0%**
Benchmark	-1.3%	8.7%	9.4%	7.1%	10.6%	18.1%	11.4%	-1.5%	12.9%	20.2%	-18.6%	**6.0%**
	0.0%	-0.1%	-1.6%	-2.1%	-0.9%	-0.8%	1.1%	2.3%	-0.1%	1.5%	-0.5%	**-1.0%**

The one-year total rate of return as at December 31, 2018 for the Fund and its benchmark were respectively -1.25% and -1.3%.

Excluding the impact of currency hedging, they were -0.75% and -0.80%. The global high yield bonds portfolio and the global real estate portfolio are hedged 50% of their USD exposure. During this year of the appreciation of the USD to most world currencies including the Canadian dollar, resulted in the hedge decreasing overall results by 0.5%.

In 2018, the Fund was marginally above the funds' benchmark by 0.05%. Strong value-added from C Worldwide Global Equity, and TD Epoch Shareholder Yield Global Equity were offset by weak performance of US equity, Canadian equity and High Yield Bond managers. US small and mid-cap equities managed by Westwood underperformed the Russell 2500 benchmark by 1.15% (-3.05% return vs -1.9% benchmark). Global High Yield Bonds managed by Stone Harbor underperformed the benchmark by 0.96% (5.63% return vs 6.59% benchmark). While the Canadian equity managers collectively underperformed their benchmark by 1.51% (-10.4% return vs -8.89% benchmark). For the US and Canadian equity managers, the combination of value and stock picking styles did not prove to be a safe haven during the market correction during Q3 and Q4 2018.

Over four years to December 31, 2018, the annualized return for the Fund was 4.94% trailing the Policy benchmark four-year annualized return of 5.88% by 94 basis points

Capital markets returns for the indexes composing the performance benchmark for the past four calendar years and annualized for the four-year period are shown in Figure 7.

Figure 7

Index Returns (CAD)

	Annual Returns 2018	2017	2016	2015	Annualized Four Years 2015-18
Equity Indices					
S&P/TSX Composite	-8.9%	9.1%	21.1%	-8.3%	**2.5%**
Russell 2500	-1.9%	9.1%	13.5%	16.5%	**9.1%**
MSCI ACWI (All Countires)	-1.3%	15.8%	4.1%	18.9%	**9.1%**
Fixed Income Indices					
FTSE TMX Canada Bond Universe	1.4%	2.5%	1.7%	3.5%	**2.3%**
FTSE TMX Canada Short Term Bond	1.9%	0.1%	1.0%	2.6%	**1.4%**
Citigroup High Yield Markets Capped	6.6%	-0.1%	13.5%	13.3%	**8.2%**

Review of Comparative Performance

Aon provides data for comparison in the form of a sample of Balanced Funds. Comparative performance results for one-year and multi-year periods ended December 31, 2018 are presented in Figure 8.

The Balanced Funds group is provided for comparison as constituents are most likely to have common asset mix characteristics with the Endowment Fund. Differences in investment strategy arise from constituent funds' unique purpose, investment objectives and philosophy, size and program resources. These lead to variation in investment holdings and divergences in returns among members constituting the peer group members. In terms of magnitude of divergence from the median, asset mix typically has the highest impact, followed by the currency strategy and active management.

Figure 8

Balanced Funds - Comparative Analysis as of December 31, 2018

	Annual Returns (%) 2018	2017	2016	2015	Annualized Returns (%) 2 Yrs	3 Yrs	4 Yrs	10 Yrs
Percentile Rank								
5th (highest)	0.2	11.7	13.6	8.3	5.1	5.8	6.2	9.7
25th	-1.4	10.5	11.1	6.7	3.8	5.3	5.3	8.7
50th (median)	-2.4	8.8	7.8	5.5	2.9	4.5	4.8	8.3
75th	-3.8	7.3	6.6	3.6	2.4	4.0	4.3	7.6
95th (lowest)	-5.2	5.1	4.7	-1.1	1.1	3.3	3.8	7.0
Comparative								
York University	-1.3	8.6	7.7	5.0	3.5	4.9	4.9	9.3
Quartile Rank	Q1	Q3	Q2	Q3	Q2	Q2	Q2	Q1

The statistics presented in Figure 8 exclude outlier returns that fall outside the range between 5th and 95th percentiles.

The Fund's one-year rate of return of -1.3% ranked in the 23rd percentile (first quartile) in 2018, improving upon the Fund's third quartile ranking in 2017, and 2015, and second quartile ranking in 2016. The ten-year result had a first quartile standing.

The Fund's bias toward equities and multi-asset class asset mix are characteristic of the asset-liability structure adopted by endowment funds with perpetual investment horizons, a stance that performs well in many, but not all markets. The strategy was reviewed in 2018 with an eye to achieving similar returns at a lower level of risk going forward. A new strategic target asset mix will come into effect in 2019 but implementation will take time due to the nature of allocating capital to new target asset classes.

Endowments Growth

Over the six years since 2013, the Endowment Fund capital (book value) has expanded by $16.1 million due to net contributions while market value has grown by $58.9 million as a result of the contributed capital plus investment income and capital appreciation, net of distributions for endowed spending and investment expenses.

Figure 9

Pooled Endowments - Growth ($ Millions)

	Market Value	Book Value*	MV-BV Ratio
December 31, 2018	$ 464.2	276.6	1.68
December 31, 2017	476.7	271.4	1.76
December 31, 2016	438.8	269.2	1.63
December 31, 2015	410.7	253.2	1.62
December 31, 2014	434.1	264.9	1.64
December 31, 2013	405.3	260.5	1.56

* Donations and Matching Funds

Endowment Fund book value constitutes the historical value of capital received from donors plus the historical value of capital matches from government and University matching programs. The endowment accounting and record keeping for book value and market value of individual endowments is performed on a unitized market valuation system basis, as introduced on May 1, 2014.

The change in the market value of the Fund during calendar 2018, shown in Figure 10, illustrates the effects of cashflows and earnings during the year.

Figure 10

Change in Total Fund Market Value ($ Millions)

Market Value, December 31, 2017		$476.7
Contributions:		
Donations	6.0	
Reinvested Distributions		
Withdrawals:		
Regular Distributions	(9.7)	
Special Distributions	-	
Fund Expenses	(2.8)	
Earnings:		
Investment Income and Market Appreciation	(6.0)	
Net Change		(12.5)
Market Value, December 31, 2018		$ 464.2

During the last four calendar years, $62.3 million has been distributed from the Fund to endowment account beneficiaries. The conversion to the unitized market value system for accounts and the smoothed banded inflation methodology for calculating annual distribution has increased the amounts of the annual distribution as seen in Figure 11, from 2015-16 and on. The amount in 2015-16 was larger due to exceptional distribution of $3.5 million. The new spending model has resulted in a greater share of Fund earnings being made available for key spending toward beneficiary purposes, mainly the support of student scholarships and bursaries, and academic chairs.

Figure 11

Distributions to Endowment Beneficiaries

	Annual Distributions $ Million
2018-19	16.1
2017-18	14.9
2016-17	13.9
2015-16	17.4
Cumulative	$ 62.3

To track the market value, unit holdings, and historical values of each individual endowment, the University uses the services of an external provider of specialized endowment fund accounting. At the end of 2018 there were 2,129 individual endowed accounts under management.

Oversight

The Investment Committee conducts activities in accordance with its terms of reference and the Board-approved Statement of Investment Policies and Procedures (SIP&P). The

Committee's responsibilities are principally fund governance and investment strategy. Activities include regular monitoring of assets and performance, oversight and selection of portfolio managers, development of investment strategy and asset mix, review of fund expenses, and quarterly reporting to the Board. The Committee undertakes further initiatives as deemed timely and in the best interests of the Endowment Fund and its beneficiaries.

Investment Committee Activity – 2018

During 2018, activities undertaken by the Investment Committee and administration included:

- Continued allocation to real estate asset class toward a target weight of 10%.
  - Capital calls for Landmark Real Estate Partners continued throughout 2018.

- All the investment managers continued to provide compliance reports confirming that their investments were following their mandates and the SIP&P.

- Adoption of a 2018-19 payout rate of $4.08 per unit for purpose of monthly accrual of distribution during 2017-18. The payout rate is set by the Committee in advance for accrual in the leading fiscal period and the distribution occurs early in the following fiscal period.

  - The amounts distributed to endowment accounts during 2017, 2016, 2015, and 2014 were respectively $4.02/unit, $3.96/unit, $3.96/unit and $3.90/unit.

- Sustainable investment program initiatives and developments are ongoing. Administration continued to review the expanding activities to integrate ESG considerations into investment processes. Equity managers were asked to report on implementation of ESG factors in their investment process.

  - A Sustainable Investing Report on the Funds activities was reviewed

- In 2018 an asset liability study to review and align the Fund's asset mix with the University's investment objectives was conducted. The asset mix reflected as of year-end will evolve as a result of the recommendations from the asset liability review.

- Further to the asset liability review, a working group was established during the summer of 2018 to:

  - Explore options for a new equity structure, and equity managers that could provide superior risk adjusted returns for the Fund
  - Consider the addition of new unconstrained fixed income mandates for the Fund
- Two working group sessions covering the eligibility of potential equity managers, the investment beliefs of the York University Endowment, and the appropriateness of an absolute return fixed income strategy resulted in an educational session for the December 4, 2019 Investment Committee meeting that covered the efficacy of a core-satellite equity structure for the Fund, and what an unconstrained fixed income mandate would entail.