

# Nations<sup>®</sup> Low Volatility

NαTIONS<sup>®</sup>

INDEXES

## Index Description

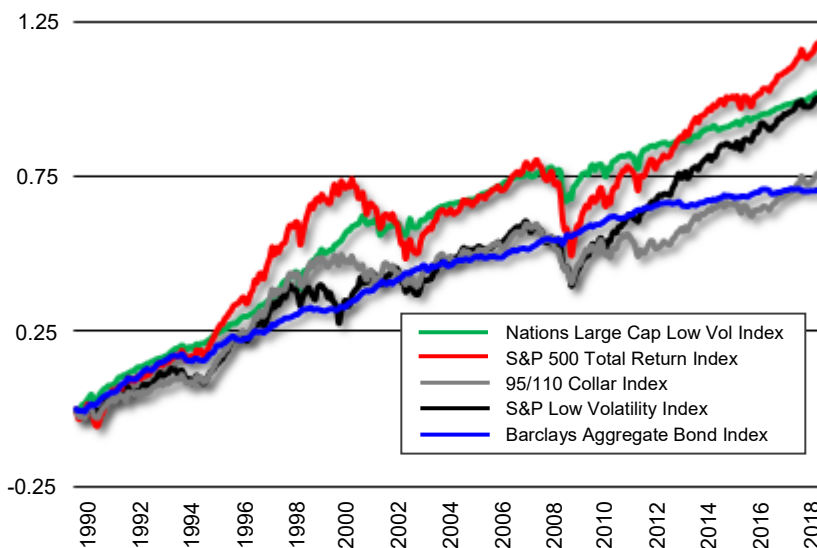
The Nations Large Cap Low Volatility<sup>™</sup> Index uses an enhanced option collar methodology that provides significant downside protection and less volatility in a mainstream investment product. The Index seeks to experience volatility equal to approximately half that of the S&P 500 while generating consistent returns; the Nations Low Volatility Index has generated average annual returns between 5% and 9% for 3, 5, 10, 20, and 23 (inception) year periods despite a wide variety of market regimes.

The Nations Large Cap Low Volatility<sup>™</sup> Index uses a methodology that is vastly superior to existing lower volatility products since it takes systematic advantage of alternative risk premia which are economically robust and enjoy a long history of superior risk adjusted returns. Existing low volatility products use reactive strategies that rely on historical data. Nations Low Volatility Indexes use a forward-looking strategy.

## Nations Option Data<sup>1</sup>

Implied Volatility of Call Option Sold	16.41%
Implied Volatility of Put Option Bought	17.08%
Implied Volatility of Put Option Sold	21.00%
Realized Volatility	15.35%
Monthly Call Option Volatility Premium as % of S&P	0.120%
Call Option Distance From Market at Initiation	0.445%
Protective Put Distance From Market at Initiation	0.127%

## Comparative Historical Performance



	Nations Low Volatility	S&P 500 Total Return	95-110 Collar	S&P Low Volatility Index	Barclays Aggreg. Bond
<b>Compound Annual Return</b>					
2018	2.670%	-4.384%	3.297%	-2.156%	0.011%
3 Year	5.263%	9.257%	7.869%	8.234%	2.056%
5 Year	5.828%	8.494%	5.654%	9.221%	2.521%
10 Year	7.950%	13.119%	6.869%	11.166%	3.477%
Since Inception <sup>2</sup>	8.334%	9.287%	6.097%	7.812%	5.816%
<b>Average Annualized Standard Deviation of Monthly Returns</b>					
2018	5.357%	15.329%	9.027%	11.675%	3.116%
3 Year	3.314%	9.850%	6.959%	8.986%	2.783%
5 Year	3.821%	10.294%	7.315%	9.276%	2.716%
10 Year	6.089%	12.795%	9.107%	9.922%	2.738%
Since Inception <sup>2</sup>	6.151%	12.889%	9.535%	10.048%	3.358%
<b>Average Annual Sharpe Ratio</b>					
2018	0.15	-0.41	0.16	-0.34	-0.59
3 Year	2.33	2.02	1.57	1.20	0.61
5 Year	1.97	1.56	1.14	1.19	0.90
10 Year	1.71	1.52	1.03	1.22	1.32
Since Inception <sup>2</sup>	1.75	1.14	0.66	0.88	1.07

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## A Comparison of Existing Low Volatility Products

Existing low volatility products use one of three generic strategies:

- The PowerShares Low Volatility ETF (SPLV) is based on the S&P Low Volatility Index. It holds the 100 stocks in the S&P 500 Index that were the least volatile over the past year;
- Direxion DRRC Volatility Response Shares (VSPY) attempts to lower volatility by changing equity exposure based on volatility. VSPY can take on a cash position of 0 to 80%;
- Two ETFs, VIXH and PHDG, buy call options or futures on the VIX while changing their exposure to the S&P based on current volatility.

The Nations Low Volatility methodology is vastly superior to all three existing strategies:

- The S&P Low Volatility methodology simply selects stocks that experienced lower volatility over the previous 12 months without regard to sector or outlook for the next 12 months. SPLV suffers from huge sector bias; nearly 30% of the fund is invested in the utility sector;
- The Direxion methodology increases exposure to equities when volatility is lower without regard for potential volatility shocks;
- VIXH and PHDG allocate assets between the S&P and VIX options, which are extremely expensive, or VIX futures which may or may not respond to a declining market.

<sup>1</sup> Monthly averages since inception

<sup>2</sup> Inception: S&P Low Volatility Index - 11/30/1990, all others - 12/31/1989

<sup>3</sup> All as of 12/31/2018

## The Nations Low Volatility Index Outperforms the S&P Low Volatility Index<sup>2</sup>

**The Nations Low Volatility Index is the real low volatility index:**

**Average Annualized Standard Deviation of Monthly Returns:**

Nations Low Volatility Index:	6.151%
S&P Low Volatility Index:	10.048%

**The Nations Index enjoys this lower volatility without a return penalty:**

**Compound Annual Return:**

Nations Low Volatility Index:	8.334%
S&P Low Volatility Index:	7.812%

**The Nations Index is less correlated to the volatility of the broad market:**

**Beta Since Inception:**

Nations Low Volatility Index:	0.37
S&P Low Volatility Index:	0.54

**The Nations Index suffers smaller drawdowns:**

**Maximum Drawdown Since Inception:**

Nations Low Volatility Index:	22.45%
S&P Low Volatility Index:	38.32%

	Nations Low Volatility	S&P 500 Total Return	95-110 Collar (CLL)	S&P Low Volatility Index	Barclays Aggreg. Bond
Avg. Annual Return <sup>3</sup> (1990-2018)	8.701%	10.762%	6.782%	8.542%	5.923%
Median Annual Return <sup>3</sup> (1990-2018)	7.511%	11.960%	4.941%	10.083%	5.931%
Annualized Sortino Ratio	1.096	0.827	0.645	0.902	1.577
Annualized Stutzer Ratio <sup>2</sup>	0.691	0.499	0.367	0.553	0.842
Value of \$1 Invested on 11/30/90 <sup>2</sup>	\$9.93	\$13.14	\$5.39	\$9.76	\$5.15
Beta	0.37	1.00	0.65	0.54	0.03
Alpha	4.73%	-	-0.24%	3.22%	5.82%
Skew	-1.471	-0.595	-0.180	-0.650	-0.220
Kurtosis	13.560	1.286	-0.171	1.539	0.840
R <sup>2</sup> to S&P 500	47.57%	-	81.51%	53.49%	0.88%
Up Capture Ratio	45.74	100.00	69.61	65.41	17.03
Down Capture Ratio	20.55	100.00	72.23	54.77	-10.22
Maximum Drawdown	22.45%	50.95%	35.47%	38.32%	15.22%

Performance of an index is not illustrative of any particular investment. Index returns quoted represent past performance which is no guarantee of future results.

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