

2-Step Credit Spreads (with WeeklysSM Options)

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Statistical Calculations (based on volatility)

Standard deviation

Probability of Touching

2-step approach to Credit Spreads

Results of 2012 Back Test

A Managing Strategy

Calculating 1 Standard Deviation

Converting the 1-year standard deviation:

$$\frac{\text{Underlying Price} \times \text{I.V.} \times \sqrt{\text{Days to Exp}}}{\sqrt{\text{Days per year}}}$$

SPX Index Level 1,385.00

Days to Exp 28

Implied Volatility 18%

4 weeks

$$\frac{1385.00 \times .18 \times \sqrt{28}}{\sqrt{365}} \approx 70.00$$

calendar days

1 Standard Deviation for 1 Week

Converting the 1-year standard deviation:

$$\frac{\text{Underlying Price} \times \text{I.V.} \times \sqrt{\text{Days to Exp}}}{\sqrt{\text{Days per year}}}$$

SPX Index Level 1,385.00

Days to Exp 7

Implied Volatility 18%

1 week

$$\frac{1385.00 \times .18 \times \sqrt{7}}{\sqrt{252}} \approx 41.55$$

trading days (9 calendar days)

Standard Deviations and Time

Days	28*	21*	14*	7 ^{±±}
1 Std Dev	70	60	48	41

$$7^{\pm\pm} = 35\% \text{ of } 20^{\pm\pm}$$

$$41^* = 58\% \text{ of } 70^*$$

Assumptions:

SPX	1,385
Volatility	18%
Int Rate	1%
Yield	1.9%

Weeklys have more statistical risk than monthly options.

* calendar days

^{±±} trading days

“Value” – WeeklysSM vs Monthlys

Would you rather:

SPX 1,385

Volatility 18%

Int Rate 1%

Yield 1.9%

(1) sell 1 28-day put?

(2) sell 4 7-day puts?

It depends!

<u>Strike Price</u>	<u>28-day Put</u>	<u>7-day Put</u>
1385	28.00	? 14.00
1365	18.85	? 6.00
1345	11.95	? 2.00

Probability of Touching*

Prob of touching 1 Std Dev* (up or down) **54%**

Prob of touch 1/2 Std Dev* (up or down) **99%**

Touch 1/4 Std Dev* **99%**

Touch down 1/2 after up 1/2 is touched* **22%**

Touch down 1/4 after up 1/4 is touched* **34%**

* Probability of touching any time during the period

Note: probabilities are independent of time period and level of volatility.

What are we looking for?

2-step scenarios (wait before initiating)

lower probability of having to manage or close

Better credit-to-managing probability ratio
(different than dollar risk/reward ratio)

2-Step Credit Spread Approach

1. Using Wednesday's close*,
– calculate 1/4, 1/2, and 1 Std. Dev.
2. Thurs: wait for 1/4 Std. Dev. to be touched
3. Sell “opposite” credit spread with short strike equal to original 1/2 Std. Dev.
4. Manage or close credit spread if index touches “opposite” 1/4 Std. Dev.

*Use Thurs open if it is different than Wed close

2-Step Credit Spread – Example

SPX at 1,385 Wed. close; Volatility = 18%

1. 1 Std. Dev. = 41 (1/2 = 20; 1/4 = 10)

Up 1/4 SD \approx 1,395

Dn 1/4 SD \approx 1,375 Dn 1/2 SD = 1,365

2. When SPX trades at 1,395 (Up 1/4 SD)...

3. Sell the 1365-1355 Put Spread

4. If SPX trades at 1,375 (Dn 1/4 SD),
close spread (even if this results in a loss)

Example continued – 1

	<u>Thursday</u> 9 days	<u>Monday</u> 5 days
SPX	1,385.00	1,395.00
1365 Put	7.60	2.30
1355 Put	<u>4.90</u>	<u>1.10</u>
Credit Spd	<u>2.70</u>	<u>1.20</u>
Max Risk	7.30*	8.80*

Example assumes spread is initiated for 1.20 credit.

*Commissions not included

Example continued – 2

	<u>Mon</u>	<u>Tue</u>	<u>Wed</u>	<u>Thu</u>
SPX	1,395	1,375	1,375	1,375
1365 Put	2.30	6.10	4.85	3.40
1355 Put	<u>1.10</u>	<u>3.25</u>	<u>2.25</u>	<u>1.25</u>
Credit Spd	1.20	2.85	2.60	2.15
Est. P/(L)*	Open spread	(1.65)	(1.40)	(0.95)

Losses depend on when spread is closed.

*Commissions not included

Example continued – 3

Purely by the percentages

$$66\% +1.20 \quad +1.20 \times 2 \quad = +2.40$$

$$34\% -1.40 \text{ (avg)} \quad -1.40 \times 1 \quad = \underline{-1.40}$$

$$\text{Expected profit after 3 trades:} \quad = +1.00$$

Subjective factors:

Commissions and bid-ask spreads?

Chances of a “long” losing streak?

Can you trade every week?

Can you trade better than the percentages?

Example continued – 4

Which strategy do you prefer?

#1: Credit 2.70 (Thursday, SPX @ 1,385)
50% chance of closing/adjusting

#2: Credit 1.20 (Monday, SPX @ 1,395)
34% chance of closing/adjusting

Note: time to expiration affects both
amount of credit and probability.

Example continued – 5

Estimated initial credit on different days:

	<u>Mon</u>	<u>Tue</u>	<u>Wed</u>	<u>Thu</u>
SPX	1,395	1,395	1,395	1,395
1365 Put	2.30	1.60	1.00	0.40
1355 Put	<u>1.10</u>	<u>0.70</u>	<u>0.35</u>	<u>0.10</u>
Credit Spd	1.20	0.90	0.65	0.30
Max Risk	(8.80)	(9.10)	(9.35)	(9.70)

*Commissions not included

Back Test* – 41 weeks in 2012

41 weeks – 26 expired **65%** 15 stopped out **35%**

<u>Day</u>	<u>Enter Trade</u>	<u>Stopped Out</u>
1 st Thu	28	0
1 st Fri	8	4
Mon	2	2
Tue	2	3
Wed	0	0
2 nd Thu	1	3
2 nd Fri	0	3
	total = 41	15/41 = 36%

*No attempt was made to estimate profit or loss. Initial credit and profit/loss varies based on day of trades and level of volatility. Full report data available on request.

A Managing Alternative (not closing) **CBOE**[®]

When SPX trades at 1,395 (up 1/4 SD)
sell **2** 1365-1355 put credit spreads

Managing:

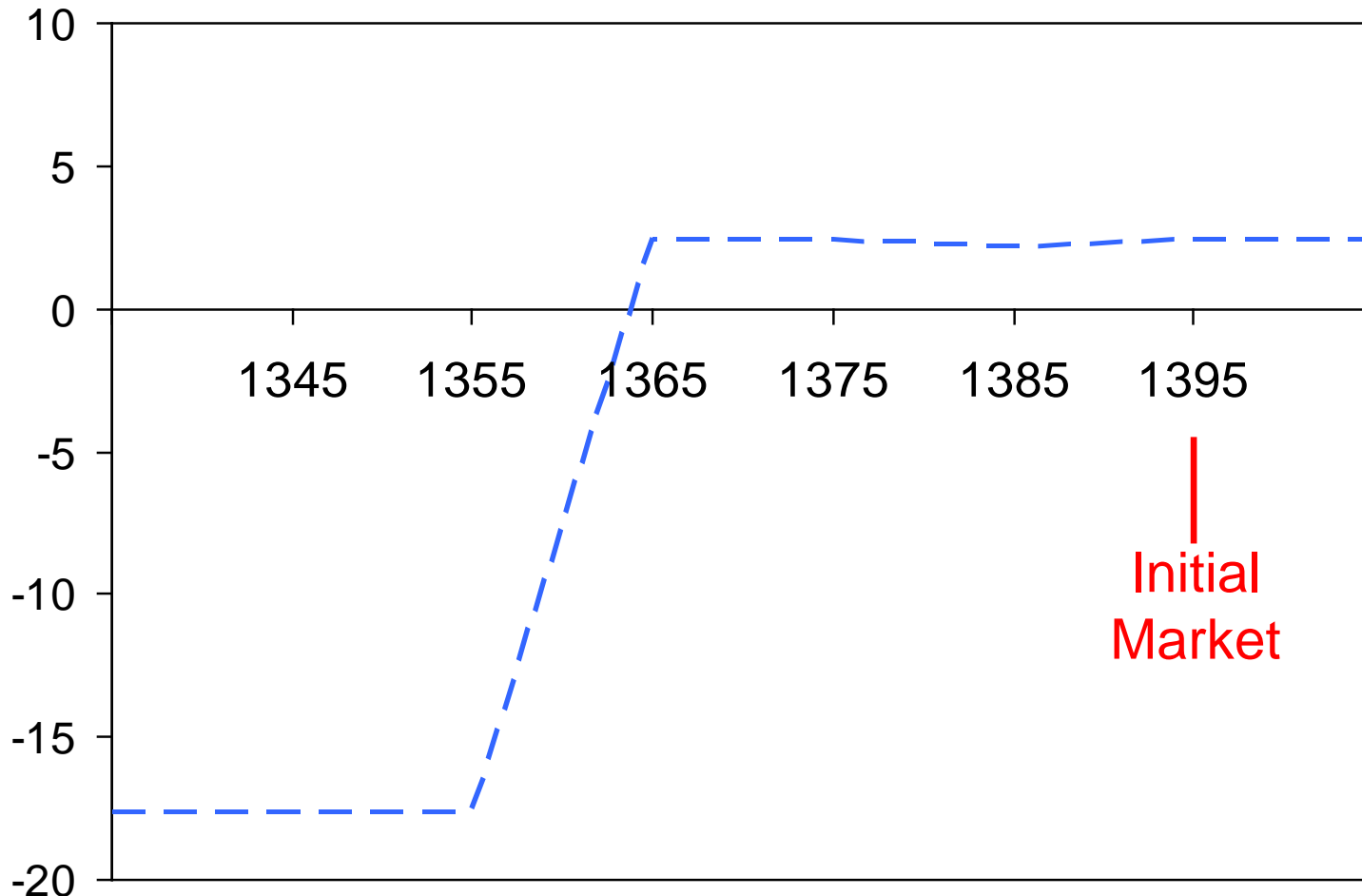
When SPX gets to 1,375 (down 1/4 SD).....
buy **1** 1375-1355 put debit spread

Result:

Long 1 1375-1365-1355 put butterfly spread

Initial 5 Credit Spreads

-2 1365 Puts @ 2.30 ea. }
+2 1355 Puts @ 1.10 ea. } Net Credit 1.20 each
x 2 = 2.40 total credit

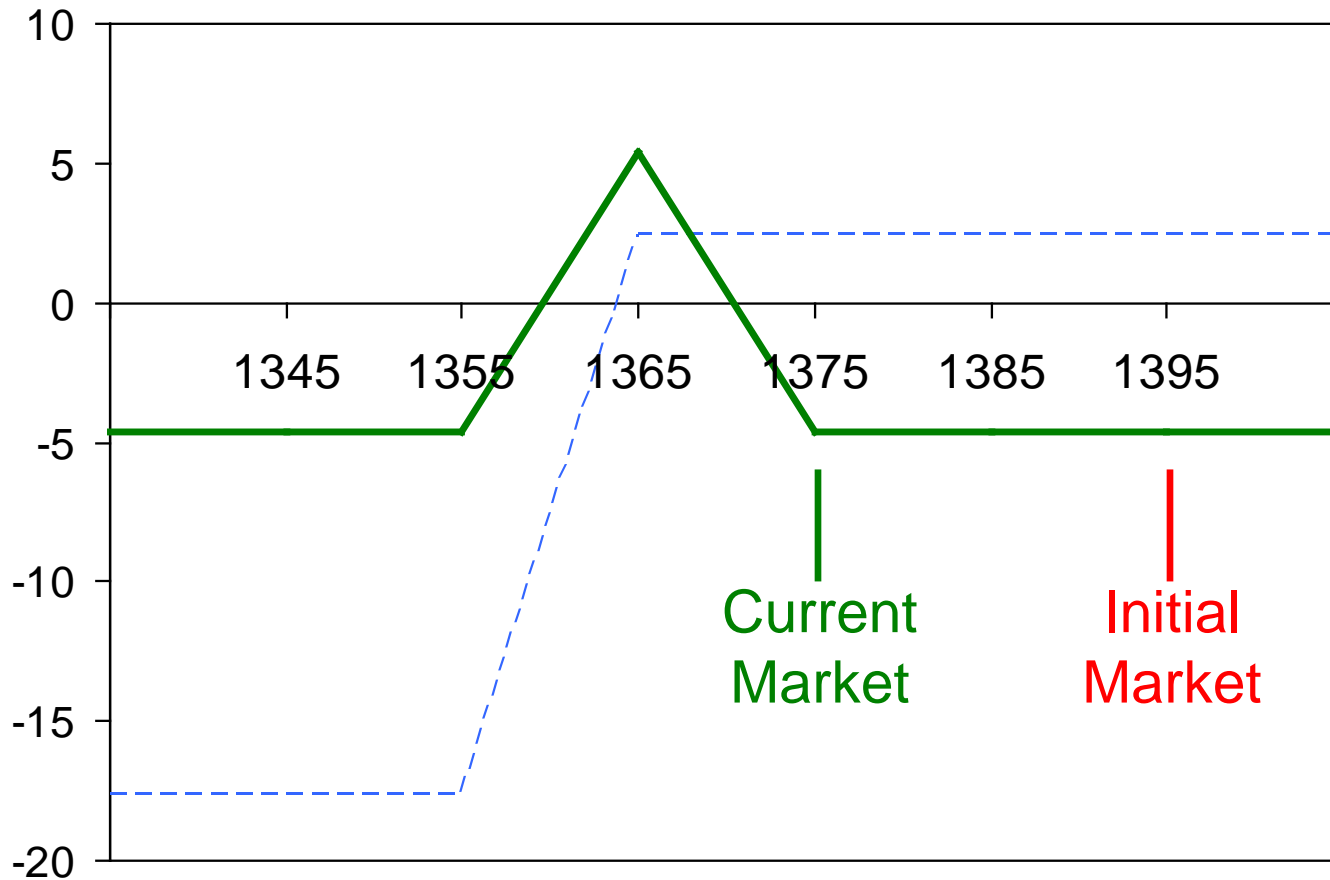


1st Adjustment – SPX @ 1,375 on Tues

-2 1365 Put @ 2.30
+2 1355 Put @ 1.10

+1 1375 Put @ 10.00
-1 1355 Put @ 3.00

+1 1375 Put
-2 1365 Puts Net Debit
+1 1355 Put (4.60)



Decisions:

Initiate on Thurs – Higher credit
Higher chance of adjusting

Wait to initiate - Lower credit
Lower chance of adjusting

Use a market forecast or rely on statistics?

What “distance” to use? (1/4 or 1/2 Std Dev)

Do you have the necessary discipline to
“cut your losses”?

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