

# Itô's Lemon – High Risk Portfolio

## Quarterly Report

June 1<sup>st</sup>, 2019

### Portfolio Snapshot

#### Portfolio Value

June 1<sup>st</sup>, 2019:

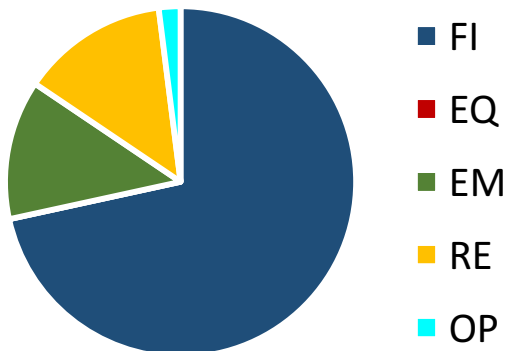
**\$ 596,978.39 (USD)**

**\$ 806,893.90 (CAD)**

#### Portfolio Composition

Fixed Income (FI)	71.6%
U.S. Equities (EQ)	—
Emerging Markets Equities (EM)	12.9%
Real Estate (RE)	13.6%
Options (OP)	2.0%

#### Weight by Asset Class



#### Portfolio Holdings

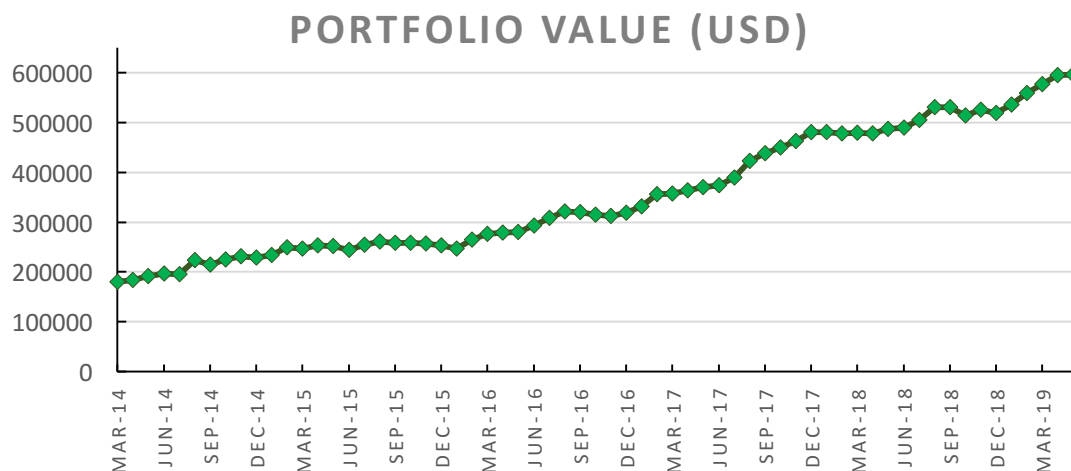
FI	ISHARES TIPS BOND ETF	11.9%
	ISHARES CORE U.S. AGGREGATE	11.9%
	ISHARES 7-10 YEAR TREASURY BO	11.9%
	ISHARES 20+ YEAR TREASURY BO	11.9%
	ISHARES 1-3 YEAR TREASURY BO	11.9%
	ISHARES IBOXX INVESTMENT GRADE	11.9%
EQ	UTILITIES SELECT SECTOR SPDR	—
	INDUSTRIAL SELECT SECT SPDR	—
	ISHARES MSCI EUROZONE ETF	—
	MATERIALS SELECT SECTOR SPDR	—
	ISHARES GLOBAL TECH ETF	—
	ISHARES US TELECOMMUNICATION	—
	ISHARES EUROPE ETF	—
	SPDR S&P 500 ETF TRUST	—
	ISHARES MSCI EAFE ETF	—
	FINANCIAL SELECT SECTOR SPDR	—
	TECHNOLOGY SELECT SECT SPDR	—
	HEALTH CARE SELECT SECTOR	—
	CONSUMER STAPLES SPDR	—
	ENERGY SELECT SECTOR SPDR	—
	ISHARES MSCI JAPAN ETF	—
EM	ISHARES MSCI BRAZIL ETF	4.3%
	ISHARES MSCI CHINA INDEX ETF	4.3%
	ISHARES LATIN AMERICA 40 ETF	4.3%
RE	ISHARES US REAL ESTATE ETF	4.5%
	SPDR DOW JONES REIT ETF	4.5%
	ISHARES COHEN & STEERS REIT	4.5%
OP	BUTTERFLY OPTIONS ON S&P 500	2.0%

\*Due to rounding, percentages may not add up precisely to 100.0%

\*\*All figures are based on USD unless otherwise specified

## Five-Year Performance Overview

\*all values (USD) in this section are annualized and include fees

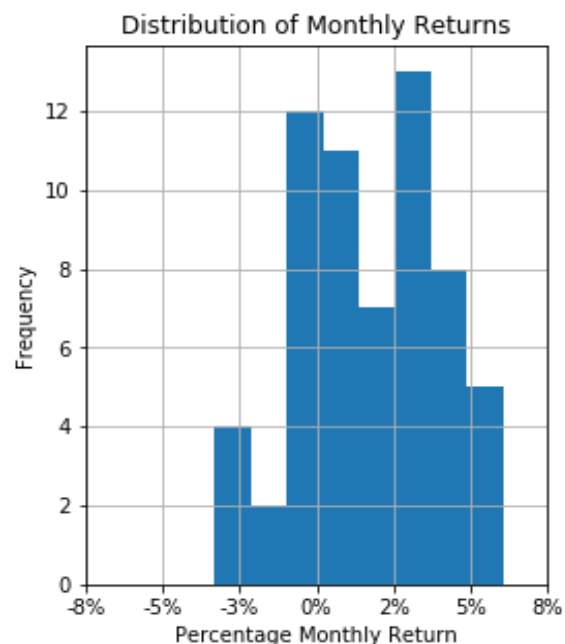


### Headline Numbers

Time-Weighted Return	13.7%
Money-Weighted Return	13.8%
Standard Deviation	8.2%
Sharpe Ratio	1.66

### Max Drawdown

Max Drawdown	-8.7%
Peak Date	JUL-2015
Trough Date	JAN-2016



### Investment Philosophy

Our portfolio uses ETFs to hold diverse positions across 4 major asset classes. We use the Risk Parity approach which makes use of empirical asset correlation to evenly distribute the risk between asset classes. Then within asset classes, we further diversify our holdings between several ETFs.

In addition, we use options to increase the risk/return profile of our portfolio. This is achieved by buying "butterfly options" on the S&P 500, which consist of two long call options and two short options. This setup gives up a highly leveraged negative exposure to volatility, which we believe is a good bet in this economic environment that we have been observing since the Financial Crisis.

We spend only 2% of the portfolio value on these options. Due to the nature of the butterfly, we cannot lose more than this 2% in the options market, because our downside is capped. Meanwhile, this strategy has been proven to increase our returns significantly over the past five years.

## Quarter Performance Details

\*all returns in this section are monthly

### Monthly Returns

Month End	USD Value	CAD Value	ETF Return	Option Return	Trading Fees	Robo Fee	Net Return
MAY-19	\$596,978.39	\$806,893.90	1.91%	-1.18%	0.41%	0.02%	0.43%
APR-19	\$595,216.50	\$796,899.66	0.53%	2.95%	0.40%	0.03%	3.05%
MAR-19	\$577,582.59	\$771,014.99	2.06%	1.64%	0.44%	0.03%	3.24%

### ETF Return Attribution

Month End	Fixed Income	Equities	Emerging Markets	Real Estate	ETF Return
MAY-19	1.91%	-	-0.03%	0.03%	1.91%
APR-19	-0.22%	-	0.77%	-0.02%	0.53%
MAR-19	1.86%	-	-0.29%	0.49%	2.06%

### Option Return Attribution

Month End	Delta/Gamma Return	Vega Return	Theta Return	Other Return	Option Return
MAY-19	-2.32%	-0.85%	0.32%	1.67%	-1.18%
APR-19	0.97%	2.12%	0.40%	-0.55%	2.95%
MAR-19	0.43%	0.16%	0.32%	0.72%	1.64%

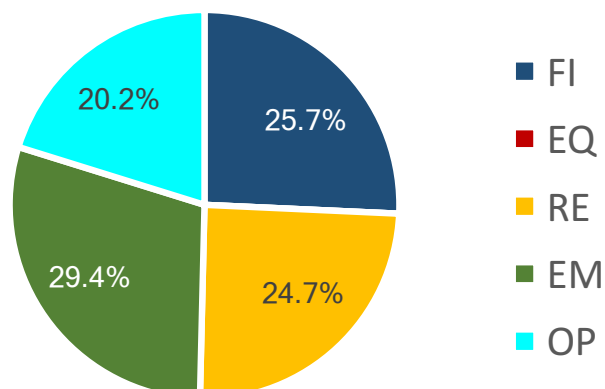
## Risk Analytics

### Value at Risk

Estimated 1-month 95% VaR	3.49%
Estimated 1-month 95% Expected Shortfall	4.41%
Estimated 1-month Volatility	2.60%

### Value at Risk Contributions

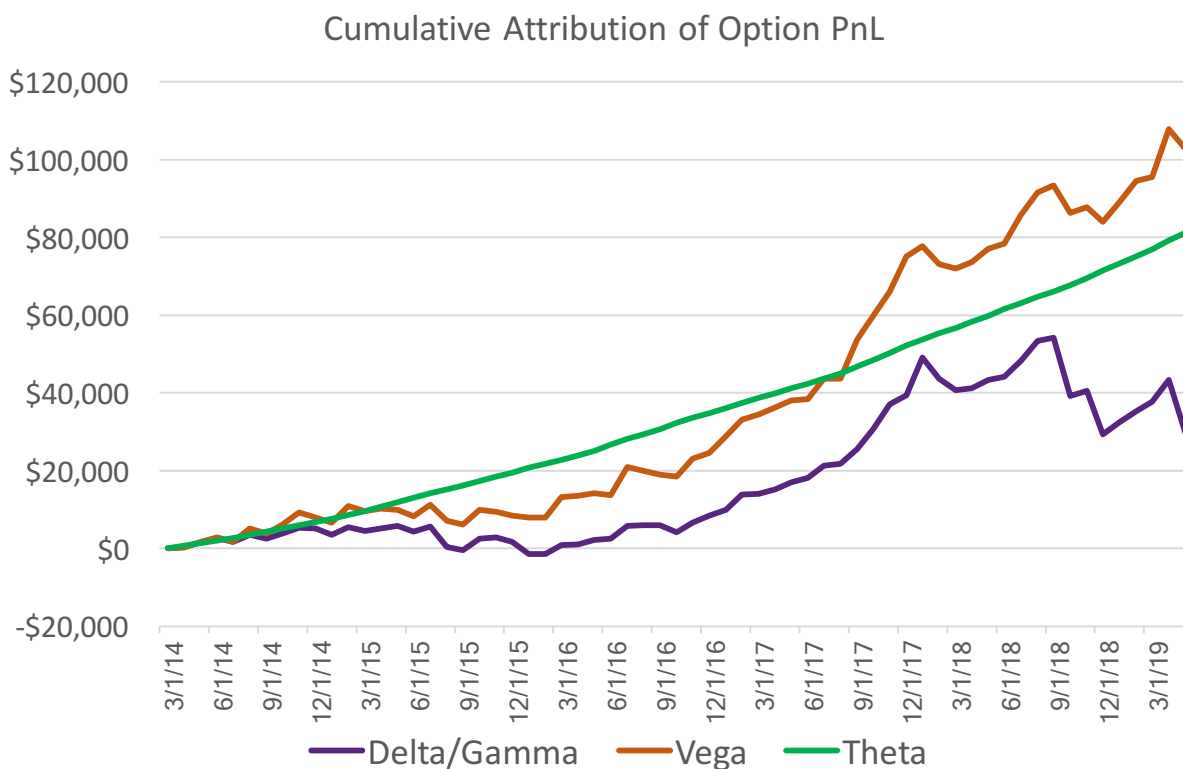
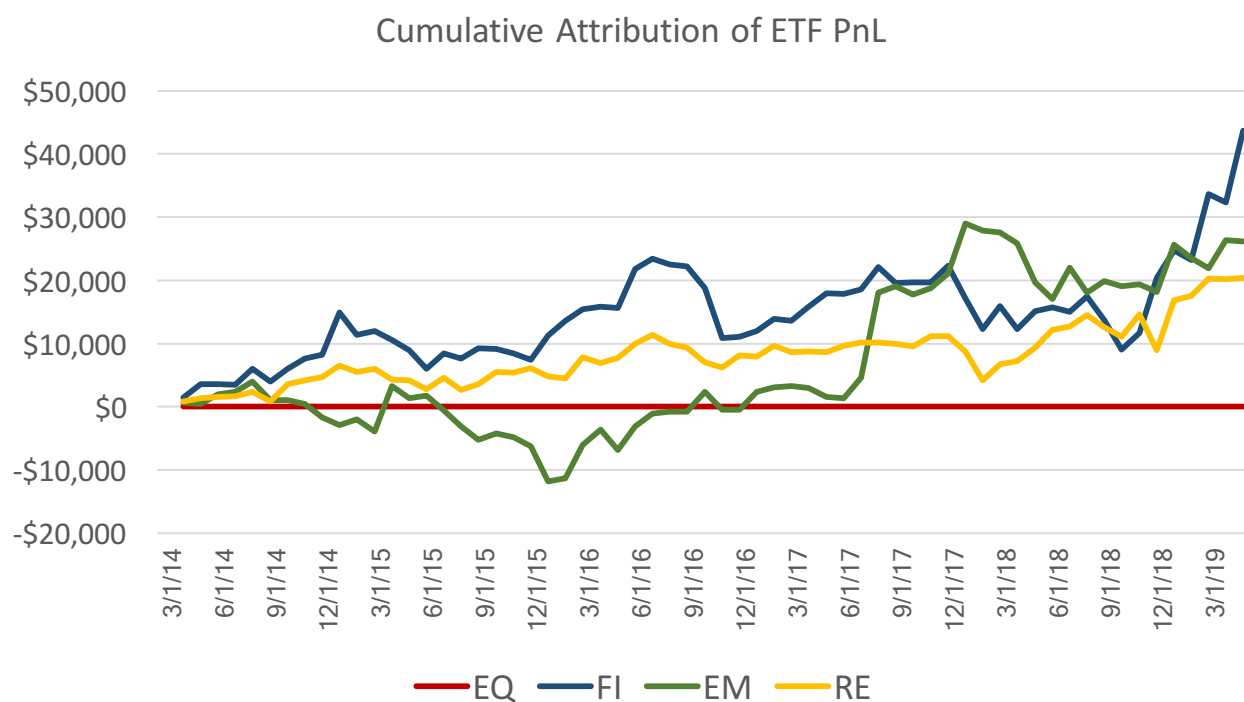
VaR Contributions by Asset Class (inc. Options)



### Scenario Analysis

Scenario (1 Month)	\$ Change in Portfolio Value	% Change in Portfolio Value
GDP down 1%	- \$ 4179.80	- 0.7%
Volatility Up 50%	- \$ 13429.48	- 2.2%
Volatility Down 50%	\$ 5502.03	0.9%
SPY Down 10%	- \$ 22157.68	- 3.7%
SPY Up 10%	\$ 9294.02	1.6%
10Y IR Up 1%	\$ 5032.24	0.8%

## Five-Year Return Attribution



**Five-Year Return Attribution (continued)**

