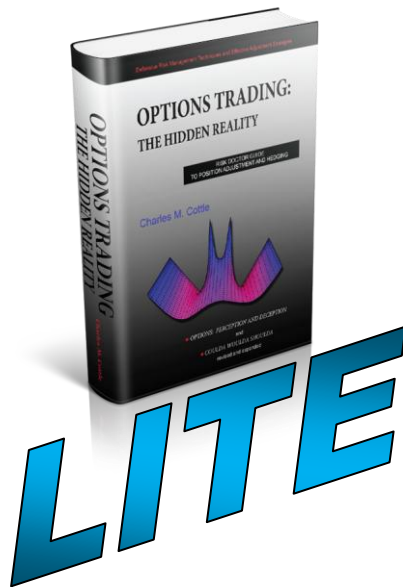


Options Trading: The Hidden Reality *LITE* *5 Part Training Course*

Part 3



By
Charles M. Cottle
RiskDoctor.com

Risk Doctor Answer Key for Part 2

1. Answer: A & D Analyzers are cool and the coolest I have ever used does it in 3D but tools like Position Dissection help to quickly assess the real risk in a position.
2. There are four basic properties:
 - 1) The synthetic of a *single* component in CUP always contains the other *two* components. Conversely, if there are *two* components in CUP, then the synthetic is the remaining *one* (**long** or **short**)
 - 2) What is the premium consideration? The time decay aspect (positive or negative) will remain the same, i.e. if the position has *positive (negative) time decay*, then the synthetic must also have *positive (negative) time decay*.
 - 3) If the position has *no* time decay, i.e. long an option and short an option then the synthetic position has *no* time decay. Simply use the sign of **C** to determine the sign of **U**. i.e., **-C+P=-U** and **+C-P=+U**
 - 4) What about the sign of the Underlying? When the call is with the underlying, on the same side of the (=), the sign of the *Underlying* position will always be the opposite sign of the *Call*, i.e., **+C-U=+P** and **-C+U=-P**. The *Put* and the *Underlying* are always the same sign; both long (+)(+) or short(-)(-), when on the same side of the (=).i.e., **+P+U=+C** and **-P-U=-C**.

Position = Synthetic Equivalent

1) +P	=	<u>+C-U</u>
2) -U +C	=	<u>+P</u>
3) +C	=	<u>+P+U</u>
4) -U -P	=	<u>-C</u>
5) -U	=	<u>-C+P</u>
6) -C +P	=	<u>-U</u>
7) +C -U	=	<u>+P</u>
8) +P +U	=	<u>+C</u>
9) +C	=	<u>+P+U</u>
10) +U -C	=	<u>-P</u>
11) -P	=	<u>-C+U</u>
12) -P +C	=	<u>+U</u>

Position = Synthetic Equivalent

13) -C	=	<u>-P-U</u>
14) +C -P	=	<u>+U</u>
15) +U	=	<u>+C-P</u>
16) -C +U	=	<u>-P</u>
17) -C	=	<u>-P-U</u>
18) +P -C	=	<u>-U</u>
19) -U	=	<u>-C+P</u>
20) -P	=	<u>-C+U</u>
21) -P -U	=	<u>-C</u>
22) +U	=	<u>+C-P</u>
23) +P	=	<u>+C-U</u>
24) +U +P	=	<u>+C</u>

Risk Doctor Answers for Part 2

3.

	Calls	Und	Puts	nC	nP		Calls	Und	Puts	nC	nP		Calls	Und	Puts	nC	nP
Original	+17	(300)		14	3	Original	(14)	(1000)		(24)	10	Original	+22	+2000		42	(20)
Syn 1:		+1400	+17	14	3	Syn 1:		(2400)	(14)	(24)	10	Syn 1:		+4200	+22	42	(20)
Syn 2:	+14		+3	14	3	Syn 2:	(24)		10	(24)	10	Syn 2:	+42		(20)	42	(20)
Syn 1:	+13	0		13	0	Syn 1:	(33)	+1500		(18)	(15)	Syn 1:	(5)	+1000		5	(10)
Original		+1300	+13	13	0	Original		(1800)	(33)	(18)	(15)	Original		+500	(5)	5	(10)
Syn 2:	+13		0	13	0	Syn 2:	(18)		(15)	(18)	(15)	Syn 2:	+5		(10)	5	(10)
Syn 1:	+34	(17)		17	17	Syn 1:	+77	(3300)		44	33	Syn 1:	+28	(600)		22	6
Syn 2:		+1700	+34	17	17	Syn 2:		+4400	+77	44	33	Syn 2:		+2200	+28	22	6
Original	+17		+17	17	17	Original	+44		+33	44	33	Original	+22		6	22	6

Do any of these positions make sense? Some do and some don't.

What was important in these exercises was to solidify your understanding of synthetics at one strike.

Ready for more strikes or are you ready to go on strike?

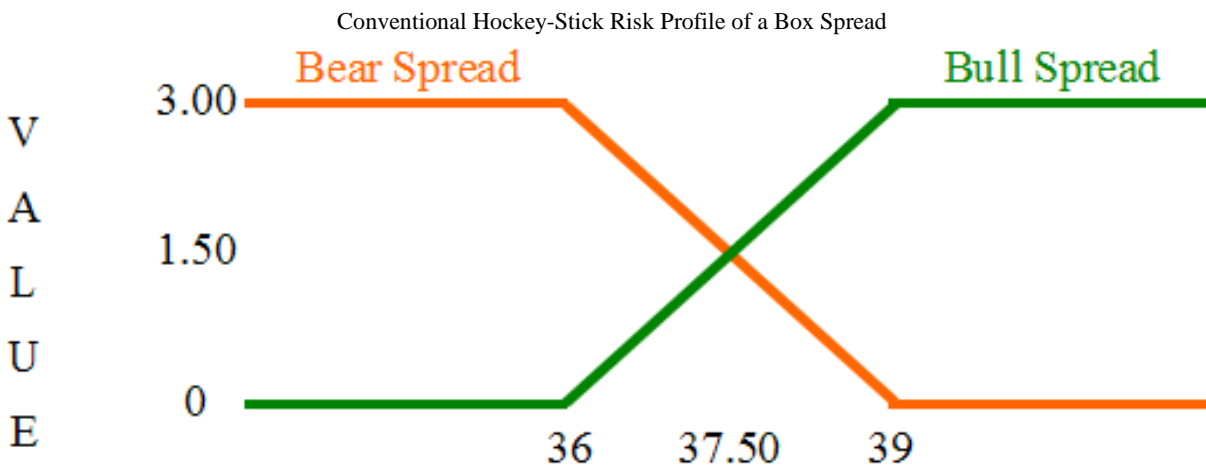
Part 3

BoxTool: Using the BoxTool is basically taking out a conversion at one strike and a reversal at the other, without the underlying positions that would offset each other. Once one of these locked positions is removed from the position, we can then see a new position. The C/R and box positions are referred to as zero-sum spreads, meaning they are basically flat. Remember the exercise from the “Preface”.

Exercise: (From the Preface) What amount of money is the most one can lose with 10*36 Calls bought at 1.70 and 10*39 Puts bought at 1.90, making a total investment of \$3600 ($10 \times (1.70 + 1.90) \times 100$ shares)? Why is the answer only \$600?

Exhibit 1–9 shows the conventional approach to demonstrating the expiration value of a box and it is difficult to understand merging hockey-stick graphs in order to assess risk. Imagine the confusion when positions with more strikes and different ratios are introduced. Learning the dissection methods presented in this book will be a little unusual at first, but can soon become second nature, with a little practice.

EXHIBIT 1 – 9

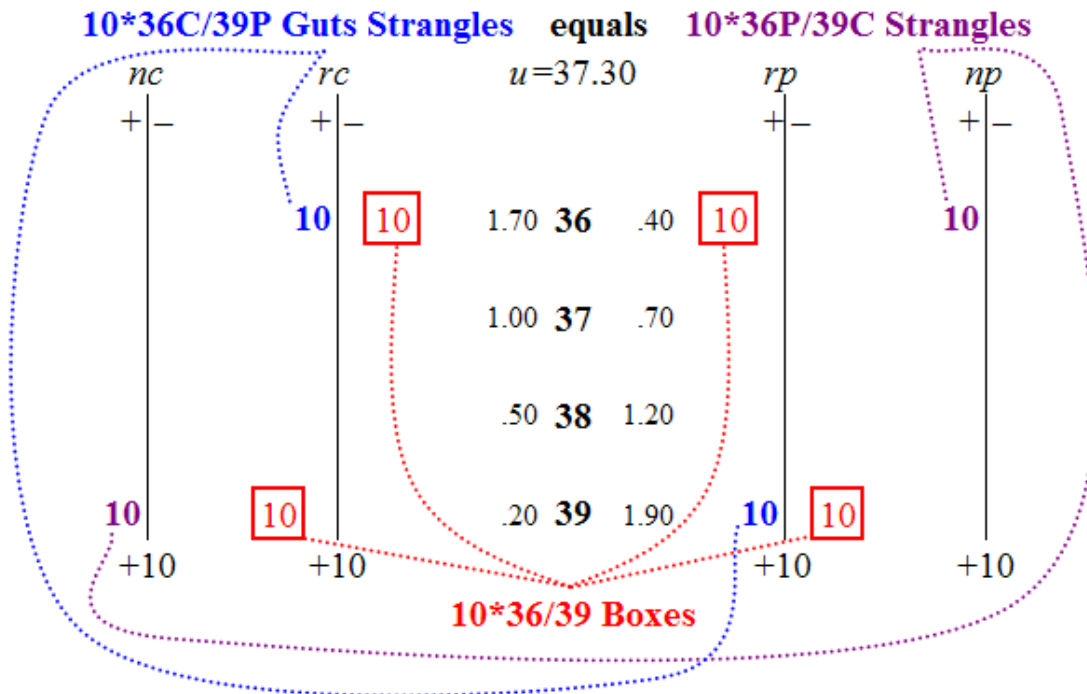


To demonstrate the answer, alter the view of the Raw Position (see Exhibit 1–10): 10*36C/39P Guts Strangles going for 3.60 by applying **10 Short 3.00 Boxes using the BoxTool (+10 36/39 Boxes are embedded in the position).**

One can much more easily answer a new question, and this time get it right: **What amount of money is the most one can lose with 10*36 Puts bought at .40 and 10*39 Calls bought at .20, making a total investment of \$600 ($10 \times (.40 + .20) \times 100$ shares)?** The minimum value for this position is not “zero” as human nature forces us to believe. Rather it is \$3000 ($10 \times 3.00 \times 100$ shares). The 3.00 Box will hold that value all the way to expiration.

EXHIBIT 1 – 10

10*36C/39P Guts Strangles is Synthetically Equivalent to 10*36P/39C Strangles
Because it Contains 10 Embedded 36/39 Box Spreads



SYNTHETIC ALTERNATIVES

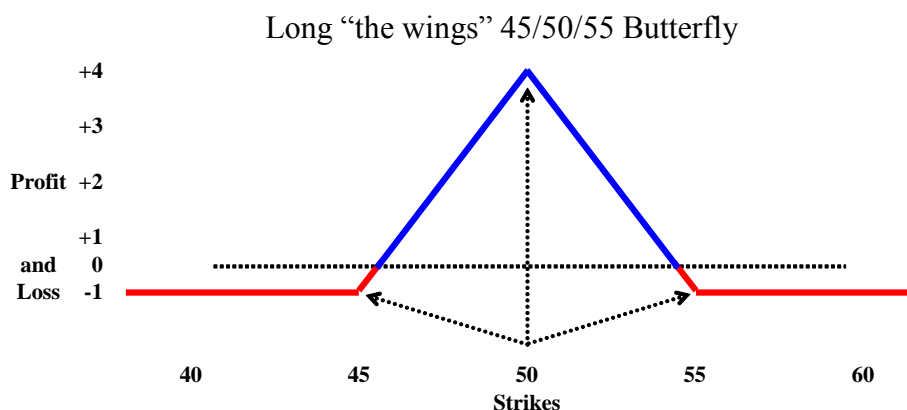
This area includes many of the typical theoretical “hockey-stick” graphs (risk profiles) presented in the pamphlets put out by exchanges, banks, and brokerage houses, and in other books on options, as well as on many web sites. A good one can be found at The Options Institute (<http://oic.anobi.net/basics/module.htm>). If you are still challenged by the basics, stop reading and come back to this point when you are ready. This book will be patiently waiting. Rather than reinvent the wheel, the following hockey stick graphs in this chapter are provided as a reference for the synthetics that apply to them. The vertical-axis represents the potential profit and loss as the underlying price changes along the horizontal-axis. The horizontal dashed line in each profile represents the break-even level. There is profit in the region above and loss in the region below the line. It should be made clear that when discussing a position, like long a 50 call it can refer to the risk profile of one of two positions: a long 50 call (+50c), or a spread combination of long underlying and a long 50 put (+ u / +50p). Both positions are virtually identical and have the same risk profile.

There are many ways to skin a butterfly and 10 examples will be demonstrated here. But why now? Why discuss advanced strategies here at this early of a stage before understanding perhaps a lot more first? So many people, when first introduced to options, go off half-cocked and ready to fire, but what they do is set fire to their wealth. Perhaps this preview will keep the fires contained.

Examine **Long** 10*50 butterfly¹ or +10*45/50/55 butterfly, meaning that the position is +1*45 / -2*50 / +1*55 butterfly, 10 times. Details of whether it is a *call* butterfly or *put* butterfly or *iron*² butterfly are not specified because they all have the same basic expiration [butterfly risk profile](#) as shown in Exhibit 1-11.

This, ‘long the wings’, butterfly risk profile can result from an infinite amount of contract combinations. What follows is a list of 10 examples of long “the wings” 45/50/55 butterfly, 10 times.

EXHIBIT 1 – 11



In each case the 45s and 55s (the wings) are long while the 50s (the body) are short. The first 4 are the most common and are usually executed as 2 vertical³ spreads. The next 3 positions could have started off as long stock and later been hedged off with a married put⁴.

Further trades would then have resulted in the long butterflies. The last 3 are example positions that could have started off with bullish long calls (in bold italics) and

¹ **Butterfly Risk Profile**

The various butterfly risk profiles (call, put, and iron), though slightly different due to exercise and other market nuances, are for all intents and purposes the same.

² **‘Long the Wings’ Iron Butterfly**

Commonly referred to as a “Short” Iron owing to the fact that its value is a credit, money received but the wings are long and the body is short. Any butterfly that is ‘long the wings’ or outer strikes aims to profit when the underlying remains close to the middle strike.

³ **Vertical Spreads**

A bull spread and a bear spread

⁴ **Married Put**

A long put that goes with long stock creates a hedge. The whole package emulates a long call (see long call diagram on p.19).

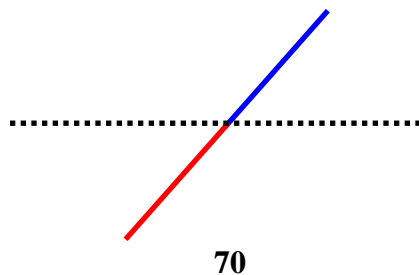
subsequently turned into bearish long puts by shorting the stock (also in bold italics). Again, further trades would then have resulted in the long butterflies.

1.	+10*45c /	-20*50c	/ +10*55c	Call Butterfly
2.	+10*45p /	-20*50p	/ +10*55p	Put Butterfly
3.	+10*45p /	-10*50p / -10*50c	/ +10*55c	Iron Butterfly
4.	+10*45c /	-10*50c / -10*50p	/ +10*55p	Gut Iron Butterfly
5.	+10*45p /	-20*50c	/ +10*55c / +1000*u	Call Butterfly using <i>Syn 45c</i>
6.	+10*45p /	-20*50c	/ +10*55p / +2000*u	Put Butterfly using <i>Syn 50p</i>
7.	+10*45c /	-20*50c	/ +10*55p / +1000*u	Call Butterfly using <i>Syn 55c</i>
8.	+10*45c /	-20*50p	/ +10*55p / -1000*u	Put Butterfly using <i>Syn 45p</i>
9.	+10*45c /	-20*50p	/ +10*55c / -2000*u	Call Butterfly using <i>Syn 50c</i>
10.	+10*45p /	-20*50p	/ +10*55c / -1000*u	Put Butterfly using <i>Syn 55p</i>

The following is a compilation of common expiration risk profiles, and associated synthetics (alternative configurations⁵) in parenthesis. **NOTE:** a credit (position generating cash proceeds) is **NOT** better than a debit (position generating a cash payout). Often a credit increases overtime when it intuitively seems that time decay will make it decrease.

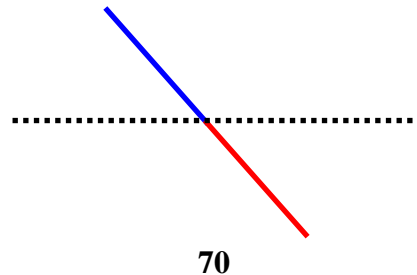
THE RISK PROFILES

Long Underlying



Long Underlying (+u)
Long 70 Combo
(Long 70 Call / Short 70 Put) (+70c / -70p)

Short Underlying

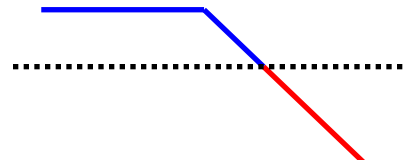


Short Underlying (-u)
Short 70 Combo
(Short 70 Call / Long 70 Put) (-70c / +70p)

Long Call



Short Call



⁵ Common Alternative Configurations

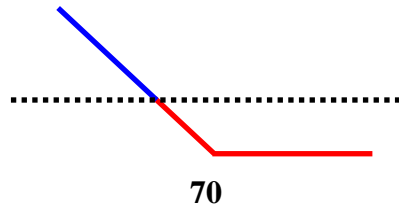
Examples involving one strike will use the 70 strike. Obviously, what works for the 70 strike also works for the 75, 80, 85, and 90 strikes.

Examples involving two strikes will use the 70 / 75 strikes. What works for the 70 / 75 strikes also works for the 75 / 80, 80 / 85, 85 / 90, as well as the skip "one" strike relationships, namely the 70 / 80, 75 / 85, 80 / 90. It is perhaps necessary to mention that it also works for skip "two" and "three" strike relationships, etc. Examples involving three strikes will use the 70 / 75 / 80 strikes. Examples involving four strikes will use the 70 / 75 / 80 / 85 strikes. Examples involving five strikes will use the 70 / 75 / 80 / 85 / 90 strikes.

70

Long 70 Call (+70c)
Long 70 Put / Long Underlying (+70p / +u)
 "Married Put"

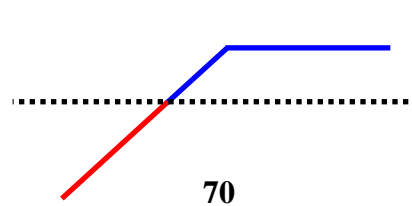
Long Put



70

Short 70 Call (-70c)
Short 70 Put / Short Underlying (-70p / -u)

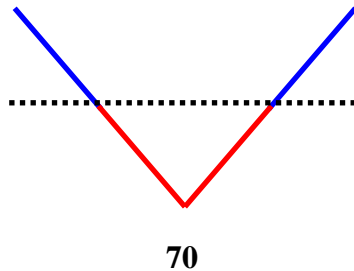
Short Put



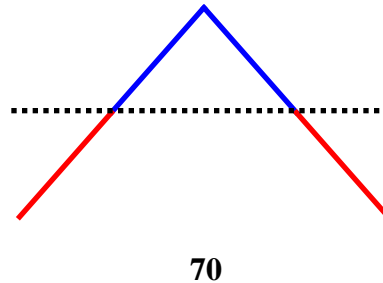
Long 70 Put (+70p)
Long 70 Call / Short Underlying (+70c / -u)

Short 70 Put (-70p)
Short 70 Call / Long Underlying (-70c / +u)
 "Covered Write" or "Buy-Write"

Long Straddle



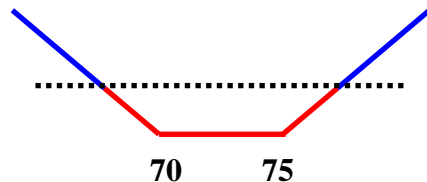
Short Straddle



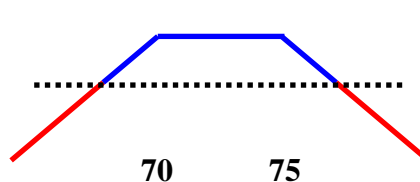
Long 70 Straddle
Long 70 Call / Long 70 Put (+70c / +70p)
Long 2*70 Calls / Short Underlying
 (+2*70c / -u)
Long 2*70 Puts / Long Underlying
 (+2*70p / +u)

Short 70 Straddle
Short 70 Call / Short 70 Put (-70c / -70p)
Short 2*70 Calls / Long Underlying
 (-2*70c / +u)
Short 2*70 Puts / Short Underlying
 (-2*70p / -u)

Long Strangle



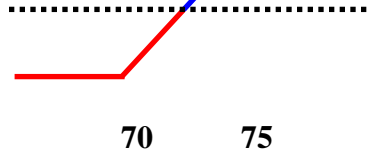
Short Strangle



Long 70/75 Strangle
Long 70s and Long 75s
Long 70 Put / Long 75 Call (+70p / +75c)
Long "Guts" Strangle
Long 70 Call / Long 75 Put (+70c / +75p)

Short 70/75 Strangle
Short 70s and Short 75s
Short 70 Put / Short 75 Call (-70p / -75c)
Short "Guts" Strangle
Short 70 Call / Short 75 Put (-70c / -75p)

Bull Spread



70/75 'Bull Spread'

Each has Long 70s and Short 75s

Long "Call Spread" or Long Call "Vertical"

Long 70 Call / Short 75 Call (+70c / -75c)

Short "Put Spread" or Short Put "Vertical"

Long 70 Put / Short 75 Put (+70p / -75p)

"Bull Collar"

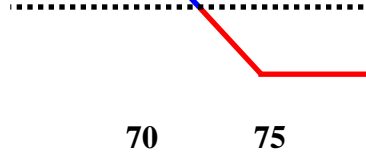
Long Underlying / Long 70p / Short 75c

(+u / +70p / -75c)

Short Underlying / Long 70c / Short 75p

(-u / +70c / -75p)

Bear Spread



70/75 'Bear Spread'

Each has Short 70s and Long 75s

Short "Call Spread" or Short Call "Vertical"

Short 70 Call / Long 75 Call (-70c / +75c)

Long "Put Spread" or Long Put "Vertical"

Short 70 Put / Long 75 Put (-70p / +75p)

"Bear Collar"

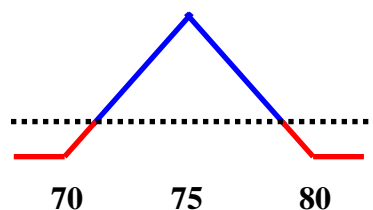
Long Underlying / Short 70c / Long 75p

(+u / -70c / +75p)

Short Underlying / Short 70p / Long 75c

(-u / -70p / +75c)

Long “the Wings” Butterfly



Long 75 Butterfly

Long 70s, Short 75s, Long 80s

Long “Call” Butterfly

*Long 70 Call / Short 2*75 Calls /*

Long 80 Call

*(+70c / -2*75c / +80c)*

Long “Put” Butterfly

*Long 70 Put / Short 2*75 Puts*

Long 80 Put

*(+70p / -2*75p / +80p)*

Short “Iron” Butterfly**

Long 70 Put / Short 75 Put /

Short 75 Call / Long 80 Call

(+70p / -75p / -75c / +80c)

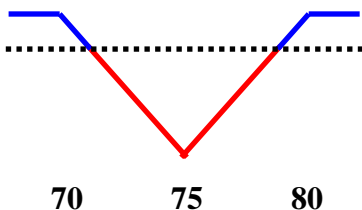
Long “Gut Iron” Butterfly

Long 70 Call / Short 75 Put /

Short 75 Call / Long 80 Put

(+70c / -75c / -75p / +80p)

Short “the Wings” Butterfly



Short 75 Butterfly

Short 70s, Long 75s, Short 80s

Short “Call” Butterfly

*Short 70 Call / Long 2*75 Calls /*

Short 80 Call

*(-70c / +2*75c / -80c)*

Short “Put” Butterfly

*Short 70 Put / Long 2*75 Puts /*

Short 80 / Put

*(-70p / +2*75p / -80p)*

Long “Iron” Butterfly**

Short 70 Put / Long 75 Put /

Long 75 Call / Short 80 Call

(-70p / +75p / +75c / -80c)

Short “Gut Iron” Butterfly

Short 70 Call / Long 75 Put /

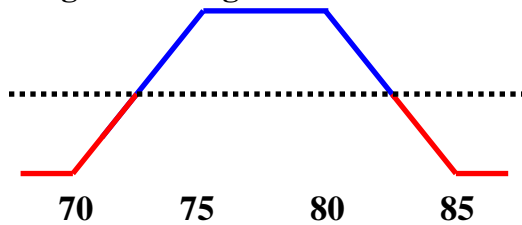
Long 75 Call / Short 80 Put

(-70c / +75c / +75p / -80p)

**** Short Iron vs. Long Iron**

Most traders refer to Irons as “short” when short the body and long the wings because the spread generates a credit but the risk profile is that of a long “the wings” butterfly. The opposite is true for long iron.

Long “the Wings” Condor



Long 70/75/80/85 Condor

Long 70s, Short 75s, Short 80s, Long 85s

Long “Call” Condor

Long 70 Call / Short 75 Call /
Short 80 Call / Long 85 Call
(+70c / -75c / -80c / +85c)

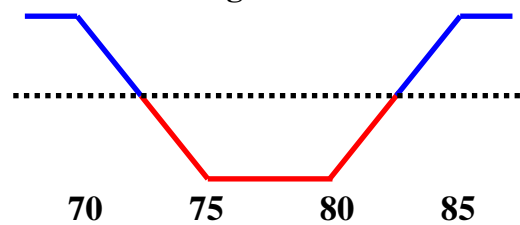
Long “Put” Condor

Long 70 Put / Short 75 Puts /
Short 80 Put / Long 85 Put
(+70p / -75p / -80p / +85p)

Short “Iron” Condor**

Long 70 Put / Short 75 Put /
Short 80 Call / Long 85 Call
(+70p / -75p / -80c / +85c)

Short “the Wings” Condor



Short 70/75/80/85 Condor

Short 70s, Long 75s, Long 80s, Short 85s

Short “Call” Condor

Short 70 Call / Long 75 Call /
Long 80 Call / Short 85 Call
(-70c / +75c / +80c / -85c)

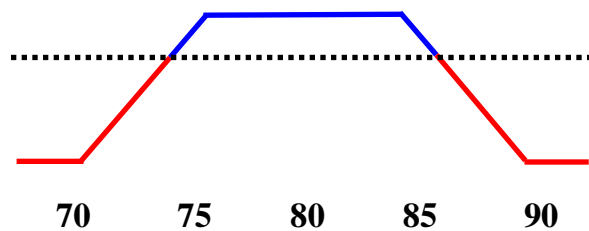
Short “Put” Condor

Short 70 Put / Long 75 Puts /
Long 80 Put / Short 85 Put
(-70p / +75p / +80p / -85p)

Long “Iron” Condor**

Short 70 Put / Long 75 Put /
Long 80 Call / Short 85 Call
(-70p / +75p / +80c / -85c)

Long “Stretched-Out”⁶ Condor



Long 70/75/85/90 Condor

Long 70s, Short 75s, Short 85s, Long 90s

Long “Call” Condor

Long 70 Call / Short 75 Call /
Short 85 Call / Long 90 Call
(+70c / -75c / -85c / +90c)

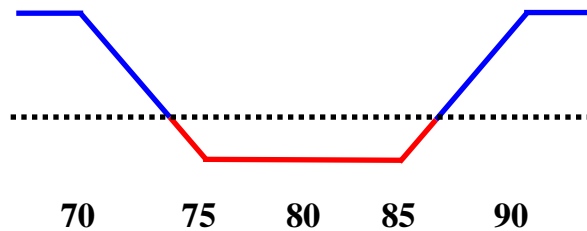
Long “Put” Condor

Long 70 Put / Short 75 Put /
Short 85 Put / Long 90 Put
(+70p / -75p / -85p / +90p)

Short “Iron” Condor**

Long 70 Put / Short 75 Put /
Short 85 Call / Long 90 Call
Call (+70p / -75p / -85c / +90c)

Short “Stretched-Out” Condor



Short 70/75/85/90 Condor

Short 70s, Long 75s, Long 85s, Short 90s

Short “Call” Condor

Short 70 Call / Long 75 Call /
Long 85 Call / Short 90 Call
(-70c / +75c / +85c / -90c)

Short “Put” Condor

Short 70 Put / Long 75 Put /
Long 85 Put / Short 90 Put
(-70p / +75p / +85p / -90p)

Long “Iron” Condor**

Short 70 Put / Long 75 Put /
Long 85 Call / Short 90
(-70p / +75p / +85c / -90c)

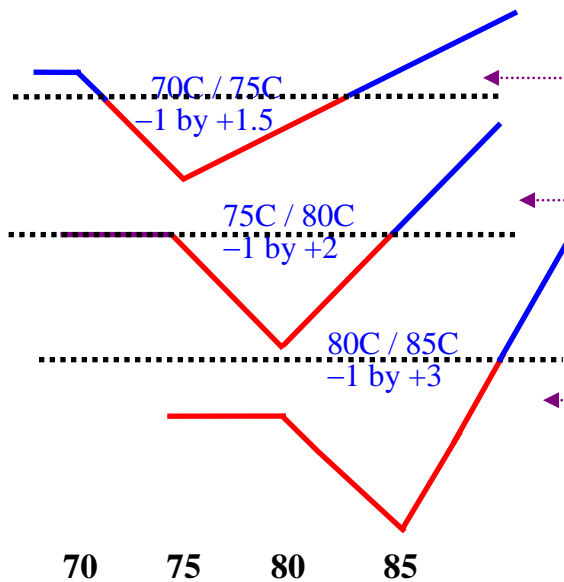
** **Short Iron vs. Long Iron**

See Explanation for Irons on the bottom of the previous page.

⁶ “Stretched Out” Condor

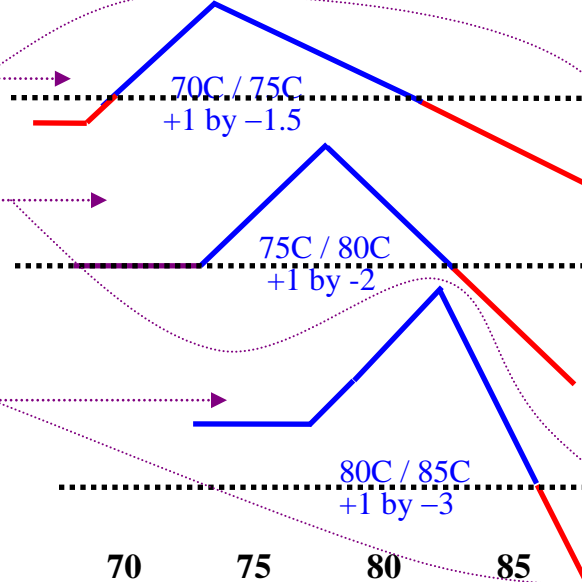
The most common Condors cover a range of 4 strikes but a Stretched Out covers a range of 5 strikes or more. A condor is a bull spread against a bear spread so stretching the distance between the verticals stretches the condor to cover a wider range of strikes.

Call Back Spread***



“Call Back (LongMore) Spread”
Short the lower strike, Long a greater quantity of the higher strike options
 (- Lower K c / + More Higher K c)

Call Ratio Spread***



“Call Ratio (ShortMore) Spread”
Long the lower strike, Short a greater quantity of the higher strike options
 (+ Lower K c / - More Higher K c)

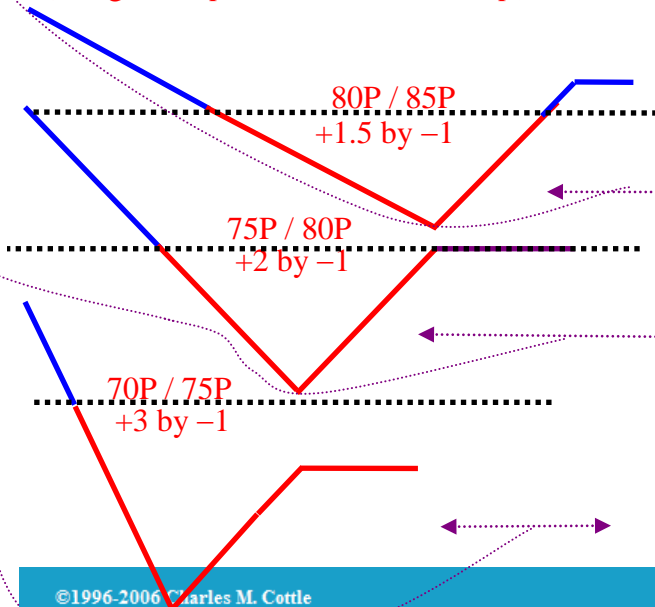
***The top ratio spread profile (opposite for the back spread) represents the **70C/75C (80P/85P)** spread with a ratio of 1:1.5 (1/ 1.5) and selling less than 2 for each 1 bought (in this scenario) generates a debit but has less risky unlimited exposure.

The middle ratio spread profile (opposite for the back spread) represents the **75C/80C (75P/80P)** spread with a ratio of 1:2 (1/2) and assumes the spread was executed at an even money (no debit or credit) cost represented by the left part of the spread profile being equal to and overlapping the dashed zero profit and loss line.

The bottom ratio spread profile (opposite for the back spread) represents the **80C/85C (70P/75P)** spread with a ratio of 1:3 (1/ 3) generates a credit but has more risky unlimited exposure.

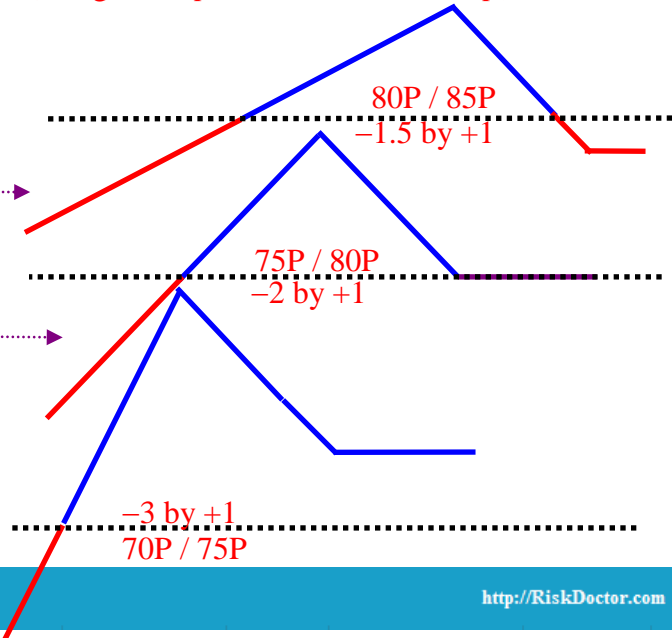
Put Back Spread**

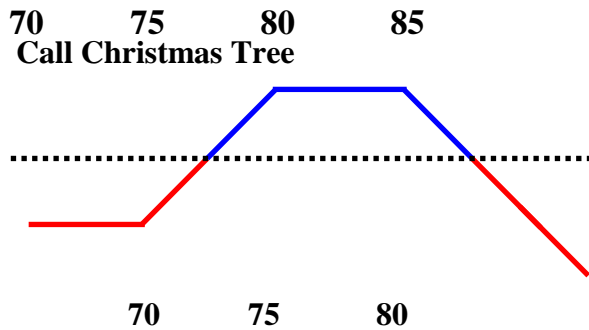
“Put Back (LongMore) Spread”
Short the higher strike, Long a greater quantity of the lower strike options
 (-Higher K p / + More Lower K p)



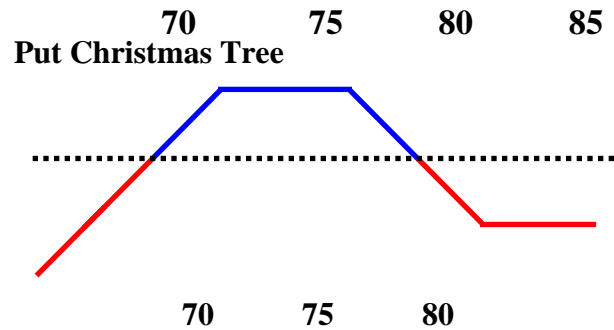
Put Ratio Spread**

“Put Ratio (ShortMore) Spread”
Long the higher strike, Short a greater quantity of the lower strike options
 (+Higher K p / - More Lower K p)



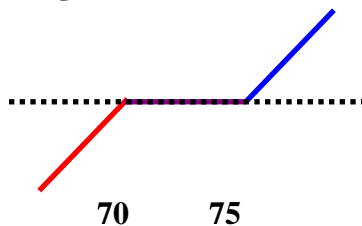


Long Call Christmas Tree
Long 70s, Short 75s, Short 80s
Long 70 Call / Short 75 Call / Short 80 Call
 (+70c / -75c / -80c)

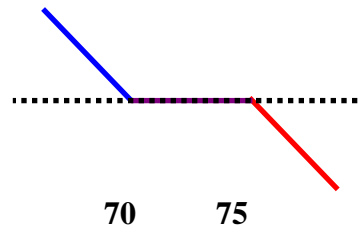


Long Put Christmas Tree
Short 70s, Short 75s, Long 80s
Short 70 Put / Short 75 Put / Long 80 Put
 (-70p / -75p / +80p)

Long Semi Future or Semi Stock Short Semi Future or Semi Stock

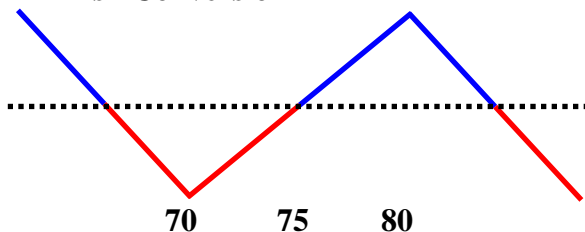


Long "SemiStock" or "SemiFuture"
Short 70s and Long 75s
Short 70 Put / Long 75 Call (-70p / +75c)
Long Underlying / -70 / +75 Bear Spread
 (both c or both p)



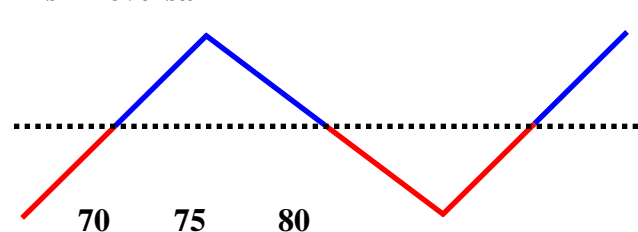
Short "SemiStock" or "SemiFuture"
Long 70s and Short 75s
Long 70 Put / Short 75 Call (+70p / -75c)
Short Underlying / +70 / -75 Bull Spread
 (both c or both p)

Risk Conversion



"Risk" Conversion
Long 70s and Short 80s
Long some 70 Puts / Short equal amount
of 75 Calls / Long an appropriate amount
of Underlying in order to be Delta Neutral
 $-X*75c / +u$ [Delta Neutral]
Bull Spread / Short Underlying
 (Delta Neutral)
 (+70s / -80s / +u) both c or both p
 (Delta Neutral)

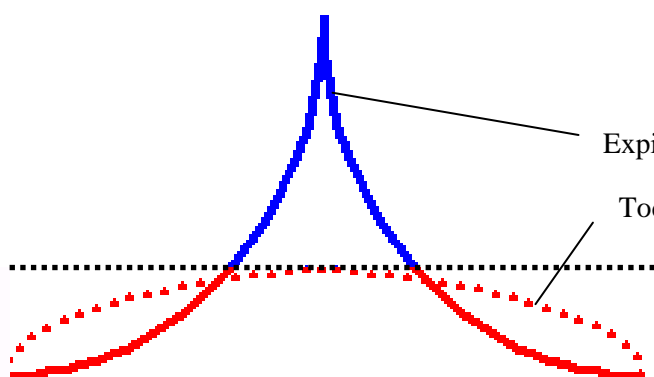
Risk Reversal



"Risk" Reversal
Short 70s and Long 80s
Short some 70 Puts / Long equal amount
of 75 Calls / Short an appropriate amount
of Underlying in order to be Delta Neutral
 $+X*70p / -X*75c / -u$ [Delta Neutral]
Bear Spread / Long Underlying
 (Delta Neutral)
 (-70s / +80s / -u) both c or both p
 (Delta Neutral)

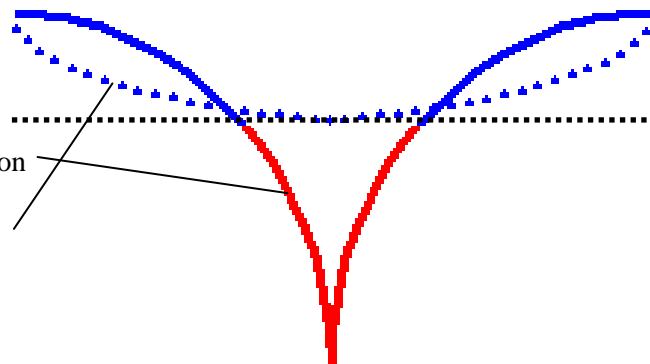
OTHER RISK PROFILES

Long Calendar Spread
Long Time (Serial)∞ Spread



10
Long “Time Spread” (Delivery for same underlying)
Long “Calendar∞ Spread” (Delivery for month futures contract)
Long Far Month 70s, Short Near Month 70s (Both Calls or Both Puts)
Long Far 70 Call / Short Near 70 Call
(+Far Month 70c / -Near Month 70c)
Long Far Month 70 Put / Short Near Month 70 Put
(+Far Month 70p / -Near Month 70p)

Short Calendar Spread
Short Time (Serial)∞ Spread



70
Short “Time Spread” (Delivery for same underlying)
Short “Calendar∞ Spread” (Delivery for different month futures contract)
Short Far Month 70s, Long Near Month 70s (Both Calls or Both Puts)
Short Far 70 Call / Long Near 70 Call
(-Far Month 70c / +Near Month 70c)
Short Far Month 70 Put / Long Near Month 70 Put
(-Far 70p / +Near 70p)

There are a variety of inter-month spreads that combine the attributes of calendars and the common spread strategies already mentioned;

A “Diagonal Spread,” which can be extremely versatile as far as profiles go, acts like a vertical and a calendar spread that have been merged.

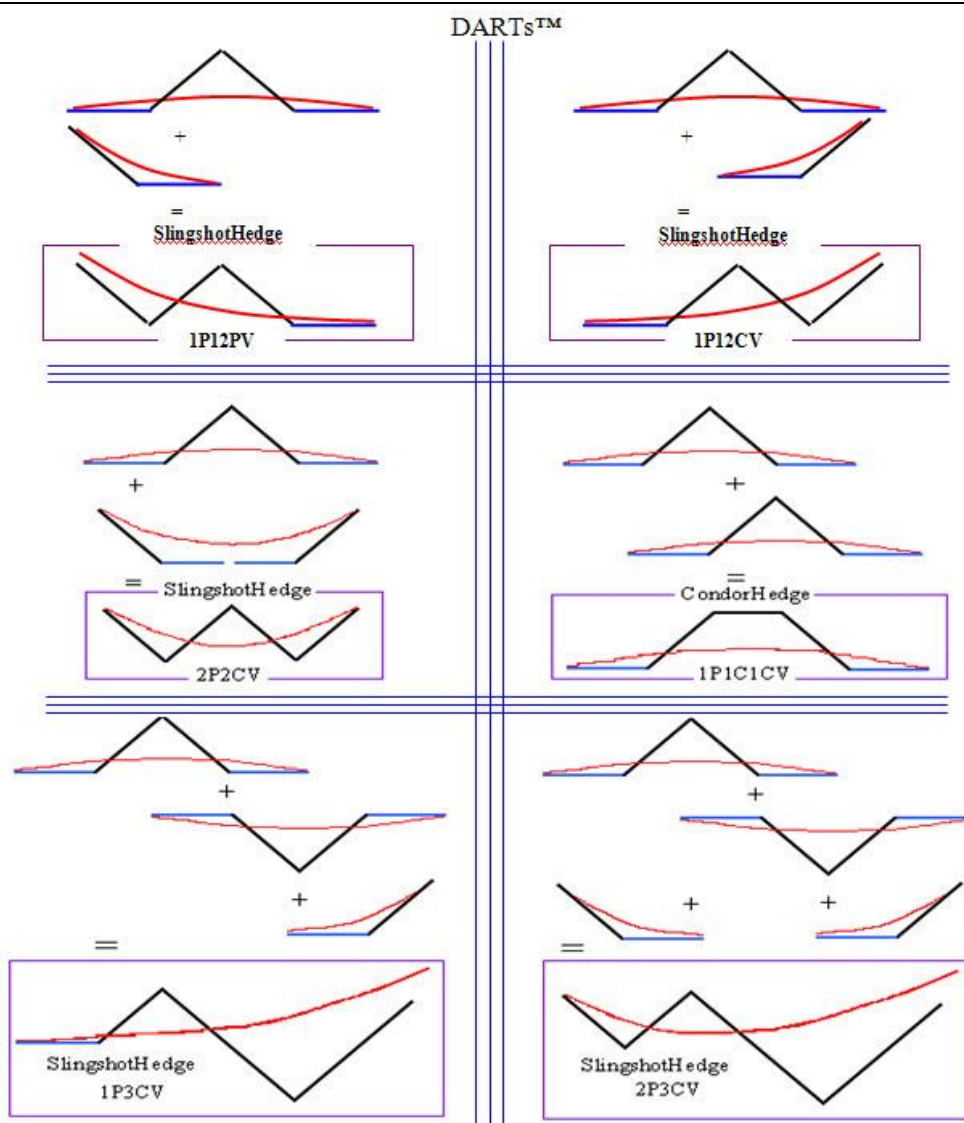
A “Double Diagonal” also known as a Straddle Strangle Swap or a Calendarized Iron Butterfly or Calendarized Iron Condor usually involves a straddle or strangle short in the nearer term options and long further dated, further away strikes as outside (less time decay) strangles. There are also ratioed butterflies and condors as well as Slingshot variations that behave like butterflies and condors with extra wings.

∞ Calendar Spreads Synonymous with Time Spreads

These days, the terms calendar spread and time spreads are often used interchangeably or synonymously and describe the same strategy but in the past there was a difference. Be careful that an options on futures calendar spread has intermonth spread risk (could represent different crop years in grains, for example, that can move in opposite directions because when the options are exercised, each delivers a different futures contract. Serial refers to options deliverable to the same futures contract.

The most exciting thing about options is that any Options Only Strategy (OOs) can be emulated by an Advanced Hybrid Hedge Strategy (AHHs). The strategy profiles pictured below, in Exhibit 1-12, are just a few of the over 1000 patent pending DARTs™ (Dynamic Adjustable Risk Transactions) that offer a vast array of underlying hedge opportunities that, at present have to be legged into, but someday can be filled in a single click (electronic transaction) of the mouse.

EXHIBIT 1-12



**Congratulations! You've completed the Coursework.
Take a break today, and complete the exercises tomorrow.
On Part 5 I'll show you a case study on how it all comes
together!**