# Lenwood Volatility Control Index

Quarterly Performance Report March 29, 2019



### Index Methodologies, LLC

### Executive Summary



- The U.S. Gross Domestic Product (GDP) for the fourth quarter of 2018 rose at an annual rate of 2.2%, in the third estimate, as reported by the Bureau of Economic Analysis on April 19, 2019. This was revised lower from a 2.6% estimate in their "initial February"<sup>6</sup> reading. For the year, 2018 real GDP grew at 2.9%, up from 2.2% in 2017. The Wall Street Journal estimates first quarter 2019 GDP at 2.4%<sup>5</sup>. Fidelity Investments described the economic environment in the first quarter as "slowing global growth"<sup>2</sup> and the U.S. "firmly in the late-cycle phase".<sup>2</sup>
- U.S. markets were strong across nearly all asset classes in 1Q19 after the "U.S. Federal Reserve's shift away from its monetary tightening bias"<sup>2</sup> and now "market expectations switched to anticipating a rate cut during 2019".<sup>2</sup> Despite strong January equity markets, during the quarter "manufacturing health fell to multiyear lows"<sup>1</sup> and business and consumer confidence waned as these groups "digested growing global uncertainty"<sup>1</sup>.
- As mentioned above, January equity returns were strong but February/March were weaker as markets digested the slowing global economy. The S&P 500 (including dividends) increased 13.65% for the quarter. Bonds enjoyed solid quarterly performance, returning 6.3% as measured by the Bloomberg Barclays U.S. Aggregate Bond Index.
- The Lenwood Volatility Control Index (LVCI) strategy, utilizing its monthly dynamic asset allocation and quantitative volatility control features, was still positioned conservatively in 1Q19 from the harsh fourth quarter 2018 downturn with 100%, 90% and 50% fixed income portfolio allocations in January, February and March, respectively. LVCI turned in a performance of 2.98% for the quarter versus the S&P 500 Total Return Index of 13.65%.

Sources: LPL Research's "Market Insight Quarterly" as of April 2019<sup>1</sup>, Fidelity Investments' "Second Quarter 2019 Quarterly Market Update"<sup>2</sup>, JPMorgan "Market Insights: Guide to the Markets"<sup>3</sup> as of March 31, 2019, Schroder Investment Management's "Quarterly Markets Review – Q1 2019"<sup>4</sup>, WSJ.com<sup>5</sup>, U.S. Department of Commerce Bureau of Economic Analysis website<sup>6</sup>.

# LVCI Constituents for January 2019



### **Universe of LVCI Constituents**

Underlying Index	Bloomberg Ticker
S&P 500 Total Return Index	SPTR Index
S&P 500 Low Volatility Total Return Index	SP5LVIT Index
S&P 500 Equal Weight Total Return Index	SPXEWTR Index
S&P 2-Yr U.S. Treasury Note Futures Index ER	SPUST2P Index
S&P 5-Yr U.S Treasury Note Futures Index ER	SPUST5P Index
S&P 10-Yr U.S. Treasury Note Futures Index ER	SPUSTTP Index

#### **Top Four LVCI Constituents with Non-Zero Weight**

Rank of Relative Strength	Bloomberg Ticker
1	SPUST5P Index
2	SPUSTTP Index
3	SPUST2P Index
4	-



# LVCI Constituents for February 2019



### **Universe of LVCI Constituents**

Underlying Index	Bloomberg Ticker
S&P 500 Total Return Index	SPTR Index
S&P 500 Low Volatility Total Return Index	SP5LVIT Index
S&P 500 Equal Weight Total Return Index	SPXEWTR Index
S&P 2-Yr U.S. Treasury Note Futures Index ER	SPUST2P Index
S&P 5-Yr U.S Treasury Note Futures Index ER	SPUST5P Index
S&P 10-Yr U.S. Treasury Note Futures Index ER	SPUSTTP Index

#### **Top Four LVCI Constituents with Non-Zero Weight**

Rank of Relative Strength	Bloomberg Ticker
1	SPUSTTP Index
2	SPUST5P Index
3	SPUST2P Index
4	SP5LVIT Index



### LVCI Constituents for March 2019



#### **Universe of LVCI Constituents**

Underlying Index	Bloomberg Ticker
S&P 500 Total Return Index	SPTR Index
S&P 500 Low Volatility Total Return Index	SP5LVIT Index
S&P 500 Equal Weight Total Return Index	SPXEWTR Index
S&P 2-Yr U.S. Treasury Note Futures Index ER	SPUST2P Index
S&P 5-Yr U.S Treasury Note Futures Index ER	SPUST5P Index
S&P 10-Yr U.S. Treasury Note Futures Index ER	SPUSTTP Index

#### **Top Four LVCI Constituents with Non-Zero Weight**

Rank of Relative Strength	Bloomberg Ticker
1	-
2	-
3	-
4	-



### Historical Performance of LVCI vs. Benchmarks



(December 01, 1999 – Mar 29, 2019)\*

	Annualized Return	Standard Deviation	Sharpe Ratio	Crisis drawdown (Oct 2007 to Oct 2008)
LVCI	6.34%	6.02%	1.05	-5.99%
Benchmark: SPTR (50%) & BCEU1T (50%)	5.72%	9.00%	0.64	-20.93%
Benchmark: SPTR	5.75%	19.15%	0.30	-44.55%



\*Simulated performance period: December 01, 1999 to May 27, 2014; Actual performance period: May 28, 2014 onwards

### 10 Years Performance of LVCI vs. Benchmarks

(Mar 31, 2009 – Mar 29, 2019)\*



Returns for the period ending March 29, 2019**					
	MTD	QTD	YTD	One year	Since inception*
LVCI	2.38%	2.98%	2.98%	3.98%	6.34%
Benchmark: SPTR (50%) & LUATTRUU (50%)	1.95%	7.81%	7.81%	7.00%	5.72%
Benchmark: SPTR	1.94%	13.65%	13.65%	9.50%	5.75%

\*Simulated performance period: December 01, 1999 to May 27, 2014; Actual performance period: May 28, 2014 onwards

\*\*Returns for MTD, QTD, YTD and One year; Annualized returns for the period 'Since Inception'

Rebased Levels

INDEX METHODOLOGIES

### Performance: LVCI vs. Constituents



Historical Performance for the Period: December 01, 1999 – March 29, 2019*						
	Annualized Return	Standard Deviation	Sharpe Ratio	Crisis drawdo	own (Oct 2007 to Oct 2008)	
LVCI	6.34%	6.02%	1.05		-5.99%	
SPTR	5.75%	19.15%	0.30	-44.55%		
SP5LVIT	10.05%	14.07%	0.71	-31.38%		
SPXEWTR	9.18%	20.34%	0.45	-48.42%		
SPUST2P	1.26%	1.53%	0.82		-2.36%	
SPUST5P	2.85%	3.89%	0.73	-5.06%		
SPUSTTP	3.97%	6.01%	0.66	-5.95%		
	R	eturns for the period e	ending March 29, 20	)19**		
	MTD	QTD	YTD	One year	Since Inception*	
LVCI	2.38%	2.98%	2.98%	3.98%	6.34%	
SPTR	1.94%	13.65%	13.65%	9.50%	5.75%	
SP5LVIT	2.33%	13.62%	13.62%	14.92%	10.05%	
SPXEWTR	0.89%	14.91%	14.91%	7.22%	9.18%	

\*Simulated performance period: December 01, 1999 to May 27, 2014; Actual performance period: May 28, 2014 onwards

0.42%

1.10%

1.82%

0.24%

0.86%

1.53%

\*\*Returns for MTD, QTD, YTD and One year; Annualized returns for the period 'Since Inception'

SPUST2P

SPUST5P

SPUSTTP

0.24%

0.86%

1.53%

0.43%

1.57%

2.76%

1.26%

2.85%

3.97%









### Disclaimer

Index Methodologies, LLC ("IM") owns all rights to the Lenwood Volatility Control Index<sup>™</sup>, including the index methodology that enables the Lenwood Volatility Control Index<sup>™</sup>. IM developed and maintains, and is solely responsible for, the methodology used by Lenwood Volatility Control Index<sup>™</sup>. IM does not sponsor, endorse, promote or sell any annuity contract or other investment product that provides or attempts to provide a return based on returns of the Lenwood Volatility Control Index<sup>™</sup>. Any decision to invest in such an annuity contract or other investment product should not be made in reliance on any statements set forth herein, but rather should only be made after carefully considering the risks detailed in the materials prepared by or on behalf of the issuer of such contract or product. "Lenwood Volatility Control Index <sup>™</sup>"</sup> and "Index Methodologies<sup>™</sup>"</sup> are trademarks of Index Methodologies, LLC.

### Performance



#### **Simulated Operating History**

The Index will be first calculated on a live basis on or around the Live Date and therefore lacks actual historical performance. The Calculation Agent and the Sponsor have retrospectively calculated the closing levels of the Index from the Base Date to but excluding the Live Date. However, because the Index will not be calculated before the Live Date, all such retrospective closing levels are simulated and must be considered hypothetical and illustrative only.

Simulated data prior to the Live Date may be constructed using certain procedures that vary from the procedures used to calculate the Index following its establishment and on the basis of certain assumptions that may not apply in the future. Although these assumptions are considered reasonable or necessary, the variations used in producing simulated historical data from those used to calculate the Index going forward could produce variations in returns of indeterminate direction and amount.

In particular, simulated history for the period from December 31, 1991 to one day prior to Live Date was constructed in two parts: from December 31, 1991 to December 1, 1999 bond futures with Bloomberg tickers TU1 Comdty, FV1 Comdty and TY1 comdty are used. To make the simulated history more representative, from December 2, 1999 to one day prior to Live Date, S&P excess return bond indices with Bloomberg tickers SPUST2P Index, SPUST5P Index, and SPUSTTP Index are used. December 1, 1999 is the earliest date for which S&P excess return indices are available.

To generate live Index Levels US Treasury Note Futures indices with Bloomberg tickers SPUST2P Index, SPUST5P Index, and SPUSTTP Index shall be used as the underlyings.

The actual performance of the Index may be materially different from the results presented in any Simulated Operating History relating to the Index. Past performance should not be considered indicative of future performance.

#### **Future Index Performance**

No assurance can be given that the strategies employed by the Calculation Agent and/or the Sponsor will be successful or that the return on the Index, as demonstrated by the Simulated Operating History, will continue in the future. The Simulated Operating History should not be considered indicative of future performance of the Index as markets are unpredictable.

There can be no assurance that the Index will generate positive returns or outperform any benchmark index or alternative strategy.

For the period using Bloomberg rolled futures, the following Bloomberg settings are used: Prices "Ratio", Adjusted "2", Days "Relative to First Notice".

### LVCI Methodology



