UBS's YES Was Not Same Iron Condor Product as at Credit Suisse

By Craig McCann, Regina Meng and Edward O'Neal[1]

In a previous study of the UBS YES option program, we wrote:

> The YES Team moved from Credit Suisse to UBS in early 2016, bringing with them a strategy they claimed to have successfully run since 2004. The UBS-branded marketing materials in 2016 and 2017 claim YES was market-neutral and had generated monthly returns for 12 years that had been uncorrelated with the stock and bond markets. As you will see below, either the prior returns reported in the UBS marketing materials were false or the strategy implemented at UBS in 2016, 2017 and 2018 differed markedly from what had been implemented at Credit Suisse. [emphasis added]

Recently, we were asked by a friend, for our basis for the emphasized sentence above. While the remainder of our 2019 note provides good support for the assertion that UBS was doing something very different than had been done at Credit Suisse, we have developed additional analyses which conclusively demonstrate the correctness of our statement.

Our previously published paper documented that YES's 2018 losses resulted from directional stock market bets – sometimes long the market, sometimes short the market - placed or maintained by UBS. In communications with clients and in other public statements, UBS has attributed YES' 2018 losses to unusual market volatility alternatively reflected in 1) unusually large stock market drops, 2) unusually large intraday swings in the stock market, 3) jumps in volatility, or 4) high historical volatility.

Monthly returns from the Credit Suisse and UBS time periods - including for subperiods of similar characteristics UBS blames for the 2018 losses - show these two programs were very different and that UBS's program was much riskier and had much more directionality than the Credit Suisse program. We find market conditions in 2018 when YES lost 18.44% were much less dramatic than in 2008 when Credit Suisse lost only 2.42%. *See* Exhibit 1 and Exhibit 2 below.

[1] © Securities Litigation and Consulting Group, Inc., 2021. Craig McCann can be reached at 703-246-9381 or craigmccann@slcg.com. Edward O'Neal can be reached at 336-655-8718 or eddieoneal@slcg.com.

1) Stock Market Drops

UBS claims the YES Team implemented non-directional iron condors that subsequently lost money because unusual stock market declines in 2018 caused index levels to drop below the short put option strike prices in the iron condors. We can test this assertion by comparing the number of days with stock market drops greater than various thresholds in 2018 with prior years when Credit Suisse managed and supervised the YES program. Table 1 reports the number of days in 2008, 2009, 2011 and 2018 with daily stock declines greater than 2%, 3%, 4%, 5% and 6%. On average in 2008, 2009 and 2011 there were twice as many days with greater than two and three percentage point declines in the S&P 500 than there were in 2018.

Table 1: 2018 One-day declines were small compared to 2008, 2009 and 2011

	Threshold					YES	
Year	<-2%	<-3%	<-4%	<-5%	<-6%	Return	Firm
2008	40	23	15	11	8	-2.4%	Credit Suisse
	-4.1%	*-5.3%*	*-6.3%*	*-7.0%*	*-7.6%*		
2009	28	12	6	1	0	2.9%	Credit Suisse
	-3.0%	*-4.0%*	*-4.7%*	*-5.3%*	*n/a*		
2011	21	6	4	1	1	-1.0%	Credit Suisse
	-3.0%	*-4.5%*	*-5.1%*	*-6.7%*	*-6.7%*		
Average	30	14	8	4	3	-0.2%	Credit Suisse
	-3.4%	*-4.6%*	*-5.3%*	*-6.3%*	*-7.1%*		
2018	16	5	1	0	0	-18.4%	UBS
	-2.6%	*-3.5%*	*-4.1%*	*n/a*	*n/a*		

For more extreme declines, the contrast is even more stark. 2008, 2009 and 2011 all experienced many larger daily stock price declines than the worst one-day decline in 2018. In 2018, the biggest one-day drop in the S&P 500 was -4.10% on February 5. There were 14 days in 2008, 6 days in 2009 and 4 days in 2011 with 1-day declines greater than -4.1%. The average decline on these 24 days was -5.77%.

The February 5, 2018 decline was smaller than the largest 24 one-day declines across three years during which time the Credit Suisse product had annual returns of -2.42%, +2.94% and -1.00%.

The largest two-week decline in 2018 was -10.87% from December 10, 2018 to December 24, 2018. Table 2 counts the number of two-week declines greater than various thresholds in 2008, 2009, 2011 and 2018. There were 15 two-week periods in 2008, 8 two-week periods in 2009 and 3 two-week periods in 2011 with declines greater than the largest two-week decline in 2018. The average decline during these 26 two-week periods with larger declines than the -10.76% decline in December 2018 was -15.04%.

Once again, the worst two-week period in 2018 doesn't make it into the worst 25 such periods in 2008, 2009 and 2011 when the Credit Suisse product effectively broke even and yet UBS claims to have lost 18.44% in 2018 following the same strategy as Credit Suisse had implemented.

Table 2: 2018 Two-week declines were small compared to 2008, 2009 and 2011

	Threshold					YES	
Year	**<-6%**	**<-8%**	**<-10%**	**<-12%**	**<-14%**	**Return**	**Firm**
2008	**30**	**19**	**15**	**14**	**12**	**-2.4%**	**Credit Suisse**
	-12.0%	*-14.9%*	*-16.5%*	*-16.8%*	*-17.5%*		
2009	**21**	**14**	**8**	**4**	**2**	**2.9%**	**Credit Suisse**
	-9.7%	*-11.1%*	*-12.7%*	*-14.0%*	*-14.9%*		
2011	**14**	**8**	**5**	**2**	**2**	**-1.0%**	**Credit Suisse**
	-9.3%	*-11.4%*	*-12.8%*	*-15.2%*	*-15.2%*		
Average	**22**	**14**	**9**	**7**	**5**	**-0.2%**	**Credit Suisse**
	-10.4%	*-12.5%*	*-14.0%*	*-15.3%*	*-15.9%*		
2018	**13**	**6**	**1**	**0**	**0**	**-18.4%**	**UBS**
	-7.8%	*-9.0%*	*-10.9%*	*n/a*	*n/a*		

We could use many other time periods over which to measure stock market returns UBS claims caused the 2018 YES losses and all yield the same unambiguous conclusion: stock market declines in 2018 were modest, not extraordinary compared to the recent past when Credit Suisse's YES program had minimal losses.

Biasing the analysis strongly in UBS's favor, consider the largest drop over consecutive days in 2018: From December 3, 2018 to December 24, 2018 the S&P 500 declined 15.74%. There were 14, 4 and 1 periods of similar length in 2008, 2009 and 2011 with greater declines than experienced in 2018. The average decline over these 19 14-trading day periods was -20.02%.

Thus even, heavily biasing the test in UBS's favor, 2018 had far fewer large stock market declines than 2008, 2009 and 2011 when the Credit Suisse product effectively broke even.

2) Large Intraday Swings

Intraday S&P 500 index swings (difference between high and low levels for the day) provides an alternative measure of stock market fluctuations which might cause losses in an option-based strategy. The largest intraday S&P 500 index swing in 2018 was 5.16% and occurred on December 26. There were 28 days in 2008, 5 days in 2009 and 4 days in 2011 during which the intraday swing was greater than the largest intraday swing in 2018. The average intraday swing across these 37 days was 7.42%.

Table 3 reports intraday swings greater than various thresholds.

Table 3: 2018 Intraday swings were small compared to 2008, 2009 and 2011

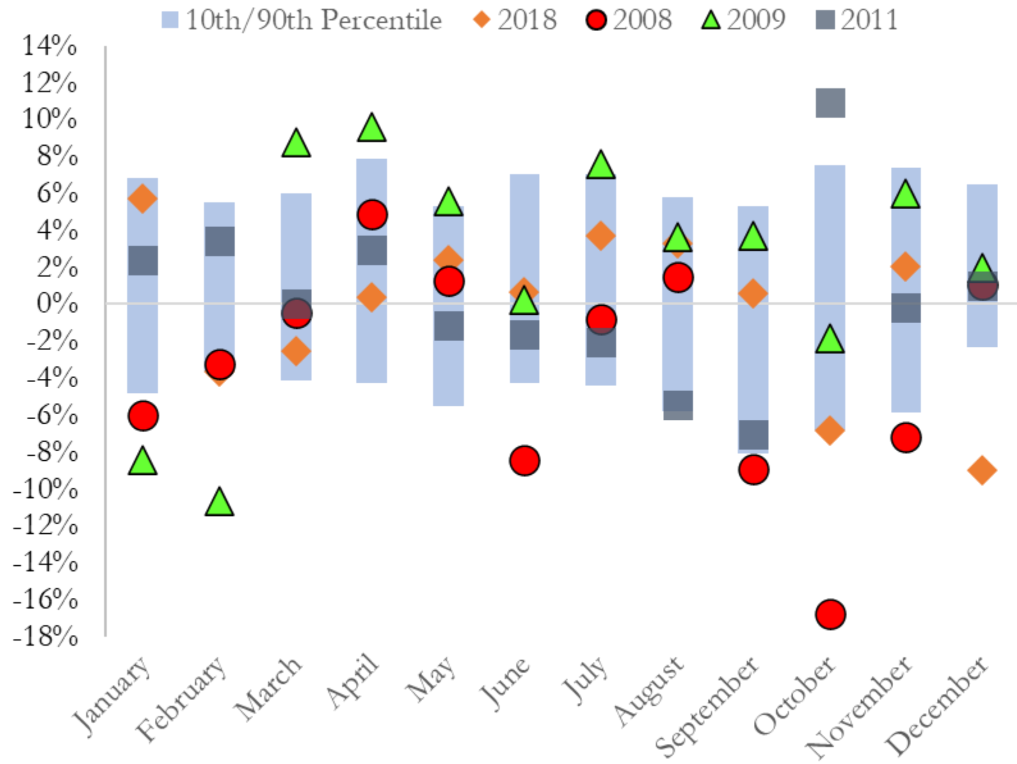
	Threshold					YES	
Year	**>2%**	**>3%**	**>4%**	**>5%**	**>6%**	**Return**	**Firm**
2008	131	19	13	7	5	-2.4%	**Credit Suisse**
	4.1%	*5.5%*	*6.5%*	*7.5%*	*8.9%*		
2009	104	42	16	5	1	2.9%	**Credit Suisse**
	3.1%	*4.0%*	*4.9%*	*5.8%*	*6.6%*		
2011	66	23	10	5	2	-1.0%	**Credit Suisse**
	3.0%	*4.2%*	*5.2%*	*5.9%*	*6.8%*		
Average	100	28	13	6	3	-0.2%	**Credit Suisse**
	3.4%	*4.6%*	*5.5%*	*6.4%*	*7.4%*		
2018	39	17	5	1	0	-18.4%	**UBS**
	3.0%	*3.8%*	*4.5%*	*5.2%*	*n/a*		

3) Monthly Returns 1928 to 2018

Calendar monthly stock market returns are often used to present simple illustrations of historical returns but can be misleading. In Figure 3 we plot the 10th and 90th percentiles of monthly returns from 1928 to 2018. Without including 2008 and 2009 the graphic might prompt someone to conclude that 2018 "broke a historical trend" or was unusual in some way compared to prior years since two of the 2018 orange diamond markers (for February and October) are at the bottom of the 10th/90th percentile range and one marker (December) is substantially below the bottom of the 10th/90th percentile range.

Adding the three recent years in my examples above corrects this incorrect inference. Many months in 2008 saw similar stock market losses as - and October 2008 was far worse - the worst month in 2018. Albeit less visually dramatic, 2009 and 2011 also had larger losses than 2018.

Figure 1: 2018 monthly returns were smooth compared to 2008, 2009 and 2011



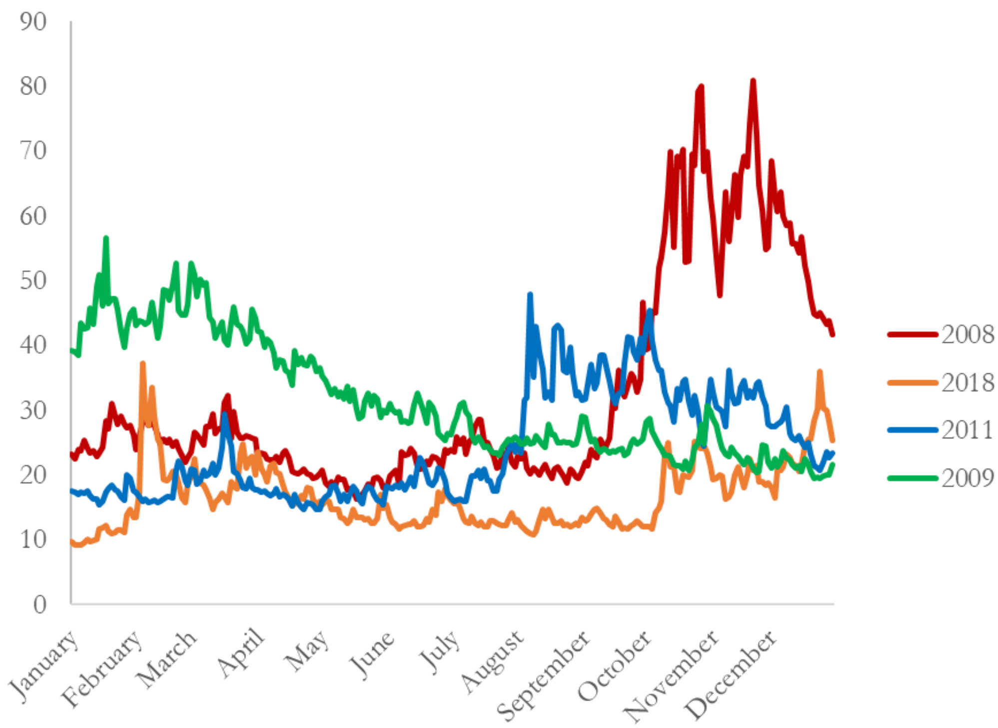
4) Stock Market Volatility

Implied Volatility

Option values are determined by underlying index levels or asset prices, strike price, time to expiration, expected volatility over the term of the option, dividend yield, and the risk-free rate.

With an option pricing model, we can solve for the volatility value – the *implied* volatility – that makes observed option prices consistent with observed or assumed values for the other five factors. The sensitivity of option values to the underlying index level or asset value and to perceived volatility are common risk measurements. These sensitivities can be estimated numerically or empirically. Figure 2 reports the CBOE VIX level which approximate implied volatilities for at-the-money S&P 500 options with 30 days to expiration.

Figure 2: VIX – 2008, 2009 and 2011 volatility was much higher than 2018 volatility

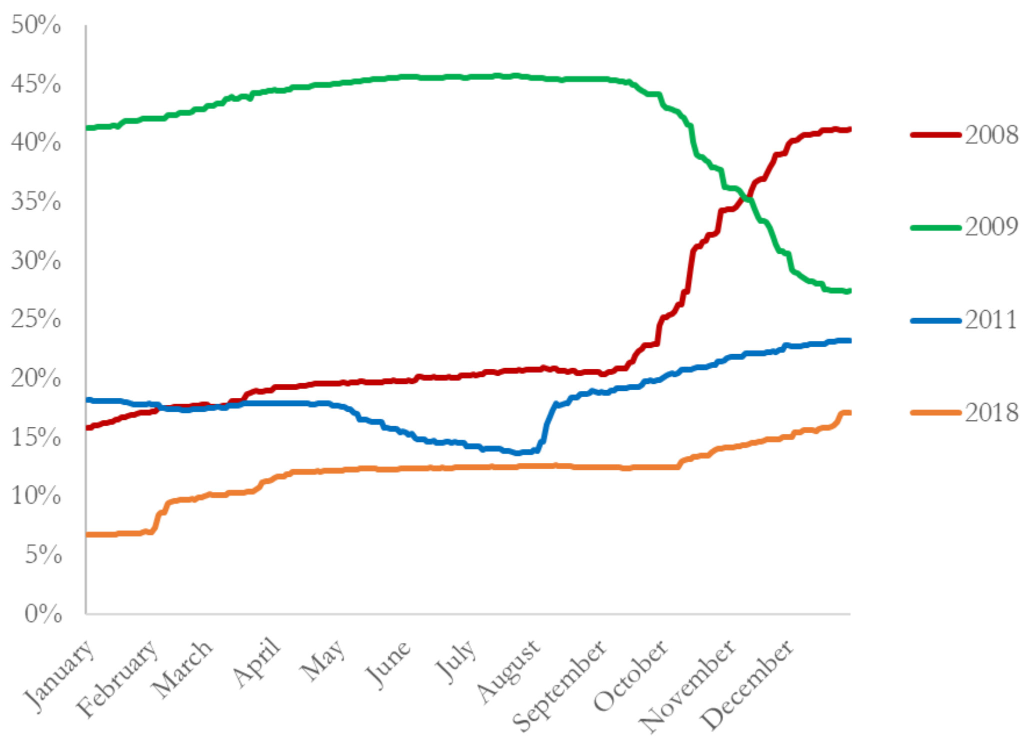


UBS stated that YES may not perform well in periods of high stock market volatility. The VIX, which reflects the market's continuously updated consensus of market volatility, was much higher in 2008, 2009 and 2011 when Credit Suisse' YES effectively broke even than in 2018 when UBS's YES lost 18.44%. Clearly UBS was doing something different than Credit Suisse or the 2018 losses were not caused by the market conditions to which UBS now points.

Historical Volatility

While typically not relevant for valuing options or assessing the riskiness of options unless implied volatilities are not readily available, historical volatility is sometimes casually used to illustrate market conditions over time. For completeness, Figure 3 plots historical volatility for the four years in our examples. As with our other measures, market conditions in 2018 when UBS YES lost 18.44% were mild compared to market conditions in 2008, 2009 and 2011 when Credit Suisse YES effectively broke even.

Figure 3: Historical Volatility was Much Higher in 2008, 2009 and 2011 Than 2018

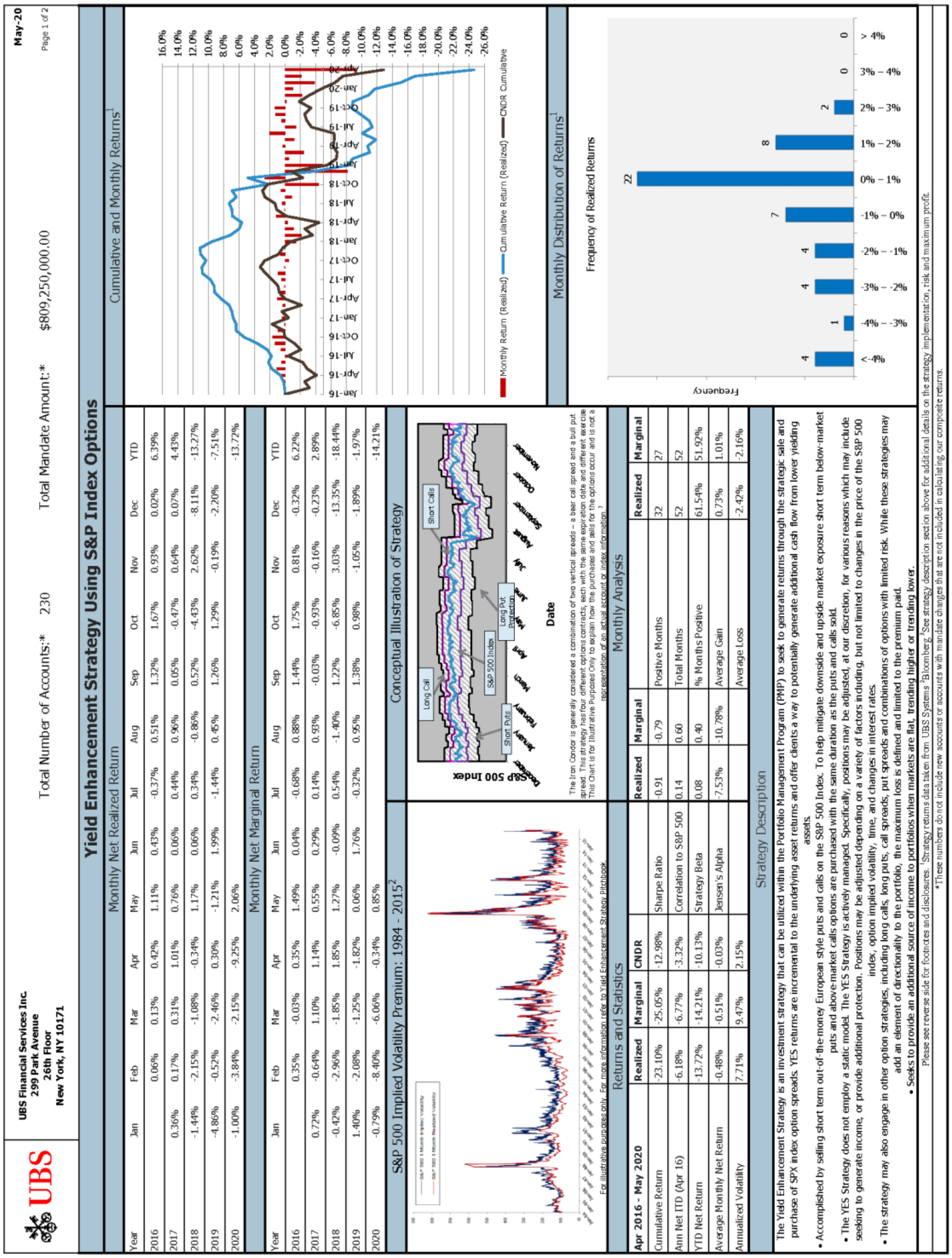


Summary

YES lost 18.44% in 2018. The similarly described product run by the same management team effectively broke even in 2008, 2009 and 2011 when stock market declines, intraday swings and volatility were all much greater. UBS was doing something very different than Credit Suisse or UBS YES's 2018 losses were not caused by the market conditions to which UBS now points.

The 2015 Credit Suisse report below illustrate strike prices centered over current index levels and put spreads equal to call spreads. UBS's graphical illustration of YES shows index levels closer the short call strike prices than the short put option prices and much larger put spreads than call spreads. These two reports and the discussion above demonstrate that UBS implemented a far more directional strategy than the Credit Suisse product – with disastrous results for UBS's clients. ###

Exhibit 1: UBS May 2020 YES Monthly Report Shows 18.44% Loss in 2018



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Total Number of Accounts:* 230 Total Mandate Amount:* $809,250,000.00

May-20
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Yield Enhancement Strategy Using S&P Index Options

Monthly Net Realized Return

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
2016		0.06%	0.13%	0.42%	1.11%	0.43%	-0.37%	0.51%	1.32%	1.67%	0.93%	0.02%	6.39%
2017	0.36%	0.17%	0.31%	1.01%	0.76%	0.06%	0.44%	0.96%	0.05%	-0.47%	0.64%	0.07%	4.43%
2018	-1.44%	-2.15%	-1.08%	-0.34%	1.17%	0.06%	0.34%	-0.86%	0.52%	-4.43%	2.62%	-8.11%	-13.27%
2019	-4.86%	-0.52%	-2.46%	0.30%	-1.21%	1.99%	-1.44%	0.45%	1.26%	1.29%	-0.19%	-2.20%	-7.51%
2020	-1.00%	-3.84%	-2.15%	-9.25%	2.06%								-13.72%

Monthly Net Marginal Return

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
2016		0.35%	-0.03%	0.35%	1.49%	0.04%	-0.68%	0.88%	1.44%	1.75%	0.81%	-0.32%	6.22%
2017	0.72%	-0.64%	1.10%	1.14%	0.55%	0.29%	0.14%	0.93%	-0.03%	-0.93%	-0.16%	-0.23%	2.89%
2018	-0.42%	-2.96%	-1.85%	1.85%	1.27%	-0.09%	0.54%	-1.40%	1.22%	-6.85%	3.03%	-13.35%	-18.44%
2019	1.40%	-2.08%	-1.25%	-1.82%	0.06%	1.76%	-0.32%	0.95%	1.38%	0.98%	-1.05%	-1.89%	-1.97%
2020	-0.79%	-8.40%	-6.06%	-0.34%	0.85%								-14.21%

Cumulative and Monthly Returns[1]

S&P 500 Implied Volatility Premium: 1984 - 2015[2]

For illustrative purposes only. For more information refer to Yield Enhancement Strategy Pitchbook

Conceptual Illustration of Strategy

The Iron Condor is generally considered a combination of two vertical spreads – a bear call spread and a bull put spread. This strategy has four different options contracts, each with the same expiration date and different exercise. This Chart is for Illustrative Purposes Only to explain how the purchases and sells for the options occur and is not a representation of an actual account or index information.[3]

Monthly Distribution of Returns[1]

Returns and Statistics

Apr 2016 - May 2020	Realized	Marginal	CNDR
Cumulative Return	-23.10%	-25.05%	-12.98%
Ann Net ITD (Apr 16)	-6.18%	-6.77%	-3.32%
YTD Net Return	-13.72%	-14.21%	-10.13%
Average Monthly Net Return	-0.48%	-0.51%	-0.03%
Annualized Volatility	7.71%	9.47%	2.15%

Monthly Analysis

	Realized	Marginal
Sharpe Ratio	-0.91	-0.79
Correlation to S&P 500	0.14	0.60
Strategy Beta	0.08	0.40
Jensen's Alpha	-7.53%	-10.78%

	Realized	Marginal
Positive Months	32	27
Total Months	52	52
% Months Positive	61.54%	51.92%
Average Gain	0.73%	1.01%
Average Loss	-2.42%	-2.16%

Strategy Description

The Yield Enhancement Strategy is an investment strategy that can be utilized within the Portfolio Management Program (PMP) to seek to generate returns through the strategic sale and purchase of SPX index option spreads. YES returns are incremental to the underlying asset returns and offer clients a way to potentially generate additional cash flow from lower yielding assets.

- Accomplished by selling short term out-of-the-money European style puts and calls on the S&P 500 Index. To help mitigate downside and upside market exposure short term below-market puts and above-market calls options are purchased with the same duration as the puts and calls sold.
- The YES Strategy does not employ a static model. The YES Strategy is actively managed. Specifically, positions may be adjusted, at our discretion, for various reasons which may include seeking to generate income, or provide additional protection. Positions may be adjusted depending on a variety of factors including, but not limited to changes in the price of the S&P 500 index, option implied volatility, time, and changes in interest rates.
- The strategy may also engage in other option strategies, including long calls, long puts, call spreads, put spreads and combinations of options with limited risk. While these strategies may add an element of directionality to the portfolio, the maximum loss is defined and limited to the premium paid.
- Seeks to provide an additional source of income to portfolios when markets are flat, trending higher or trending lower.

Please see reverse side for footnotes and disclosures. [1]Strategy returns data taken from UBS Systems [2]Bloomberg [3]See strategy description section above for additional details on the strategy implementation, risk and maximum profit.
*These numbers do not include new accounts or accounts with mandate changes that are not included in calculating our composite returns.

Exhibit 2: Credit Suisse May 2015 Monthly Report Shows 2.42% Loss in 2008

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May-15

Yield Enhancement Strategy Using S&P Index Options

Monthly Net Realized Return

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
2004	-1.63%	1.93%	5.46%	-0.60%	1.96%	4.71%	1.56%	1.78%	1.62%	2.03%	-4.12%	1.59%	17.13%
2005	1.63%	0.58%	0.67%	1.64%	-0.26%	0.94%	1.02%	1.61%	1.12%	0.90%	-0.72%	-1.01%	8.39%
2006	1.38%	1.41%	1.26%	1.53%	0.61%	1.65%	2.08%	-1.18%	0.71%	-0.38%	0.14%	-1.41%	8.01%
2007	1.49%	1.98%	0.80%	-3.88%	0.27%	0.48%	1.32%	0.95%	0.42%	1.15%	0.97%	2.67%	8.81%
2008	-0.18%	0.52%	2.57%	2.27%	1.84%	1.39%	0.18%	0.75%	0.52%	-1.75%	-8.77%	1.03%	-0.16%
2009	1.00%	0.77%	0.22%	-0.73%	0.11%	0.21%	0.79%	-0.55%	-0.63%	0.75%	1.05%	0.76%	3.80%
2010	0.94%	0.88%	0.77%	0.59%	-5.62%	-2.55%	0.72%	1.06%	0.71%	0.25%	0.68%	0.77%	-1.02%
2011	0.65%	0.64%	0.70%	0.73%	0.76%	0.45%	-0.33%	-1.96%	-6.45%	1.89%	1.05%	2.66%	0.46%
2012	1.08%	0.95%	1.03%	0.75%	0.81%	1.34%	1.11%	0.96%	0.69%	0.19%	1.01%	0.36%	10.73%
2013	0.80%	0.17%	-0.05%	-0.41%	-0.70%	0.72%	0.10%	0.64%	0.63%	0.74%	0.46%	0.63%	3.77%
2014	-0.13%	-0.54%	0.71%	0.42%	1.29%	0.31%	0.20%	0.89%	0.61%	-0.14%	-0.18%	-0.39%	3.07%
2015	0.54%	0.20%	0.90%	1.59%									3.27%

Monthly Net Marginal Return

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
2004	0.58%	2.79%	3.55%	1.82%	3.17%	3.27%	1.51%	0.52%	1.99%	1.06%	-2.75%	0.58%	19.47%
2005	1.78%	0.02%	1.28%	0.79%	0.40%	1.53%	-0.39%	1.55%	1.47%	-0.39%	-1.82%	0.98%	7.38%
2006	1.73%	1.24%	0.98%	1.11%	0.22%	1.88%	-0.18%	0.10%	0.20%	-0.70%	-0.17%	0.99%	7.61%
2007	1.35%	0.16%	1.05%	-4.74%	-0.02%	1.16%	-0.24%	2.55%	1.22%	1.08%	-2.36%	5.77%	6.82%
2008	-3.55%	2.34%	3.14%	2.10%	1.65%	-1.37%	1.14%	2.45%	-3.71%	-5.76%	-3.09%	2.79%	-2.42%
2009	0.37%	0.24%	-1.29%	0.06%	0.57%	1.48%	-2.45%	0.23%	-0.41%	0.46%	2.15%	1.59%	2.94%
2010	-0.36%	2.13%	0.56%	0.25%	-11.93%	1.21%	2.34%	1.50%	0.40%	0.98%	-0.25%	1.60%	-2.41%
2011	0.79%	0.69%	0.87%	0.18%	0.12%	-0.41%	-2.05%	-5.70%	-0.49%	-0.65%	2.98%	2.94%	-1.00%
2012	1.67%	0.65%	1.25%	1.16%	0.41%	1.09%	0.82%	0.80%	0.29%	1.00%	-0.17%	0.61%	9.98%
2013	0.40%	0.44%	-0.14%	0.08%	-1.37%	0.56%	1.26%	0.00%	0.82%	0.59%	0.01%	-0.72%	1.92%
2014	0.32%	0.43%	1.42%	0.47%	1.02%	0.32%	-0.71%	1.85%	0.65%	-2.20%	0.38%	-0.04%	3.93%
2015	0.37%	1.94%	0.95%	1.79%									5.13%

Strategy Description

The Yield Enhancement Strategy is a non-directional investment strategy that generates a synthetic dividend through the strategic sale and purchase of S&P 500 index options. Clients provide collateral in the form of a "dormant asset" such as a municipal bond portfolio or a concentrated stock position. The strategy offers transparency, liquidity and favorable tax treatment.

Highlights of the Yield Enhancement Strategy using Puts and Calls

- Take advantage of a bond portfolio, equity portfolio or other dormant asset.

- Generate a synthetic dividend or incremental yield by selling short term out-of-the-money puts and calls on the S&P 500 index. To manage downside and upside market exposure short term below-market put and above-market call options are purchased with the same duration as the puts and calls sold.

- Provide an additional source of income to portfolios when markets are flat, trending higher or trending lower.

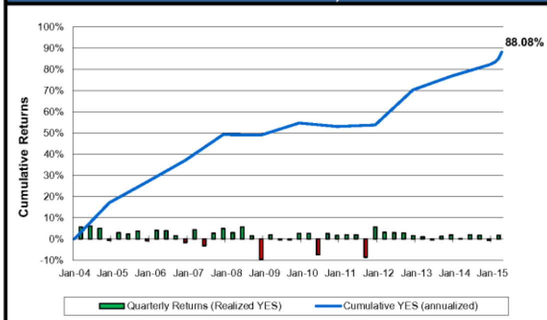
- Offer transparency, daily liquidity and individual client accounts. The strategy is not a hedge fund nor does it have hedge fund fees.

- Receive beneficial tax treatment on index option income - 60% is deemed long term capital gains while 40% is short term regardless of the length of time the options are held. (IRC 1256)

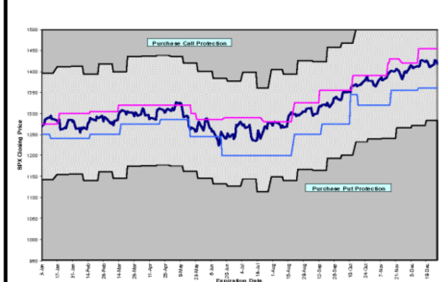
Returns and Statistics / Monthly Analysis

January 2004 - April 2015	Realized	Marginal		Realized	Marginal		Realized	Marginal
Return Since Inception	88.08%	75.26%	Sharpe Ratio	0.80	0.58	Positive Months	107	102
YTD Return	3.27%	5.13%	Correlation to S&P 500	0.21	0.31	Total Months	136	136
Average Monthly Return	0.48%	0.43%	Correlation to Barclays AGG	-0.10	-0.02	% Months Positive	78.68%	75.00%
Average Annual Return ('04-'15)	5.52%	4.95%	Strategy Beta	0.08	0.15	Average Gain	1.05%	1.19%
Annualized Volatility	5.65%	6.77%	Jensen's Alpha	4.03%	2.93%	Average Loss	-1.63%	-1.84%

Cumulative and Monthly Returns



Conceptual Illustration of Strategy*



Independent Accountant	Ashland Partners 33 North LaSalle Street, Suite 2330 Chicago, IL 60602 (541) 842-8413	Management Fee Structure	First $3-$5 MM:	1.75%	$50 MM - $99 MM (Flat):	1.15%
			Next $5 MM (up to $10 MM):	1.50%	$100 MM - $249 MM (Flat):	1.00%
			Next $10 MM (up to $20 MM):	1.25%	$250 MM and up (Flat):	0.90%
			$20 MM - $50 MM (Flat):	1.25%		