Peterson Investment Fund I, LP

An Undervalued Portfolio Hedge

VALUEx Klosters, Switzerland 2018

Peterson Capital Management, LLC

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We see a shift toward risk taking behavior and less risk avoidance.

WHAT DO WE KNOW?

- Global Markets at All Time Highs (S&P 500 ~2,700)
- Interest Rates Artificially Low (US 10-Yr 2.3%)
- Shiller PE Ratio at second highest ever recorded (32)
- Buffett Valuation Indicator: Total Equity Market Capitalization divided by GDP highest since 2000 (140%)
- Negative ECB Interest Rates and EU High Yield Index under 2.5%
- Argentina Issued 7% 100 Year Bonds (8 Defaults in under 200 Years)
- Cryptocurrency mania in effect (Bitcoin, Litecoin, and Ethereum up 2,000%, 3,000% and 5,000% respectively)
- Lowest Volatility since before 1990 (VIX 9.6)

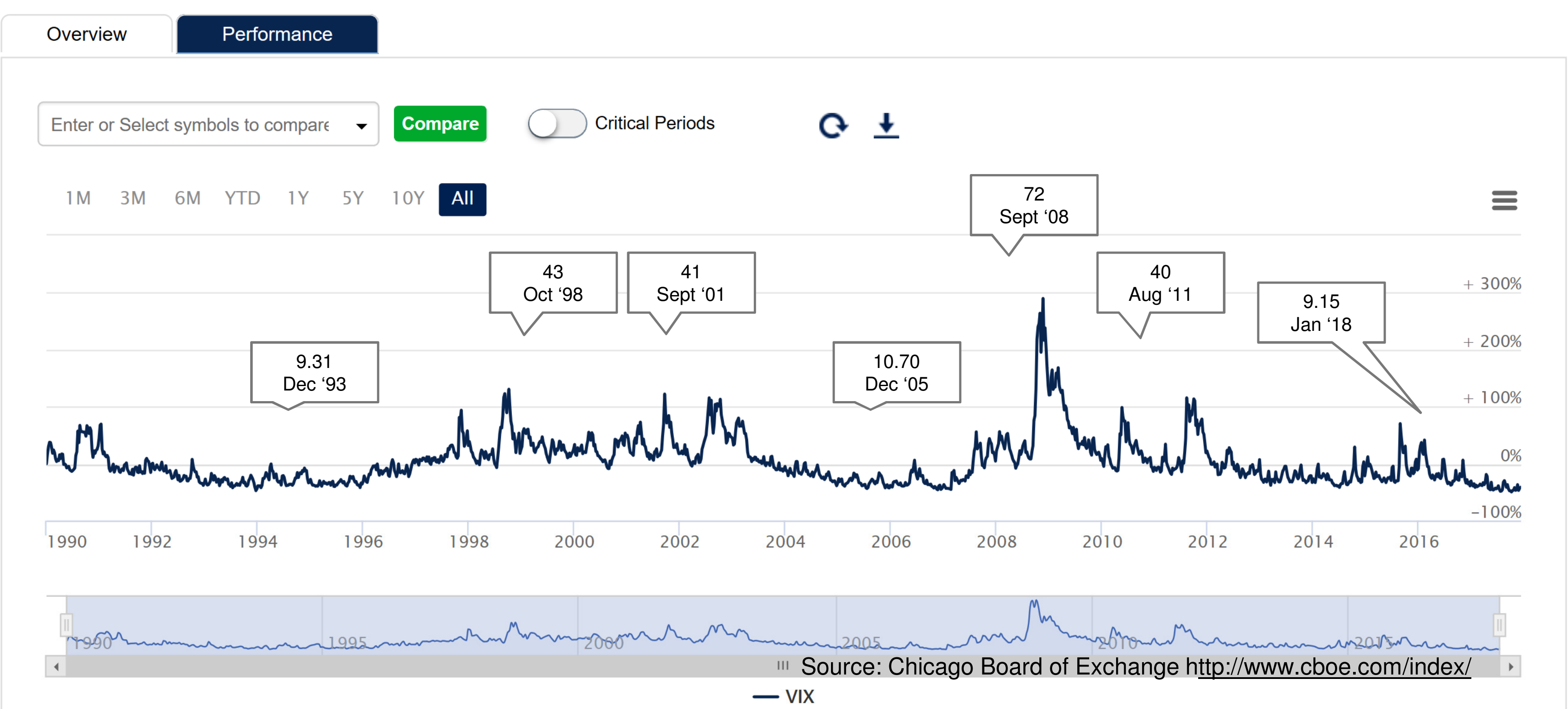
WHAT DO WE NOT KNOW?

- Macroeconomic Forecasting
- Market Timing

The S&P 500 is up over 400% in under 9 years since March 2009, it is prudent to position yourself to thrive through the next bear market.

Today, volatility (VIX) is at one of its lowest points in at least 28 years.

Volatility is cheap. The lowest volatility in decades provides a unique opportunity for a low cost hedge using multi-year put contracts.



9.31 Dec '93

43 Oct '98

41 Sept '01

10.70 Dec '05

72 Sept '08

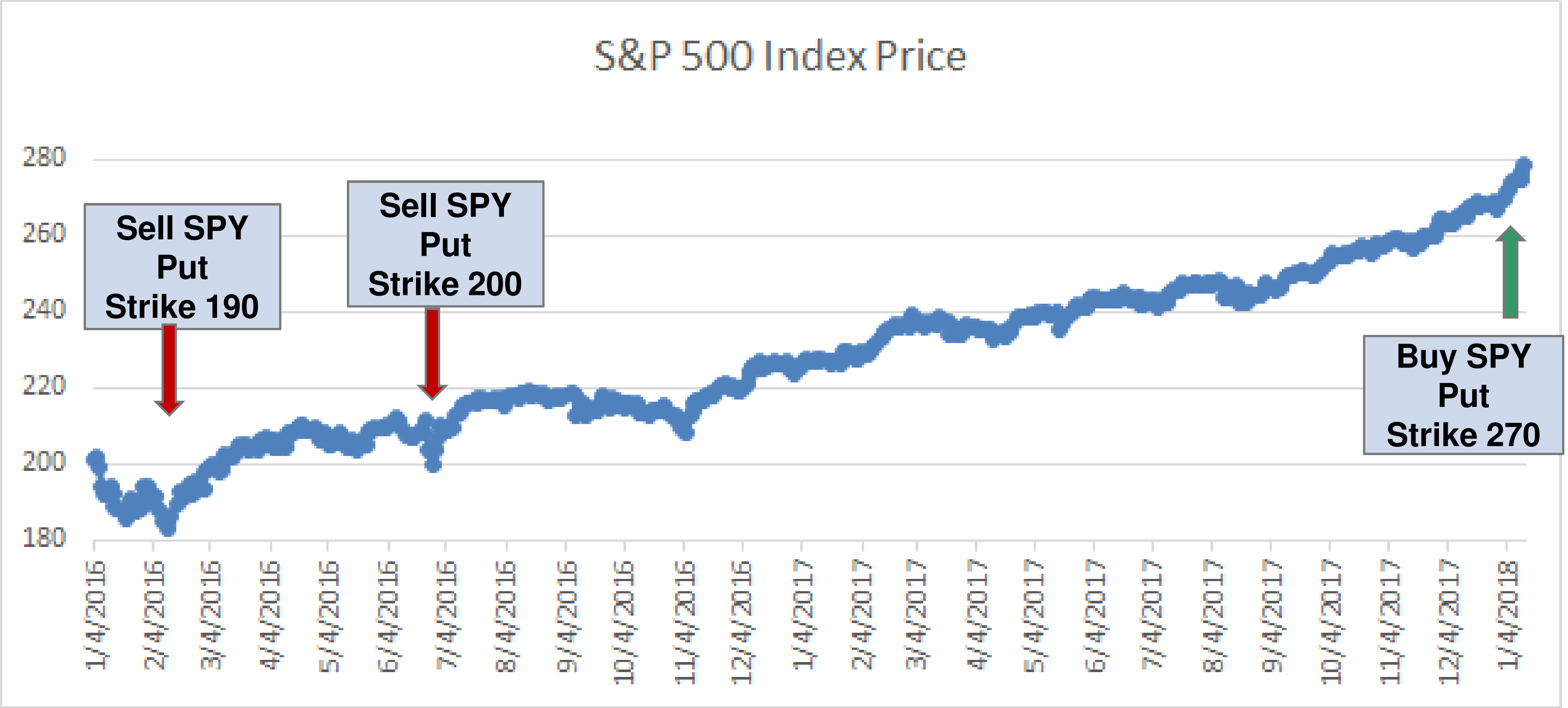
40 Aug '11

9.15 Jan '18

Source: Chicago Board of Exchange http://www.cboe.com/index/

How can one take advantage of high equity prices with low volatility?

- Buy one 5% out-of-the-money put for protection
- Sell one 30% out-of-the-money put and one 35% out-of-the-money put to help pay for the protection



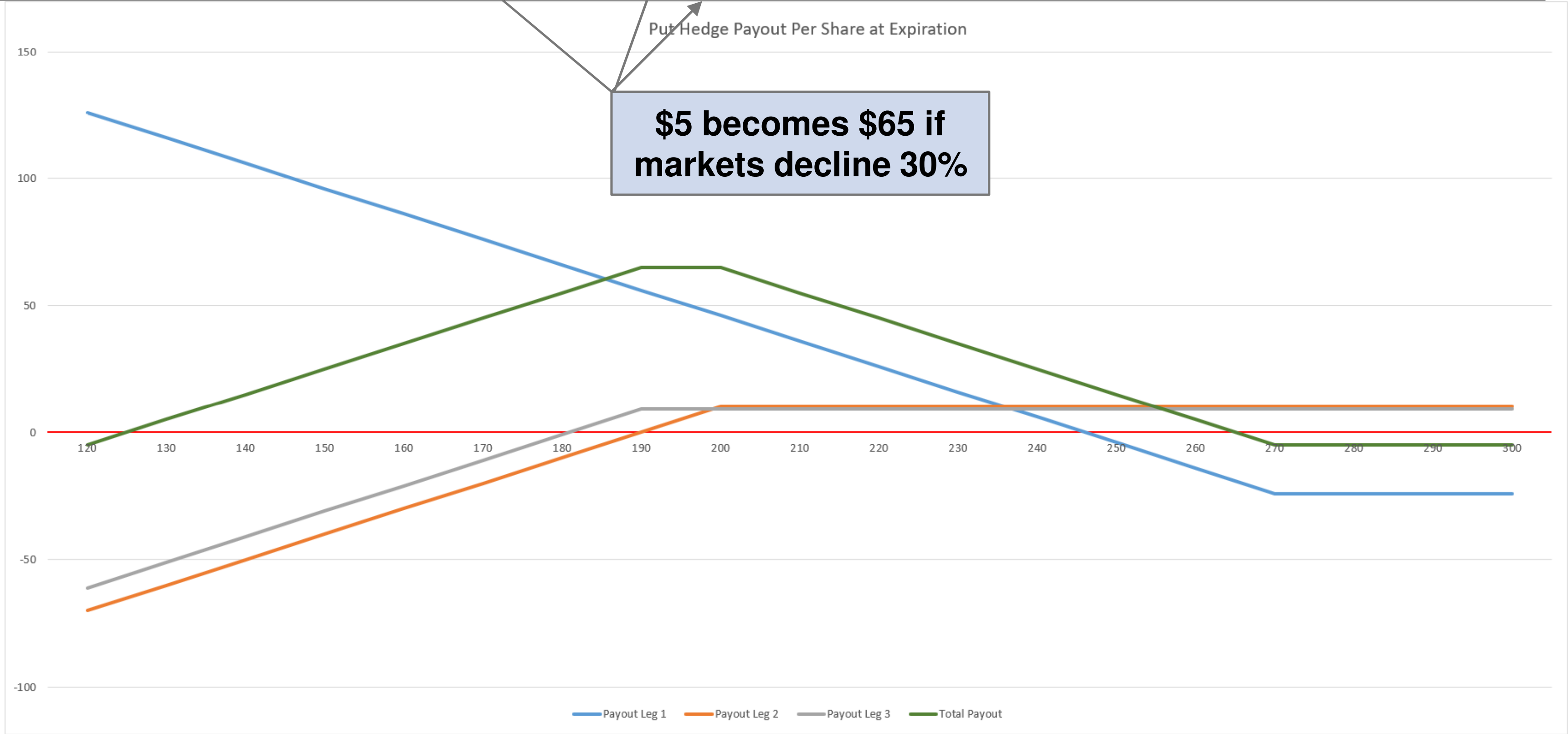
To avoid timing the next bear market, one can use long term LEAPS contracts. Contracts used today expire in January of 2020. On January 22, contracts will be available for December 2020.

December 2020 Put Spread Hedge Payout Model

		Strike	Put/Call	Price	280 SPY Price Today
Leg 1	Buy	270	P	24	-4%
Leg 2	Sell	200	P	10	-29%
Leg 3	Sell	190	P	9	-32%
Trade Cost				5	

This inexpensive asymmetric hedge provides an incredible 10-12x gain should SPY decline between 28-45%. A positive multi bagger total payout results from SPY declines ranging from 15-60%.

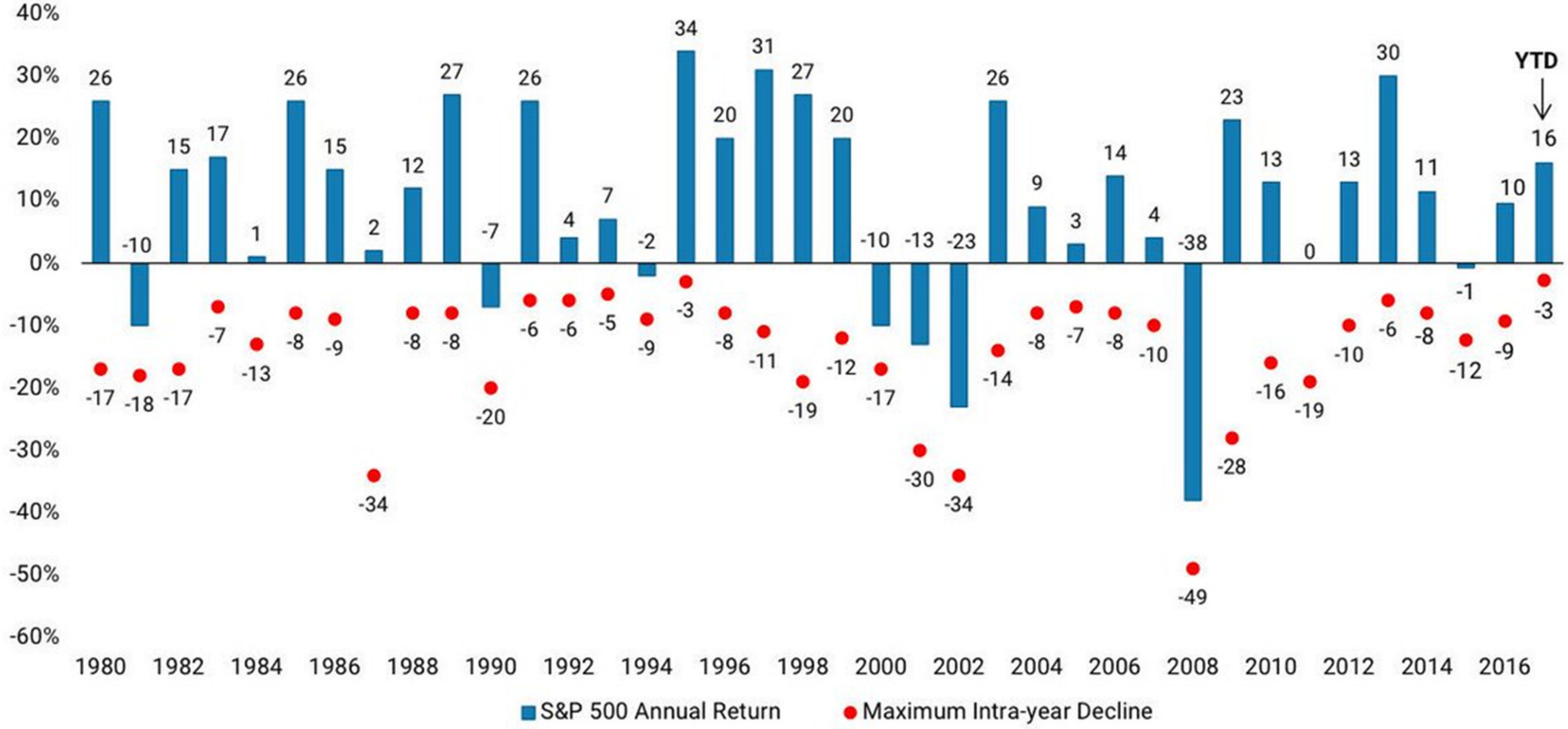
SPY Price	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
Index Return	-57%	-54%	-50%	-46%	-43%	-39%	-36%	-32%	-29%	-25%	-21%	-18%	-14%	-11%	-7%	-4%	0%	4%	7%
Payout Leg 1	126	116	106	96	86	76	66	56	46	36	26	16	6	-4	-14	-24	-24	-24	-24
Payout Leg 2	-70	-60	-50	-40	-30	-20	-10	0	10	10	10	10	10	10	10	10	10	10	10
Payout Leg 3	-61	-51	-41	-31	-21	-11	-1	9	9	9	9	9	9	9	9	9	9	9	9
Total Payout	-5	5	15	25	35	45	55	65	65	55	45	35	25	15	5	-5	-5	-5	-5
Percent Gain	-100%	100%	300%	500%	700%	900%	1100%	1300%	1300%	1100%	900%	700%	500%	300%	100%	-100%	-100%	-100%	-100%



$5 becomes $65 if markets decline 30%

Historical S&P 500 annual returns and drawdowns since 1980

In an analysis of 37 years, annual intra-year drawdowns have exceeded 30% 4 times. 2008 was the only full year with an annual loss greater than 35%.



Source: Bloomberg, Morgan Stanley Research as of November 21, 2017.

Position sizing has major return implications and the Kelly criterion can be used to optimize capital compounding

What percent of my bankroll should I allocate to a hedge?

Kelly % = W – [(1-W)/R]

- W (win) = Number of Positive Outcome Trades / Total Trades
- R (gain / loss ratio) = Total Positive Trade Amounts / Total Negative Trade Amounts

Observations

- Drawdown > 30% in 4 of 37 years
- Drawdown >15% in 13 of last 37 years
- Multiyear index declines/drawdowns have reached nearly 50%

Assumptions

- Repeatable opportunity if volatility remains low
- We are likely to experience another drawdown sometime within next 5 or 10 years

Conclusions

- With wide assumptions, Kelly states 6% average portfolio allocation. Half Kelly at 3% (300 bps) is a wise allocation.
- Allocating 100 bps yearly to a multi-year position, one can build into 300 bps over 3 years, creating 40% portfolio upside in a crisis