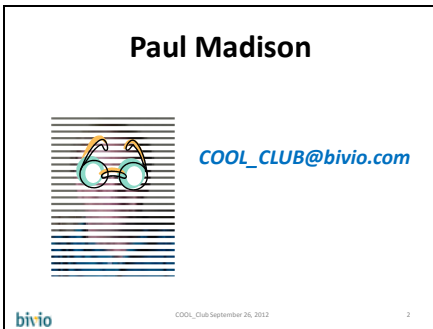


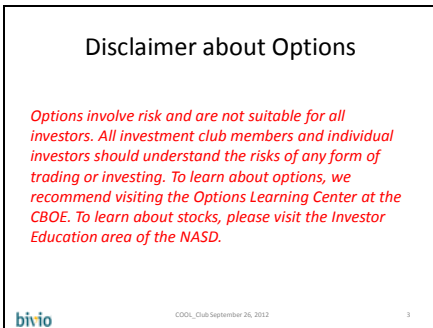


Good evening and welcome to tonight's session of the Covered Options Online Learning Club otherwise known as the COOL\_Club. I apologize now if I start yawning in your ears as it has been a long week chasing Mr. Volatility around.

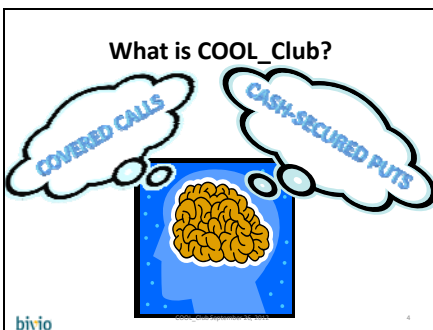


I am your host Paul Madison and resident COOL\_Club Dude.

You can write to me at the COOL\_Club Discussion List which is [COOL\\_Club@bivio.com](mailto:COOL_Club@bivio.com)



Our usual Disclaimer about Options... Options do involve risk and are not suitable for all investors. All club members or individual investors should understand the risks associated with options or any other investment instrument before investing. Also on the slide are places to go to help learn about options as well as stocks.



So what is COOL\_Club

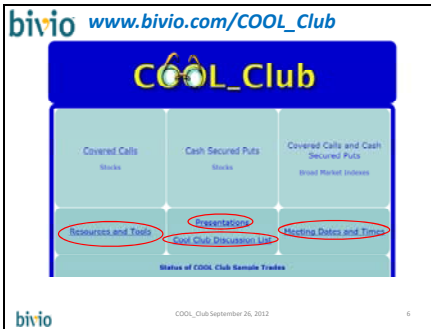
For those of you who are new, COOL\_Club is a weekly 30 minute session where we explore the thought processes associated with doing Covered Options. Some nights, like tonight, we explore side topics that are related to selling covered options that I believe will help you better understand them.

### October Schedule

- First Wednesday (Oct 3<sup>rd</sup>) 5 pm ET  
*Why we Sell rather than Buy Options*
- Second Wednesday (Oct 10<sup>th</sup>) 8 pm ET  
*Covered Options: Getting started with your broker*
- Third Wednesday (Oct 17<sup>th</sup>) 9 pm ET  
*Selling Covered Calls*
- Fourth Wednesday (Oct 24<sup>th</sup>) 10pm ET  
*Selling Cash-Secured PUTs*
- Fifth Wednesday (Oct 31<sup>st</sup>) OFF  
*Halloween - watch out for Mr. Volatility!*

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An often asked question is “why does Paul only believe in selling options rather than buying options, isn’t it just two sides of the same coin?” You are in luck because, we will explore this topic at next week’s COOL\_Club session. The following week we will also do an extra topic about what you need to do with your broker to be able start selling covered options. By the way I would love people’s experiences with brokers other than Fidelity, Schwab, & Optionhouse as these are the only three that I can speak about directly.



Here is our COOL\_Club home page  
The link is [www.bivio.com/COOL\\_Club](http://www.bivio.com/COOL_Club)

Both Handouts and recordings are under the Presentations link

Join the email discussion list by clicking here

You can get to the Excel Spreadsheet COOL TOOLS by clicking on “Resources and Tools

And finally the schedule and registration links are here.

### Tonight

- Meet Mr. Volatility
- Review homework posts
- Open floor discussion

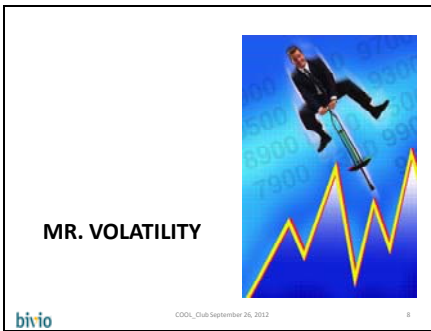
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So tonight

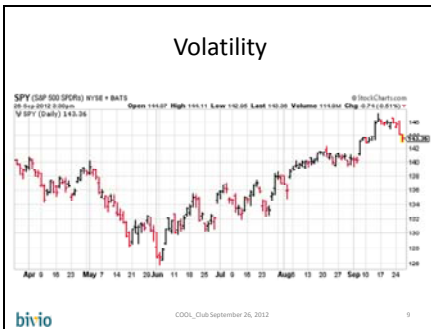
We are going to spend most of the night looking at Volatility. To begin with much of this discussion will tie to how volatility relates to selling covered options but towards the end we are also going to talk a little about how volatility can impact general saving and investing.

Then we will look at some great homework posts. I am very pleased with the postings and I am sure it is getting others thinking about giving this a try.

Then if we have time we will have an open floor discussion around any questions on covered options, specific stocks, and or tool questions.



We finally get to meet Mr. Volatility. I have mentioned him from time to time but have put off talking about him and he was really starting to get a complex. I decided it was time for us to let him out of the box.



So what is Volatility?

At it's simplest it is just a measure of the movement or variability of a stock's price over a period of time.



Why do we have so much movement in stock price, well it is driven by two fundamental emotions.

Fear

and greed. Stock prices are always anticipating what a company is going to do in the future. The market's reaction to small bits of information can be exaggerated. Why is that? Well in today's market, information flows freely and quickly and so we all know at essentially the same time the good news and the bad news which tends to shift the balance in the marketplace.

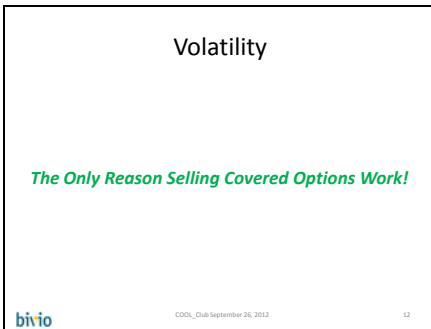
In a normal market we have a reasonable balance of buyers and sellers but good news or bad news will tend to shift the balance heavily in one direction or the other to excess. So why is it fear and greed?

Bad news makes owners of stock concerned that the future is not rosy and that they should get out while the getting is good.

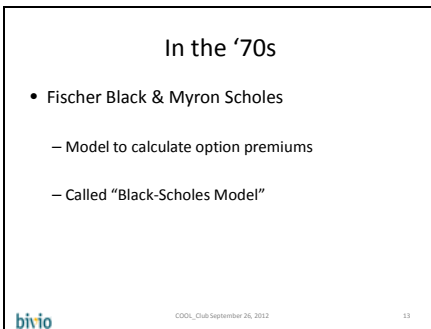
But when it is good news, people think the sky's the limit and they cannot wait to jump aboard.



Often volatility can seem like the boogey man waiting to get you. But like most monsters, the more you understand them the more you realize that they are not so bad. If you figure out how to play with them they can be your friend.



By the way, if there was no volatility there would be no reason to sell covered options. Volatility is the only reason the option market is around.



So back in the 70's

Two gentlemen by the names of Fischer Black and Myron Scholes decided they wanted to be able

to calculate what a fair value for an option premium was.

Their work has been immortalized and is called the Black-Scholes Model. Understanding the Black-Scholes Model in detail could easily be a 5 hour credit course at a university so we are not going to go into a lot of detail. We're just going to cover a little bit that I think will open up some doors for you.

## Inputs Needed for *Black-Scholes Model*

- Stock price ✓
- Time to expiration ✓
- Strike price ✓
- Risk-free rate ??
- Volatility of stock ??

When they finished their model there were five pieces of information needed as input to be able to calculate an option premium.

First we need the stock's actual price

OK I understand that and that is easy to get

Second we need to know how much time is left to expiration

Ok again I get that and can calculate that (or the broker will tell me)

Then the Strike Price

Piece of cake...got it.

Then we get into two bits of information that need explanation. First Risk-free rate.

Huh?

Followed by the Volatility of the Stock?

How do I calculate that?

## Risk-free rate

*Investopedia* –

*“The theoretical rate of return of an investment with zero risk.”*

Usual Proxy:

US Government 10 Year T-Bills

Currently around **1.63%**

Let's start with the easy one first “Risk-free rate”. Investopedia gives a definition that says “The theoretical rate of return of an investment with zero risk”.

That's a mouthful. I know we all want to find that mystical investment instrument that has zero risk but it probably is still hiding. Despite what we may feel around the risk of government debt, which in of itself could be another 5 hour credit course,

the generally accepted proxy for an investment vehicle with zero risk is the US Government 10 year Treasury Bills. Earlier today they were quoted as yielding

just under 1.63%.

## Volatility

Investopedia –

*“A variable in option value formulas showing the extent to which the return of the underlying asset will fluctuate between now and the option's expiration...”*

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That leaves us with Volatility.

Again let's look at an investopedia definition

“A variable in option value formulas showing the extent to which the return of the underlying asset will fluctuate between now and the option's expiration...”

So the key here is the underlined section which says it is the “extent to which the return of the underlying asset (our stock) will fluctuate”.

How do you figure that out?

## Black & Scholes

- Derived underlying stock volatility
- Used it in their model
- Calculated option premiums

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Let's go back to our buddies Black and Scholes

When they did their model work they actually derived the underlying stock volatility. (Don't forget they were college professors so they enjoyed figuring out the math to do this. And I guess it was worth it as they won a Nobel prize in Economics for their work). But I digress ....as I was saying they actually derived the underlying stock's volatility and

Then they used it in their model along with the four other inputs

and they were able to calculate what the theoretical fair value for an option should be.

## Real World

- Black-Scholes does not set option premiums!
- **The Marketplace does!**
  - Buyers and Sellers agree on premiums

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Of course you probably don't want to have to do that.

In the real world, the Black-Scholes Model is not used to set option premiums!

Option premiums are set by the Marketplace!

It is Buyers and Sellers agreeing to do business at a certain price that drives what the option premiums are! I imagine buying and selling is something you are a bit more comfortable with than complicated mathematics.

## So Why Does the Model Matter?

- If we use a real market premium
- We can back-calculate volatility
  - We call this “*Implied Volatility*”

So now you are saying “Ok Paul, if the Black-Scholes Model is not used to set option premiums why did you waste my valuable time talking about it?”

Well the answer is because if I start with an input of a known option premium then

I can use the Black-Scholes Model to back calculate what the Volatility assumption had to be to justify that real world premium.

We call this Implied Volatility because if a real world option premium makes sense it implies that you must have thought that the volatility was this.





## Between Strikes - CALLS

AAPL - APPLE INC											
Last	Change	Bid	Size	Ask	Ask Size	High	Low	Vol	90-Day Avg. Vol	EPS	P/E
665.15	-0.36	2	664.00	664.95	1	672.89	661.20	20,522,251	14,844,443	42.54	15.83

Calls for AAPL											
Strike	Change	Bid	Ask	Volume	Open Int	Delta	Gamma	Vanna	Theta	Vol	Action
13.15	-0.70	15.00	15.00	5,144	10	0.45	0.73	0.028	-1.42	0.16	0.03
9.30	-0.25	9.05	9.30	19,230	541	0.35	0.83	0.024	-1.52	0.19	0.02
6.15	-0.70	6.05	6.20	31,051	664	0.15	0.51	0.026	-1.54	0.20	0.02
3.80	-0.85	3.80	43,560	3,222	29,79	0.07	0.208	-1.40	0.19	0.01	0.01
2.14	-1.40	3.80	1.12	40,797	6,116	0.01	0.25	0.022	-1.13	0.16	0.01
1.15	-1.10	6.90	1.12	34,463	7,320	0.01	0.017	-0.34	0.12	0.01	0.01

Notice How IV's are getting richer as you get further in the money

We can also just look at the difference in IV's between different strikes for the same stock and the same expiration.

Notice in the case of Apple Calls for expiration this Friday, that the IV's get fatter as we get deeper in the money (lower prices).

## Between Two Companies - PUTS

AAPL - APPLE INC												PG - PROCTOR AND GAMBLE CO												
Last	Change	Bid	Size	Ask	Ask Size	High	Low	Vol	90-Day Avg. Vol	EPS	P/E	Last	Change	Bid	Size	Ask	Ask Size	High	Low	Vol	90-Day Avg. Vol	EPS	P/E	
665.15	-0.36	2	664.00	664.95	1	672.89	661.20	20,522,251	14,844,443	42.54	15.83	49.34	-0.30	0	66.50	66.50	1	66.00	66.00	1	66.00	66.00	1	66.00

Puts for AAPL												Puts for PG											
Strike	Change	Bid	Ask	Volume	Open Int	Delta	Gamma	Vanna	Theta	Vol	Action	Strike	Change	Bid	Ask	Volume	Open Int	Delta	Gamma	Vanna	Theta	Vol	Action
600	Implied = 14.00	-0.10	15.00	15.00	5,144	0.28	0.73	0.028	-1.42	0.16	0.03	600	Implied = 6.00	0.00	6.00	6.00	66	0.13	0.52	0.14	1.00	11.00	0.09
500	Implied = 17.37	-0.10	17.30	17.30	10,000	0.30	0.83	0.024	-1.52	0.19	0.02	500	Implied = 6.15	-0.02	6.15	6.15	100	0.13	0.52	0.14	1.00	11.00	0.09
400	Implied = 19.70	-0.10	19.60	19.70	6,000	0.34	0.78	0.024	-1.40	0.20	0.02	400	Implied = 6.40	-0.01	6.40	6.41	700	0.10	0.40	0.11	1.00	11.00	0.09
300	Implied = 22.10	-0.10	22.00	22.10	3,000	0.39	0.50	0.024	-1.40	0.20	0.02	300	Implied = 6.60	-0.01	6.60	6.60	200	0.09	0.30	0.11	1.00	11.00	0.09
200	Implied = 24.60	-0.10	24.50	24.60	2,000	0.44	0.20	0.024	-1.40	0.20	0.02	200	Implied = 6.80	-0.01	6.80	6.80	100	0.08	0.20	0.11	1.00	11.00	0.09
100	Implied = 27.40	-0.10	27.30	27.40	2,000	0.49	0.10	0.024	-1.40	0.20	0.02	100	Implied = 7.00	0.00	7.00	7.00	50	0.07	0.10	0.11	1.00	11.00	0.09

Notice How IV's are getting richer as you get further out of the money

Now Lets look at two companies to see how they compare.

Here we are looking at Apple PUTs and Proctor & Gamble PUTs both at near the money strikes. You can see there is more angst in Apple's premiums up around an IV of 30 than there is in PG's which for the most part are in the teens.

Notice in this case both companies PUTs are getting fatter IV's the further out of the money (lower prices) you go. The richer IV's as the strikes go down on price on both PUTs and on the CALLs, on the last slide, tells me the market is more worried about price correction than the market going up.

## Between Different Time Frames

AAPL - APPLE INC												Puts for AAPL												Puts for Jan 18 2014											
Last	Change	Bid	Size	Ask	Ask Size	High	Low	Vol	90-Day Avg. Vol	EPS	P/E	Strike	Change	Bid	Ask	Volume	Open Int	Delta	Gamma	Vanna	Theta	Vol	Action	Strike	Change	Bid	Ask	Volume	Open Int	Delta	Gamma	Vanna	Theta	Vol	Action
665.15	-0.36	2	664.00	664.95	1	672.89	661.20	20,522,251	14,844,443	42.54	15.83	600	Implied = 14.00	-0.10	15.00	15.00	5,144	0.28	0.73	0.028	-1.42	0.16	0.03	600	Implied = 80.42	-0.75	140.70	140.70	17	0.02	0.02	0.02	0.02	0.02	
												500	Implied = 17.37	-0.10	17.30	17.30	10,000	0.30	0.83	0.024	-1.52	0.19	0.02	500	Implied = 101.00	-1.40	140.20	140.20	100	0.01	0.01	0.01	0.01	0.01	
												400	Implied = 19.70	-0.10	19.60	19.70	6,000	0.34	0.78	0.024	-1.40	0.20	0.02	400	Implied = 100.00	-0.22	140.00	140.00	100	0.01	0.01	0.01	0.01	0.01	
												300	Implied = 22.10	-0.10	22.00	22.10	3,000	0.39	0.50	0.024	-1.40	0.20	0.02	300	Implied = 110.00	-0.20	140.00	140.00	100	0.01	0.01	0.01	0.01	0.01	
												200	Implied = 24.60	-0.10	24.50	24.60	2,000	0.44	0.20	0.024	-1.40	0.20	0.02	200	Implied = 111.00	-0.20	141.00	141.00	100	0.01	0.01	0.01	0.01	0.01	
												100	Implied = 27.40	-0.10	27.30	27.40	2,000	0.49	0.10	0.024	-1.40	0.20	0.02	100	Implied = 112.00	-0.20	142.00	142.00	100	0.01	0.01	0.01	0.01	0.01	

IV's for Apple are actually higher in the future

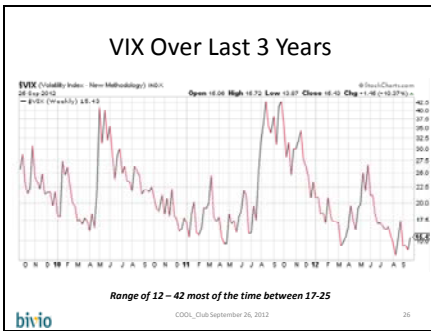
And finally we can compare different Expiration periods. So here is Apple Puts for next month and January of 2014. In this case the market is actually more worried about the future than they are the near term as we can tell because of the High IV's.

## VIX

- Composite of IVs for S&P 500 Index options
- Gives perspective on broad market Volatility

Options traders like to look at something called the VIX. The VIX is a composite of the IV's for a wide range of options on the S&P 500 Index for the next 30 days.

This gives us a nice perspective on what the Volatility of the Broad Market is.



Here is a chart of the VIX over the last three years. You can see that it has ranged from low double digits to just above 40. But we can also see we have spent most of our time in the 17-25 range. Does anybody recognize the spikes in May 2010 or August 2011?

May 2010 – What I found was BP OIL Disaster in the Gulf, Retail Sales fell unexpectedly, China announced that they would untie the yuan to the US Dollar, and finally there was a terrorist scare because a Car bomb was found in Times Square maybe somebody in the audience can remember something else as well.

August 2011 – Is a lot easier, as that was the US Debt crisis which we remember all too well.

### IV's and Covered Options

- Provides Context
  - Is the Market Volatility low or high
  - Is the Stock's Volatility low or high
  - Comes with experience
- Higher IV's mean richer premiums – higher APRs

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So why should I care about IV and how do I use it. IV is not something that comes into the COOL\_TOOL or that will change the APR calculations.

What it does do for you is provide some context.

Using the VIX we can tell whether the broad market volatility is relatively low or relatively high.

Looking at the Stock's IV we can get a flavor of if the stock is viewed as more volatile than the market and with what it has been over time.

Of course some of this feel for IV's is only going to come with experience especially around our particular stocks

Higher IV's mean as sellers of covered options we are receiving richer premiums. That obviously means fatter APRs. Nice.

## What we like to strive for

- Perfection (not always possible):
  - STO when IV is High
  - BTC when IV is Lower
- Harder to make money if:
  - STO when IV is Low
  - BTC when IV is Higher



So here is a reminder of the ideal thing to strive for (which may not always be possible). We want to STO when we have High IVs and we prefer to be BTC when the IV is back lower.

You are going to have a tough time making money if you STO when the IV is low and then try to BTC at higher IVs.

So try to do this

and not this

## Ever had this happen:

- STO Covered Call
- Stock price goes down!
- Premium of the option goes up instead of down!?
- The reason this happens is the IV on the option has gone up!

So have you ever

sold a Covered Call on a stock you owned and

the next day the stock price goes down

and instead of the option premium going down like Paul said it would it stays flat or maybe worse goes up!?

The reason this happens is the Implied Volatility on that option has just gone up from where you sold it. There is now more angst around that stock then when you originally sold the covered call.

## Optimum Time to Sell Covered Options

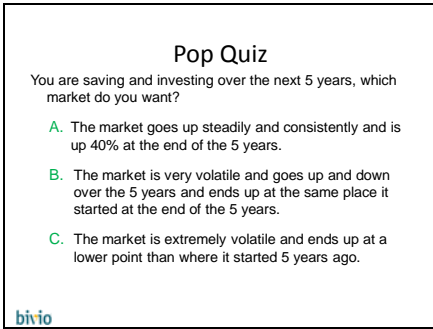
- Volatility is up on the day
  - *Now you know what that means!*

Remember when I talk about the optimum time to be selling options, I always say it is best that the volatility is up on the day. Now you know what that means

## QUESTIONS



We also promised to talk about Volatility and Investing. We are going to do that now.



Here is a little Pop Quiz and you will get to take a Gotomeeting Survey to answer it. Let's say you are in a mode where you are saving on a regular basis and investing those savings immediately over the next five years. What kind of market is going to be most advantageous to you.

The first choice is that the Market steadily rises each year and goes up consistently and by the end of the 5 years it is up 40% from where we started. Just a nice gentle ride with very low volatility.

The next choice is a rockier ride. The market is very volatile and is both up and down over the five years and when we get off the ride the market is exactly at the same place as where we started.

The last choice is even more volatile. The market is not only violently up and down over the five years but by the time five years is over we are below where we started and we are reaching for an air-sickness bag.

I will turn it over to Laurie now so we can take the POLL.

## You may be surprised

Answer A

Year	Invested	Index	Purch.
1	\$1,000	100	10.0
2	\$1,000	110	9.1
3	\$1,000	120	8.3
4	\$1,000	130	7.7
5		140	
Invested		\$4,000	

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Ok so lets see what happens. We'll assume our investment of choice is SPY - the S&P 500 Index ETF. First is scenario A. we see every year we invested \$1000 dollars. Because the price was going up evenly by \$10 per year we are buying fewer shares each year.

By the end we have 35.1 shares of SPY. At \$140 our \$4000 invested is worth \$4914, a gain of just under 23%. Not bad

Now lets look at scenario B. We can see the Index dropped off to 60 for a couple of years and then jumped up to 140 and finally settled at 100. The same place as where we started but our stomachs are queasy from the ride.

However, because we had opportunities to buy at the really low price of 60 for a couple of years, we actually end up owning 50.5 shares of SPY. They are worth \$5,048. A gain of 26.2% ...even nicer. The extra money paid for our Pepto Bismol.

## Even more surprising!

Answer C

Paul's Index ETF Talks

Date	Amount Invested	Price of SPY	Shares Purch.
Oct '07	\$1,000	146.82	6.8
Oct '08	\$1,000	93.88	10.7
Mar '09	\$1,000	78.28	12.8
Feb '10	\$1,000	110.67	9.0
Mar '11		130.83	

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But here is one that is even more surprising. This is Answer C.

This is real data. Every year in Tulsa I would teach an evening class on Index ETFs and SPY. If someone would have invested their \$1000 the next day after my class they would have seen these prices and these share purchases. In '07 the price was almost 147 (about where we are today) and they would have bought just under 7 shares. But in '08 they had much lower prices and bought quite a few more shares. All told they would have bought just over 39 shares and the price at the end of the period

was \$131. Over 10% below where we started.

But check this out. Our \$4000 turned into \$5134. A 28% gain from price appreciation. And, don't forget all the while we were also collecting a dividend of about 2% per year. As you know it has been hard to live through this, but if you were saving and investing it would have paid off for you.

Those who picked the third option deserve a gold star or they may have been a student of mine in another class and have seen this example already.



## Homework – Chuck – BTC - 9/25

Clear Data		Index ETF COOL TOOL Closing the Option	
Index	SPY	For Date	9/28
Price	\$144.10	Index	\$144.00
Delta	-1.64	Maximum Premium (Net after)	\$0.07
1. Original Sell-To-Open Position			
What Exp. Date?	9/28	Collected on Open	\$123.00
Amount	\$144.00	Cost To Close	\$123.00
Sub-Purpose Premium	\$0.00	Net	\$0.00
Number of Contracts	1	APR	0%
How sold?	9/24	2. Recommended Maximum Premium	
		For Date	9/28
		Index	\$144.00
		Maximum Premium (Net after)	\$0.07
		Collected on Open	\$123.00
		Cost To Close	\$123.00
		Net	\$0.00
		APR	0%
		3c. If option is exercised you will sell your stock for	
		Strike Price + Premium - Assignment =	Proceeds per share
		\$144.00 - \$0.41 - \$0.09 =	\$143.50

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## Homework - Theresa

- AAPL
  - Trade 1
    - STO on 9/24 \$675 PUT for 9/28 Exp.
      - Collected \$4.50 on 1 contract APR 58%
    - BTC
      - Bought back at \$1.50 Limit put in when @ \$2.50
      - Net of commissions \$270 in 1 day APR 146%
  - Trade 2
    - STO on 9/25 \$660 PUT for 9/28 Exp.
      - Collected \$4.35 on 1 contract APR 116%
      - Waiting to BTC or own Apple at \$660 - 4.35

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## Homework - Ron

- CLF
  - STO on 9/26 \$37.50 PUT for 9/28 Exp
    - Premium of \$.38 (commission only \$.01/share) APR 185%
  - Waiting to BTC or buy CLF at \$37.50 - \$.38
  - When calculating APRs on weeklies looks at money being tied up to Monday rather than Friday ....adds three more days which drops APR to only 74% ☺

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## Homework - Sharon

- COH
  - STO on 9/25 \$55 PUT for 10/20 Exp.
    - Collected \$1.80 APR 45+%
  - Waiting to BTC or Buy COH @ \$55 - \$1.80
- QSII
  - STO on 9/26 \$17.50 PUT for 10/20 Exp.
    - Collected .55 APR 45+%
  - Waiting to BTC or Buy QSII @ \$17.50 - .55
- Not making an investment recommendation

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NEXT SESSION Oct 3<sup>rd</sup> 5:00pm EDT

**WHY WE SELL RATHER THAN BUY OPTIONS**

bivio

COOL Club September 26, 2012

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Next week, October 3<sup>rd</sup> at 5:00 pm and we will talk about Why we Sell rather than Buy Options.

As Homework, I like what is going on where people are sharing some things they are doing or trying. I think it would be good to make sure you spell out, this is in a Virtual account so people can take that in to account.

## QUESTIONS & OPEN FLOOR

## GOOD NIGHT AND GOOD SELLING