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Case Study of Relative Risk and Return of a Covered Call vs. Selling a Put on the S&P 500 ETF - SPY

A surprisingly large number of investors (and advisors) believe that selling covered calls is a lower risk strategy than selling puts. Some advisors even say that selling puts is like "picking up nickels in front of a steamroller", when in fact the risk and return characteristics are nearly the same. This is a comparison of the merits of utilizing a covered call strategy on SPY as it compares to selling a put on SPY during a market downdraft and subsequent recovery from late 2015 into early 2016. During this period, the S&P 500 suffered a 13% correction over a 4 month period of time. The examination includes cash earned from option premium, dividends earned and capital gain from shares owned as it compares to capital-at-risk. It also compares the mark-to-market value of the position at each month-end.

Option and stock prices were purchased from the CBOE and are actual real-time prices. We purchased closing and 3:45PM price data on SPY for every trading day between December 17, 2015 through April 15, 2016. We believe 3:45PM pricing gives a more accurate representation than closing prices, because the trade actually could have been done with 15 minutes of trading left. The prices used in the study was the actual bid price in the case of the initial sale of the put or call, and the prices used in the subsequent sales or rolls was the mid-point of the 3:45PM bid and ask, which in every instance were just pennies apart. The prices for the month-end values use the ask price for short options and bid price for the long SPY position, the most conservative pricing method.

We use the initial strike price for the call or put which would have been just out-of-the money. For example, SPY was trading at 205.81 at 3:45PM on December 17th, so we modeled buying the shares at 205.81 and selling a one-month call at 206. We kept selling 206 calls, month-after-month, until the shares were called away. Likewise, since SPY was at 205.81 we modeled selling a put with a strike price of 205, rolling it out month-after-month until SPY recovered to above 205.

The case study is for illustrative purposes only and should not be considered an investment recommendation. The following page documents the covered call strategy, the next page documents selling puts, and the last page compares the two. For ease of comparison the examples do not include trading commissions or management fees, but do include assumed dividend payments.

Selling an out-of-the-money covered call on SPY

Bought 100 shares of SPY on December 17th, sold a January call, February call, March call, and finally an April call. The April call ended in-the-money, so the shares were called away and the transaction string ended. Below is the chain of events:

Buy 100 shares SPY at $205.81, sell 1 Jan 15th 206 call at $2.93

Stock cost $20,581, premium from call is $293

Capital at risk is $20,581

Cumulative cash-flow $293.00

S&P 500 drops 9%. The January call expires and a February call is sold.

Sell 1 Feb 19th 206 call at $0.12, premium from call is $12

SPY pays a dividend of $121.20

Cumulative cash-flow $426.20

S&P 500 recovers a little. The February call expires and a March call is sold.

Sell 1 Mar 18th 206 call at $0.08, premium from call is $8

Cumulative cash-flow $434.20

S&P 500 almost makes it back to 206. The March call expires and an April call is sold.

Sell 1 Apr 15th 206 call at $1.94, premium from call is $194

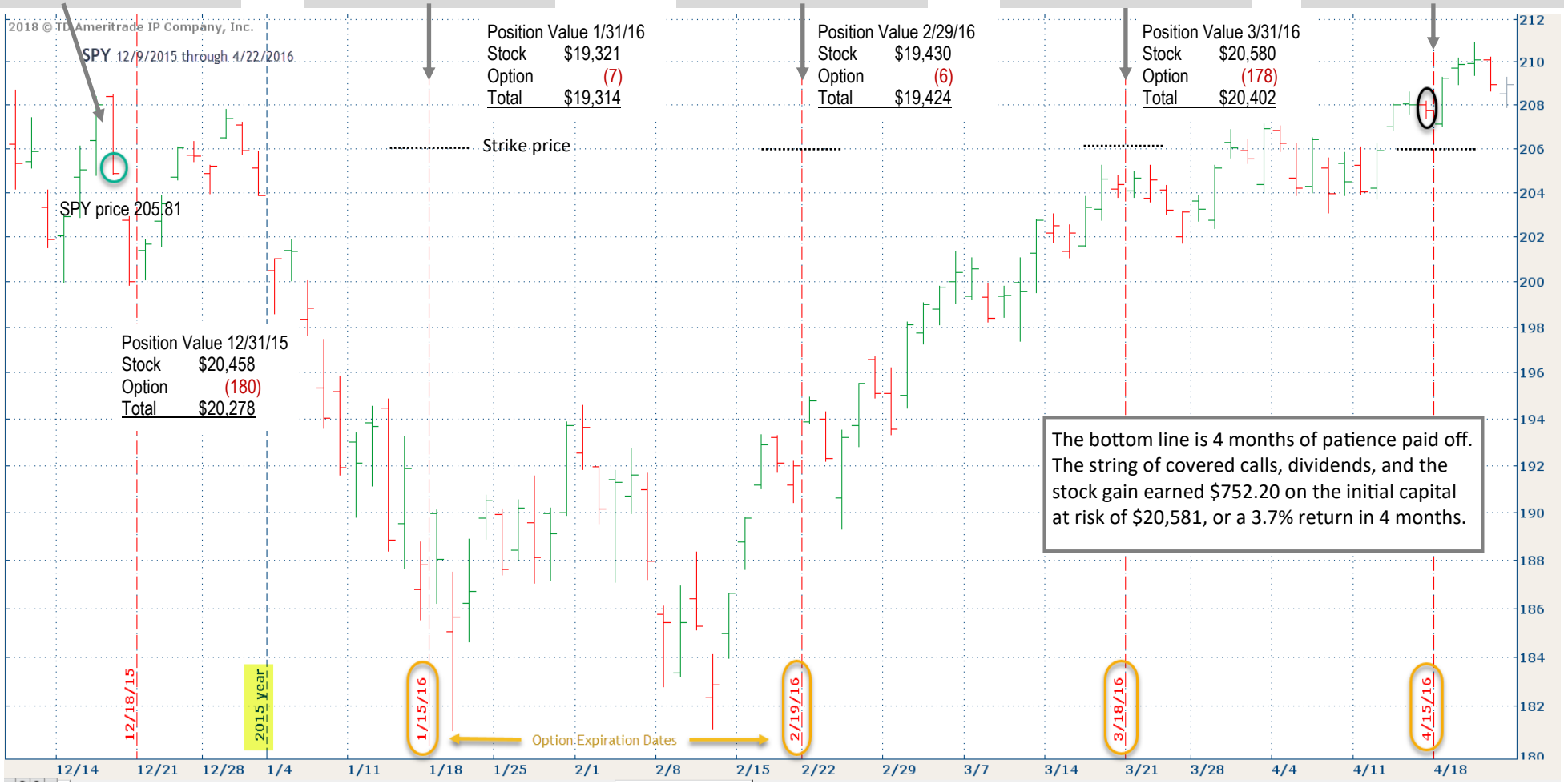
Cumulative cash-flow $628.20

SPY closes above 206 and the April call is exercised.

SPY shares sell at $206

Gain from stock sale $19, SPY pays another dividend in April of $105

Cumulative realized profit $752.20



Selling an out-of-the-money put on SPY

Sold 1 January put on SPY on December 17th, then rolled out to a February put, March put, and finally an April put. The April put ended out-the-money and expired, so the transaction string ended. Below is the chain of events:

Sell 1 Jan 15th 205 put at $3.81. Investor obligates to buy 100 SPY at $205, and in return the premium from the put is $381

Capital at risk is $20,500

Cumulative cash-flow $381

S&P 500 drops 9%. The January put is deep in the money and to prevent exercise must be rolled out to February.

Buy Jan put at $17.25 or ($1725) and sell Feb put for $18.30 or $1830. Additional cash-flow is $105.

Cumulative cash-flow $486

S&P 500 recovers a little. The February put is deep in the money and must be rolled to March.

Buy Feb put at $12.99 or ($1299) and sell March put for $14.11 or $1411. Additional cash-flow is $112.

Cumulative cash-flow $598

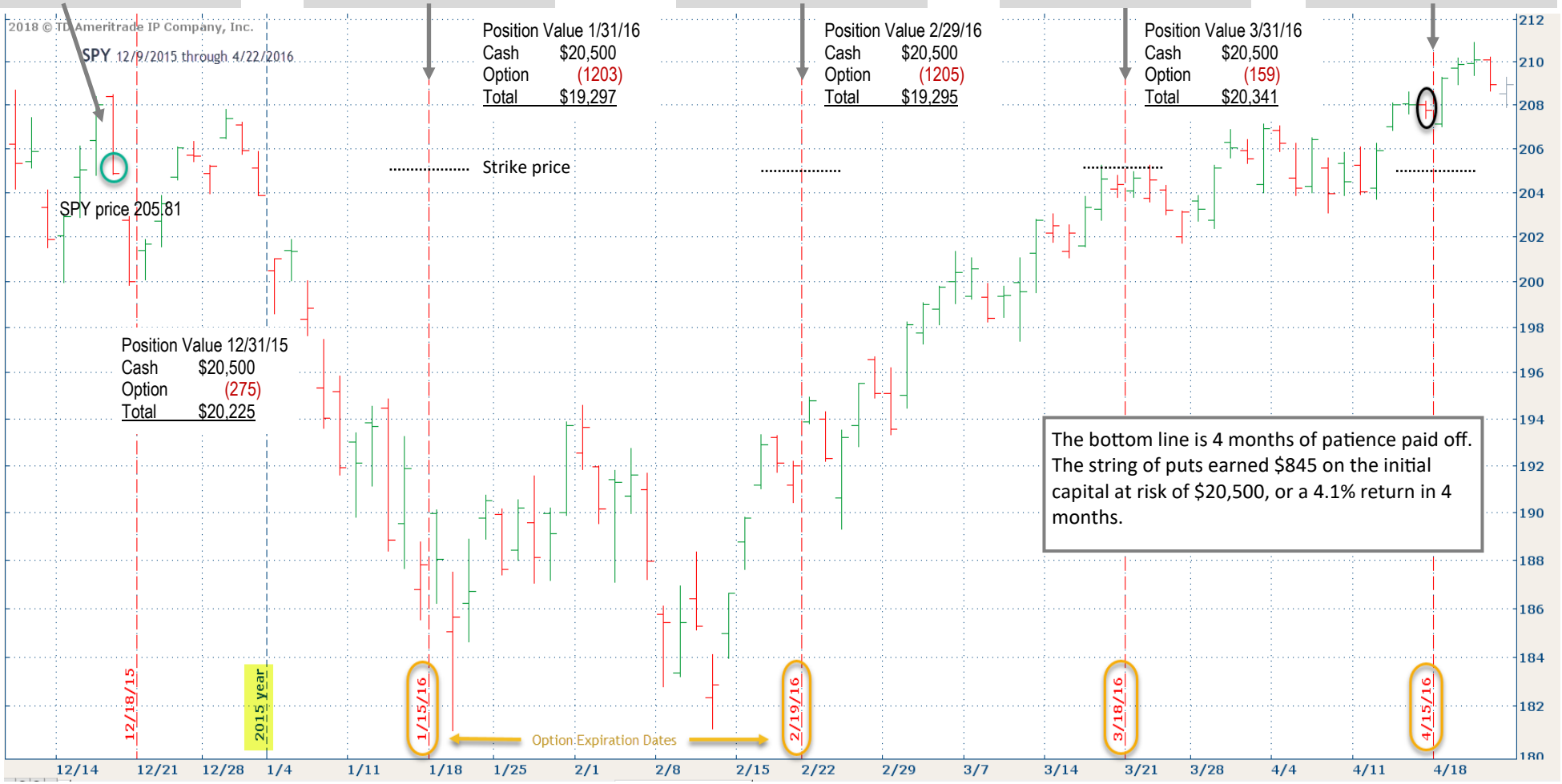
SPY almost makes it back to 205 but is at 204.52. The March put must be rolled out to April.

Buy March put at $0.50 or ($50) and sell April put for $2.97 or $297. Additional cash-flow is $247.

Cumulative cash-flow $845

SPY closes above 205 and the April put expires. The obligation and capital at risk is released. All accumulated cash-flow becomes profit.

Cumulative realized profit $845



Side-by-Side Comparison

Selling an out-of-the-money covered call on SPY	
Capital at risk	$20,581
Cumulative realized profit	752
Mark-to-market Position Value, equity bid ± option ask	
December 31, 2015	20,278
January 31, 2016	19,314
February 29, 2016	19,424
March 31,2016	20,402

Selling an out-of-the-money put on SPY	
Capital at risk	$20,500
Cumulative realized profit	845
Mark-to-market Position Value, cash position ± option ask	
December 31, 2015	20,225
January 31, 2016	19,297
February 29, 2016	19,295
March 31,2016	20,341