

# Itô's Lemon – Low Risk Portfolio

## Quarterly Report

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

### Portfolio Snapshot

#### Portfolio Value

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

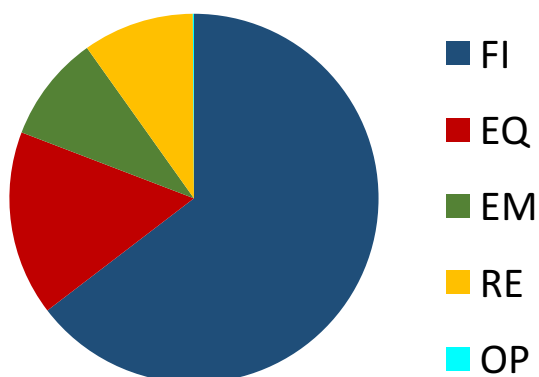
**\$ 414,769.61 (USD)**

**\$ 560,615.05 (CAD)**

#### Portfolio Composition

Fixed Income (FI)	16.2%
U.S. Equities (EQ)	64.6%
Emerging Markets Equities (EM)	9.3%
Real Estate (RE)	9.7%
Options (OP)	0.1%

#### Weight by Asset Class



#### Portfolio Holdings

FI	ISHARES TIPS BOND ETF	10.8%
	ISHARES CORE U.S. AGGREGATE	10.8%
	ISHARES 7-10 YEAR TREASURY BO	10.8%
	ISHARES 20+ YEAR TREASURY BO	10.8%
	ISHARES 1-3 YEAR TREASURY BO	10.8%
	ISHARES IBOXX INVESTMENT GRADE	10.8%
EQ	UTILITIES SELECT SECTOR SPDR	1.1%
	INDUSTRIAL SELECT SECT SPDR	1.1%
	ISHARES MSCI EUROZONE ETF	1.1%
	MATERIALS SELECT SECTOR SPDR	1.1%
	ISHARES GLOBAL TECH ETF	1.1%
	ISHARES US TELECOMMUNICATION	1.1%
	ISHARES EUROPE ETF	1.1%
	SPDR S&P 500 ETF TRUST	1.1%
	ISHARES MSCI EAFE ETF	1.1%
	FINANCIAL SELECT SECTOR SPDR	1.1%
	TECHNOLOGY SELECT SECT SPDR	1.1%
	HEALTH CARE SELECT SECTOR	1.1%
	CONSUMER STAPLES SPDR	1.1%
	ENERGY SELECT SECTOR SPDR	1.1%
	ISHARES MSCI JAPAN ETF	1.1%
EM	ISHARES MSCI BRAZIL ETF	3.1%
	ISHARES MSCI CHINA INDEX ETF	3.1%
	ISHARES LATIN AMERICA 40 ETF	3.1%
RE	ISHARES US REAL ESTATE ETF	3.2%
	SPDR DOW JONES REIT ETF	3.2%
	ISHARES COHEN & STEERS REIT	3.2%
OP	OTM PUT OPTIONS ON S&P 500	0.1%

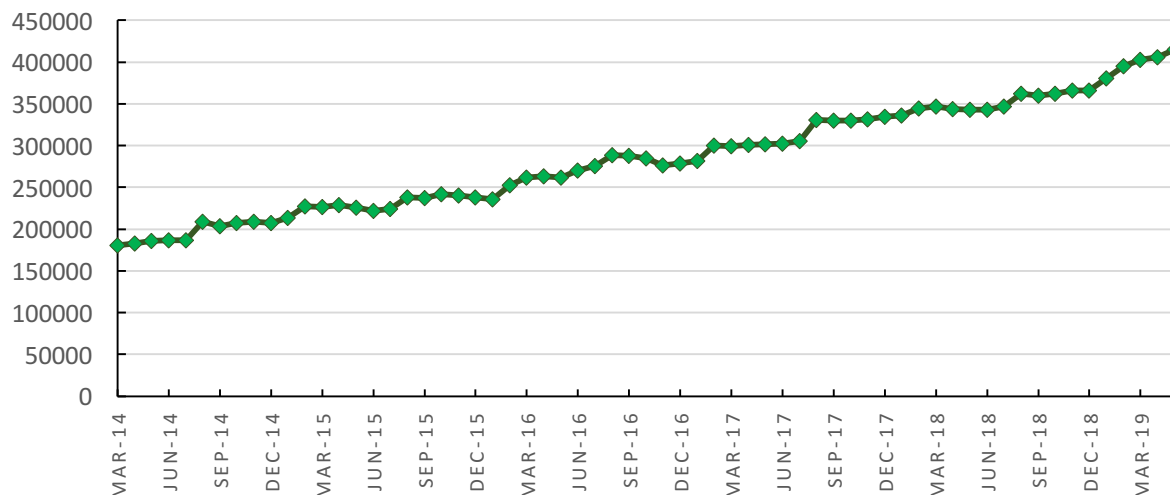
\*Due to rounding, percentages may not add up precisely to 100.0%

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

## Five-Year Performance Overview

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

### PORTFOLIO VALUE (USD)



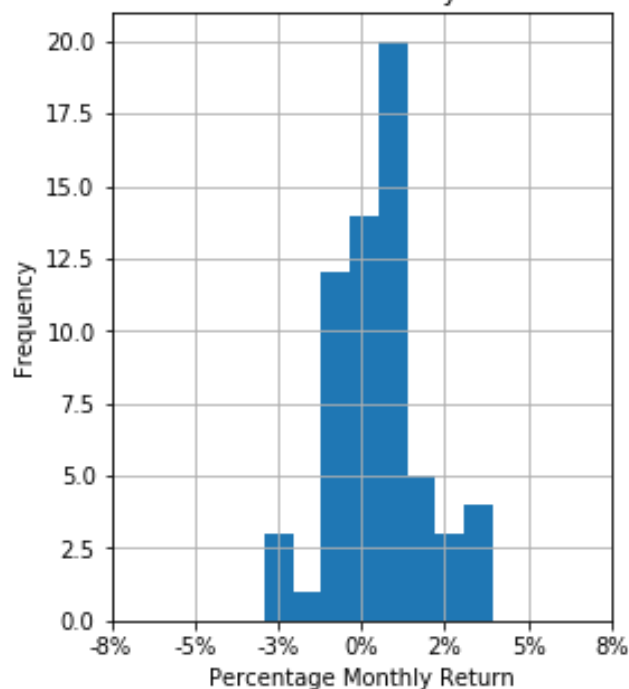
### Headline Numbers

Time-Weighted Return	4.5%
Money-Weighted Return	5.1%
Standard Deviation	4.8%
Sharpe Ratio	0.94

### Max Drawdown

Max Drawdown	-4.9%
Peak Date	JUL-2016
Trough Date	NOV-2016

### Distribution of Monthly Returns



### 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 decrease the risk profile of our portfolio. This is achieved by buying put options on the S&P 500. Despite only spending 0.1% of our portfolio on these options, we have decent protection in the event of a crash in the equity market.

## Quarter Performance Overview

\*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	\$414,769.61	\$560,615.05	0.70%	1.64%	0.04%	0.03%	2.28%
APR-19	\$405,534.07	\$542,945.23	0.87%	-0.09%	0.05%	0.03%	0.71%
MAR-19	\$402,688.08	\$537,548.31	2.01%	-0.09%	0.03%	0.03%	1.87%

### ETF Return Attribution

Month End	Fixed Income	Equities	Emerging Markets	Real Estate	ETF Return
MAY-19	1.72%	-1.02%	-0.02%	0.02%	0.70%
APR-19	-0.20%	0.53%	0.56%	-0.02%	0.87%
MAR-19	1.65%	0.22%	-0.21%	0.35%	2.01%

### Option Return Attribution

Month End	Delta/Gamma Return	Vega Return	Theta Return	Other Return	Option Return
MAY-19	0.84%	0.37%	-0.09%	0.52%	1.64%
APR-19	-0.01%	-0.02%	-0.09%	0.03%	-0.09%
MAR-19	-0.05%	-0.01%	-0.08%	0.05%	-0.09%

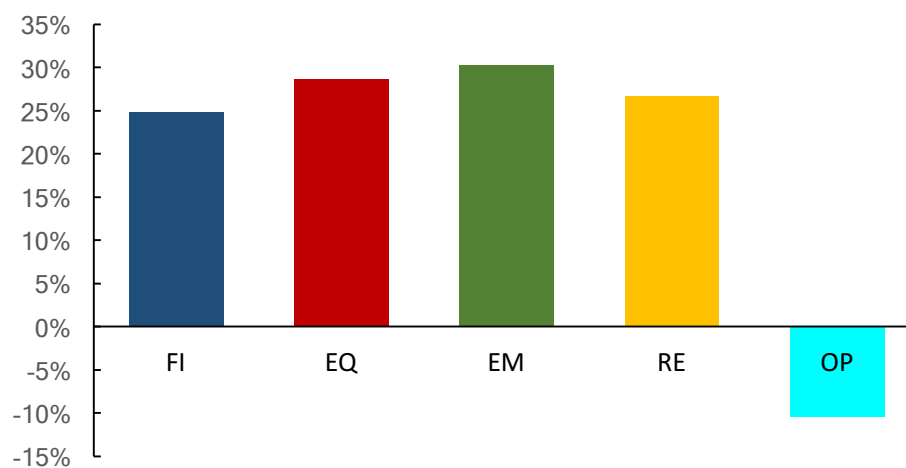
## Risk Analytics

### Value at Risk

Estimated 1-month 95% VaR	2.66%
Estimated 1-month 95% Expected Shortfall	3.43%
Estimated 1-month Volatility	1.93%

### VaR Contributions

VaR Contribution by Asset Class (inc. Options)

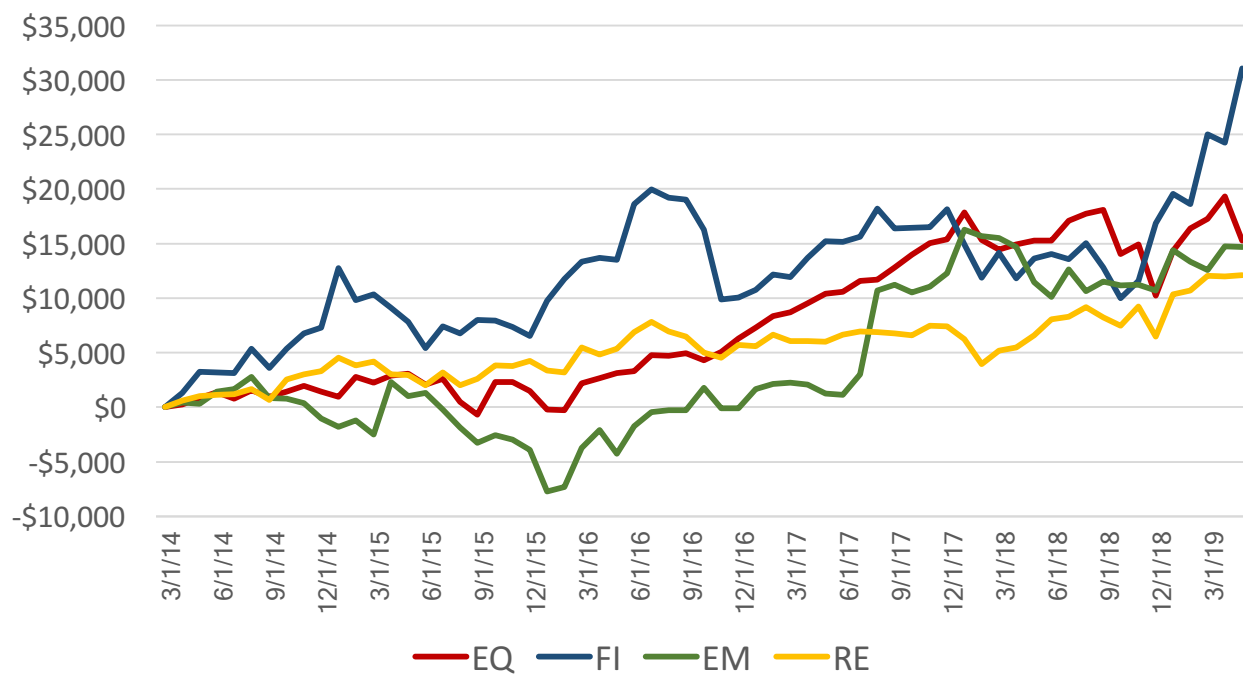


### Scenario Analysis

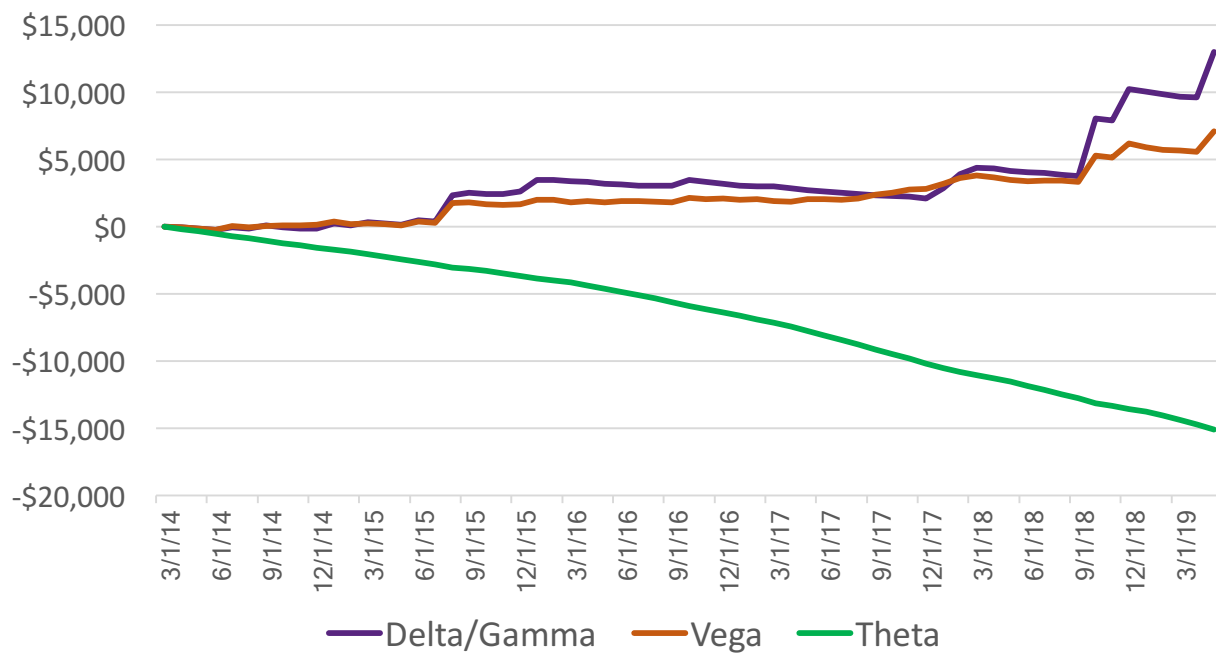
Scenario (1 Month)	\$ Change in Portfolio Value	% Change in Portfolio Value
GDP down 1%	- \$ 3,513.08	- 0.85%
Volatility Up 50%	- \$ 3,111.58	- 0.75%
Volatility Down 50%	\$ 12,915.81	3.11%
SPY Down 10%	- \$ 7,185.75	- 1.73%
SPY Up 10%	\$ 13,544.91	3.27%
10Y IR Up 1%	\$ 594.31	0.14%

## Five-Year Return Attribution

Cumulative Attribution of ETF PnL



Cumulative Attribution of Option PnL



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

