Chicago Mercantile Exchange

STRATEGY
FUTURES & OPTIONS
GUIDE

Introduction

Using futures and options, whether separately or in combination, can offer countless trading opportunities. The 21 strategies in this publication are not intended to provide a complete guide to every possible trading strategy, but rather a starting point. Whether the contents will prove to be the best strategies and follow-up steps for you will depend on your knowledge of the market, your risk-carrying ability and your trading objectives.

Interested in learning more about futures? The Chicago Mercantile Exchange® (CME®) Education Department offers a full range of courses and seminars designed to meet your needs, whether you're still learning the basics or looking for advanced instruction in options strategies or technical analysis. Courses are offered in classrooms at the Exchange as well as online. Please visit the Education section of the CME Web site, www.cme.com, to see current educational offerings and upcoming class schedules. You may also call the Education Department at 312-930-6937or e-mail us at edu@cme.com.

How to Use This Guide

This publication was designed, not as a complete guide to every possible scenario, but rather as an easy-to-use manual that suggests possible trading strategies. One way to use it effectively is to follow these simple steps:

1. Determine Your Market Outlook.
Are you generally bullish, bearish, or undecided on future market moves?

2. Determine Your Volatility Outlook.
Do you feel that volatility will rise, fall, or are you undecided?

3. Look Up the Corresponding Strategy on the Appropriate Table.
Whether you are initiating a position or trying to follow up a current position, line up the correct row and column on the proper table to find a strategy that will help you make the most of your outlook.

4. Determine the "Best" Strike Price.
By analyzing your market and volatility outlook further you should be able to select the option strike that provides the best opportunity. The Guide does not go into detail on selecting the best strikes. You can do this by calculating a few "What-If" scenarios.

Some Things You Should Be Aware Of:

- In addition to breaking down market analysis into two main questions ("What is your market outlook?" and "What is your volatility outlook?"), you must also consider margin requirements, commission costs, taxes and execution costs, as well as other possible factors.
- The follow-up strategies in this Guide are usually "One Trade" changes. In other words, we asked: "How can a trader transform a position into a more desirable position with just one trade?" We did, however, bend this rule a little when one trade produced no acceptable strategy.
- Although you may be able to transform a trade with just one transaction, the resulting position can contain options at strikes that may or may not be appropriate for your new outlook.
- The ratio spreads and ratio backspreads are strategies that do not fit neatly into one of the nine scenarios. Therefore, a trader MUST analyze these strategies in greater depth. The strikes chosen bear greatly on the resulting profit/loss. Do several "What-If" scenarios before using these strategies.
- There are many other strategies, such as: calendar spreads, condors, Christmas trees, and option strips that are not addressed here. While they are all valid strategies, they do not fit neatly into this approach.
- The suggested strategies on the following pages are just that—suggestions. Because of limited space, the strategies suggested may or may not the "best" ones for your trading plan.

How to Use the Tables

On the next page is a table suggesting strategies to use when "Initiating a Market Position." Let's go through an example: A trader has been watching a major increase in the value of the S&P 500® futures contract and feels the market is poised for a minor downward move. A small market drop with volatility dropping and futures leveling off is this trader's outlook.

The market scenario is bearish.
The trader looks across the top of the page and finds **"BEARISH."**

The volatility scenario is down.
The trader looks down the left of the page and finds **"VOLATILITY FALLING."**

The trader lines up the **BEARISH** colum with the **VOLATILITY FALLING** row and finds two possible suggested market scenarios:
Number 6, **SHORT CALL,** and Number 18, **RATIO PUT SPREAD.**

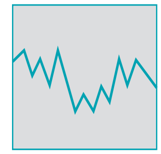
The trader now does a number of "What-If" scenarios to determine the best strike, the profit objective and loss tolerance before making any trading decisions.

Initiating a Market Position

BULLISH

BEARISH

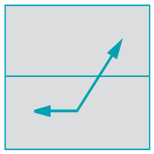
UNDECIDED



VOLATILITY RISING

5
LONG CALL

Buy a call

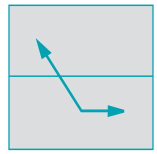


19*
CALL RATIO BACKSPREAD

Sell a call and buy two higher strike calls

7
LONG PUT

Buy a put

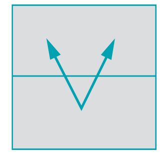


20*
PUT RATIO BACKSPREAD

Sell a put and buy two lower strike puts

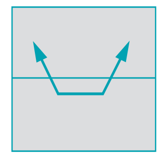
13
LONG STRADDLE

Buy a call and buy a put at same strike



15
LONG STRANGLE

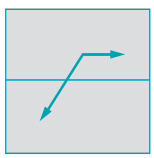
Buy a call and buy a put at different strikes



VOLATILITY FALLING

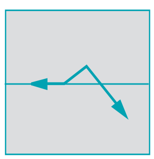
8
SHORT PUT

Sell a put



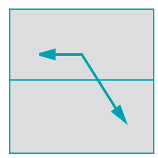
17*
RATIO CALL SPREAD

Buy a call and sell two higher strike calls



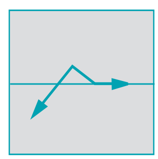
6
SHORT CALL

Sell a call



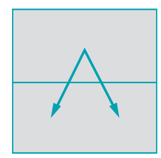
18*
RATIO PUT SPREAD

Buy a put and sell two lower strike puts



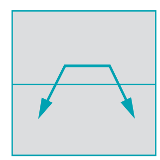
14
SHORT STRADDLE

Sell a call and sell a put at same strike



16
SHORT STRANGLE

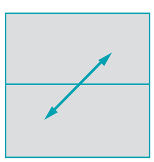
Sell a call and sell a put at different strikes



VOLATILITY UNDECIDED

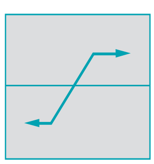
1
LONG FUTURES

Buy a futures



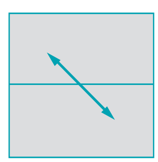
9
BULL SPREAD

Buy a call and sell a call at a higher strike OR buy a put and sell a put at a higher strike



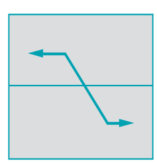
2
SHORT FUTURES

Sell a futures



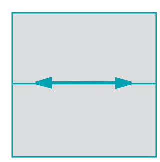
10
BEAR SPREAD

Buy a put and sell a put at a lower strike OR buy a call and sell a call at a lower strike



21
BOX/ CONVERSION

Use one of the many combinations of futures and options that take advantage of mispricing to lock in a profit.



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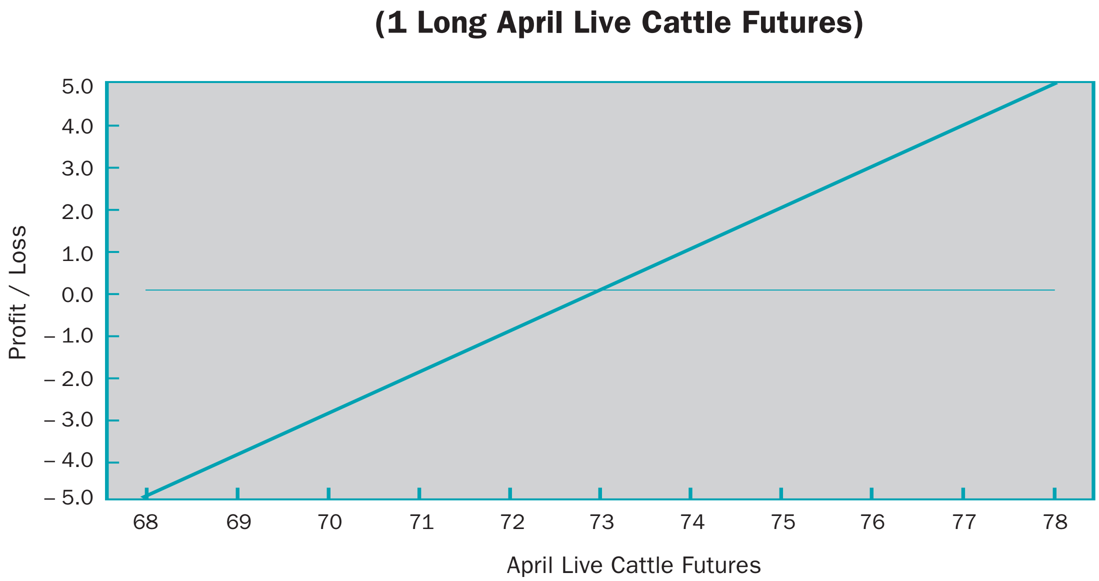
1 Long Futures



Scenario:

This trader feels that Live Cattle futures are poised for a rally. The implied volatility of the options is relatively high, but the trader does not expect it to come down soon. Therefore, he decides to buy one futures contract.

Specifics:

Underlying Futures Contract:	April Live Cattle
Futures Price Level:	73.00
Days to Futures Expiration:	75
Days to Options Expiration:	55
Option Implied Volatility:	16.2%
Position:	Long 1 Futures

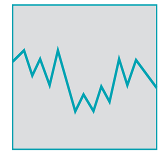
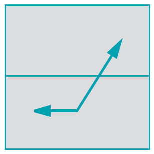
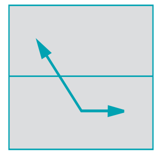
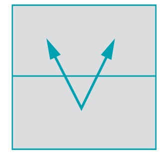
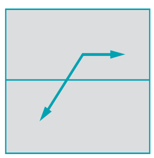
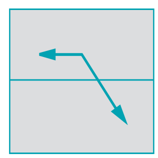
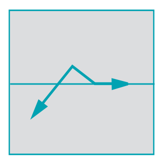
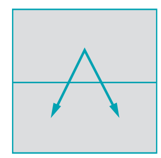
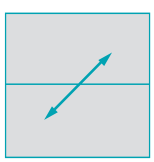
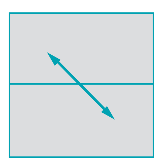
At Expiration:

Breakeven:	73.00 (original futures price)
Loss Risk:	Unlimited; losses increase as futures fall.
Potential Gain:	Unlimited; profits increase as futures rise.

Things to Watch:

Changes in implied volatility have no effect on this position. If the trader has an opinion on volatility, he may consider another strategy. Another strategy may increase potential profits and/or reduce potential losses. Check the next page for suggested follow-up strategies.

Follow-up Strategies

	BULLISH 	**BEARISH** 	**UNDECIDED** 
VOLATILITY RISING 	**5** **LONG CALL**  Buy a put	**7** **LONG PUT**  Liquidate futures and buy a put **20*** **PUT RATIO BACKSPREAD**  Sell a call and buy two puts at a lower strike	**13** **LONG STRADDLE**  Buy two puts
VOLATILITY FALLING 	**8** **SHORT PUT**  Sell a call	**6** **SHORT CALL**  Liquidate futures and sell a call **18*** **RATIO PUT SPREAD**  Sell two calls and buy a call at a higher strike	**14** **SHORT STRADDLE**  Sell two calls
VOLATILITY UNDECIDED 	**1** **LONG FUTURES**  Hold on	**2** **SHORT FUTURES**  Sell two futures (one liquidates original position)	Liquidate position

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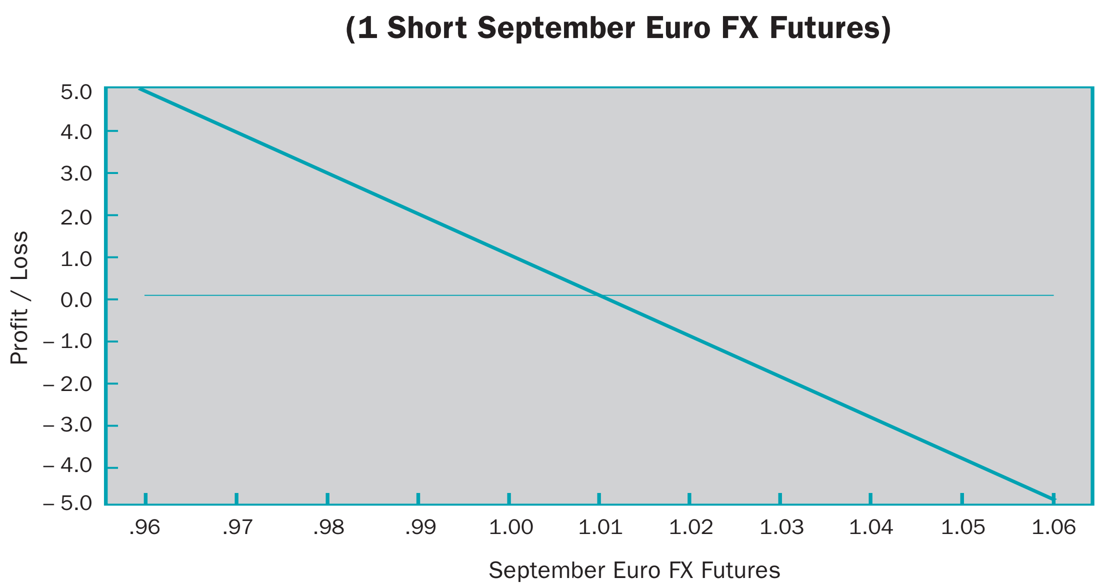
2 Short Futures



Scenario:
This trader is a technician. He sees a major turnaround in the price of Euro FX Futures. He points out that chart patterns suggest a big downward move, the short-term moving average crossed under the long-term moving average, even the fundamentals look bearish. He has looked at the options market, but feels that a short futures position would be the best.

Specifics:

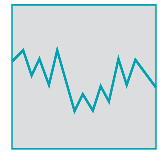
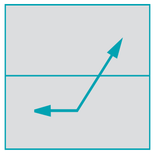
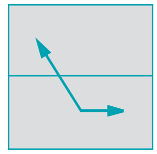
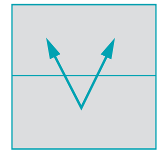
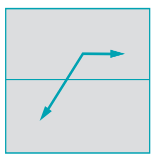
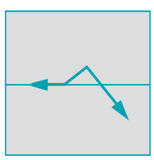
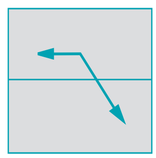
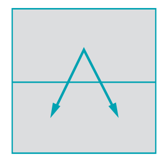
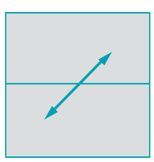
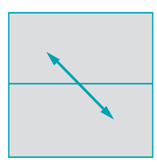
Underlying Futures Contract:	September Euro FX
Futures Price Level:	1.0100
Days to Futures Expiration:	65
Days to Options Expiration:	55
Option Implied Volatility:	14.9%
Position:	Short 1 Futures

At Expiration:

Breakeven:	1.0100 (original futures price)
Loss Risk:	Unlimited; losses increase as futures rise.
Potential Gain:	Unlimited; profits increase as futures fall.

Things to Watch:
Implied volatility has no effect on this position. If the trader has an opinion on volatility, he may consider another strategy. Other strategies may increase the reward and/or reduce the risk. Check the following page for follow-up strategies.

Follow-up Strategies

	BULLISH 	**BEARISH** 	**UNDECIDED** 
VOLATILITY RISING 	**5** **LONG CALL** Liquidate futures and buy a call  **19*** **CALL RATIO BACKSPREAD** Sell a put and buy two calls at a higher strike 	**7** **LONG PUT** Buy a call 	**13** **LONG STRADDLE** Buy two calls 
VOLATILITY FALLING 	**8** **SHORT PUT** Liquidate futures and sell a put  **17*** **RATIO CALL SPREAD** Sell two puts and buy a put at a lower strike 	**6** **SHORT CALL** Sell a put 	**14** **SHORT STRADDLE** Sell two puts 
VOLATILITY UNDECIDED 	**1** **LONG FUTURES** Buy two futures (one liquidates original position) 	**2** **SHORT FUTURES** Hold on 	Liquidate position

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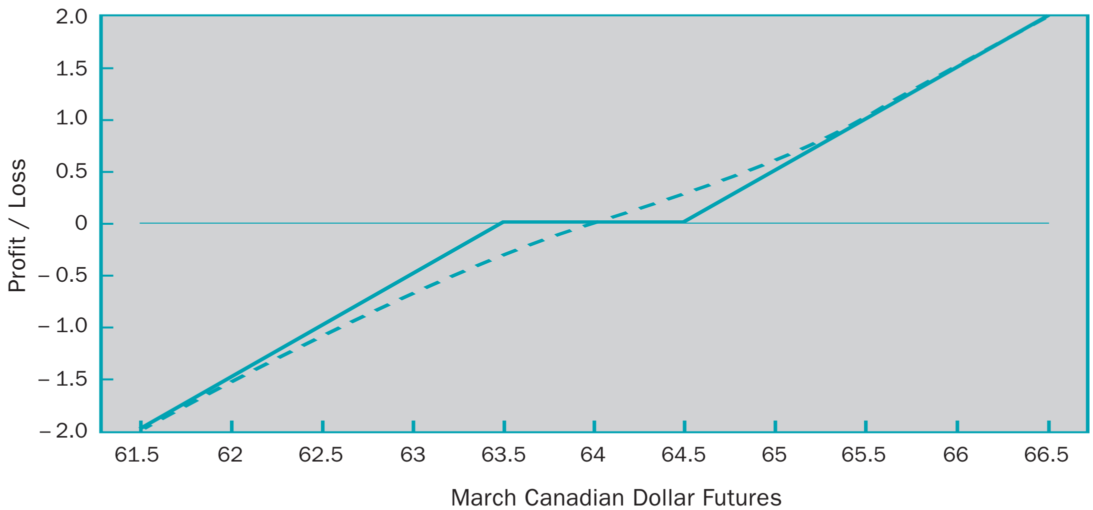
3 Synthetic Long Futures (Split Strike)

(1 Long Mar CD Call @ .6450; 1 Short Put @ .6350)
(Dashed Line = Current; Solid Line = Expiration)



Scenario:
Normally a trader enters into this position only as a follow-up strategy. Suppose the trader had a short strangle that he wanted to convert to a long futures. He can buy 2 calls (one liquidates the original short call). This nearly creates a synthetic long futures (long call, short put); however, it does so at different strike prices. The only difference in the risk/reward profile is the flat area between strikes—where little is gained or lost (depending upon the premiums and the exact strikes chosen).

Specifics:

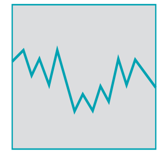
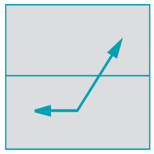
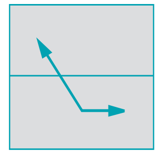
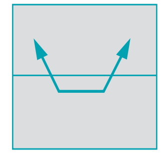
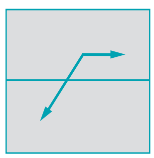
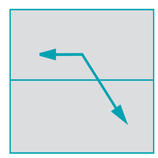
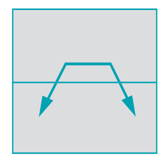
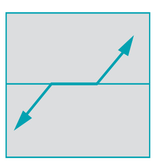
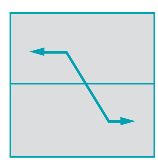
Underlying Futures Contract:	March Canadian Dollar	
Futures Price Level:	.6400	
Days to Futures Expiration:	30	
Days to Options Expiration:	20	
Option Implied Volatility:	5.0%	
Option Position:	Long 1 Mar .6450 Call	– .0020 ($200)
	Short 1 Mar .6350 Put	+ .0019 ($190)
		– .0001 ($ 10)

At Expiration:

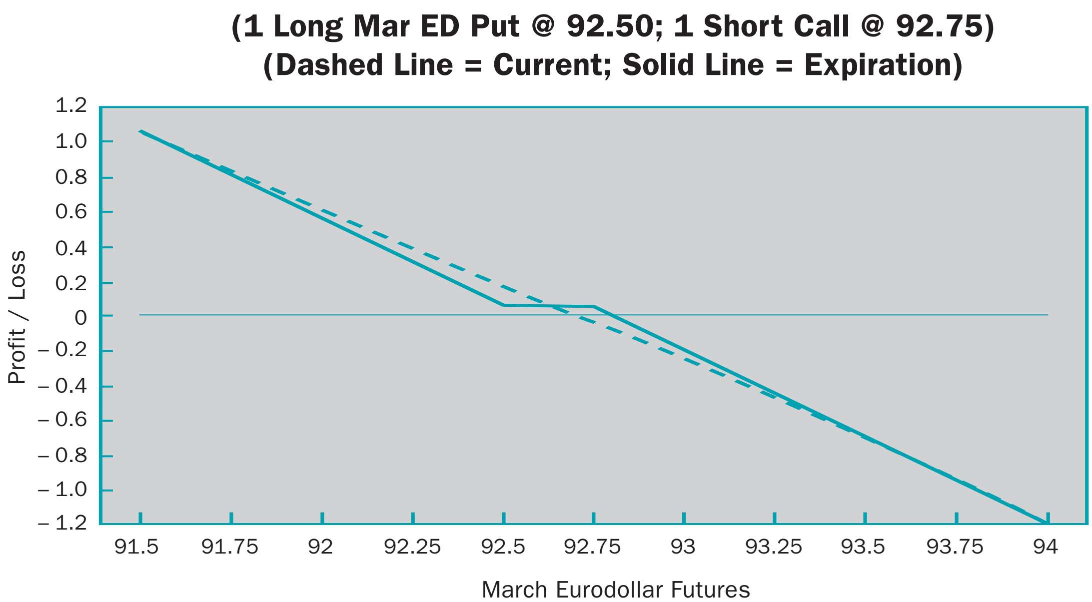
Breakeven:	.6451 (.6450 strike + 0.0001 debit)
Loss Risk:	Unlimited; losses mount as futures fall past .6350 strike.
Potential Gain:	Unlimited; profits increase as futures rise past .6451 breakeven.

Things to Watch:
This position is not normally affected by changes in implied volatility. It is nearly the same as a long futures position except for the flat area between strikes. The flat area below the current futures price allows for some downside movement without loss. However, the trader gives away a little upside potential. Check the next page for follow-up strategies.

Follow-up Strategies

	BULLISH 	BEARISH 	UNDECIDED 
VOLATILITY RISING 	5 LONG CALL  Liquidate short put	7 LONG PUT  Buy two puts (one liquidates original short put) and liquidate long call	15 LONG STRANGLE  Buy two puts (one liquidates original short put)
VOLATILITY FALLING 	8 SHORT PUT  Liquidate long call	6 SHORT CALL  Sell two calls (one liquidates original long call) and liquidate short put	16 SHORT STRANGLE  Sell two calls (one liquidates original long call)
VOLATILITY UNDECIDED 	3 SYNTHETIC LONG FUTURES (SPLIT STRIKE)  Hold on	10 BEAR SPREAD  Sell a futures	Liquidate position

4 Synthetic Short Futures (Split-Strike)



Scenario:

This trader feels that Eurodollar prices are going to drop (interest rates to rise). He has no opinion on volatility. He considers a straight short futures, but decides that there is a slight chance that EuroDollar futures will rise a little. He therefore decides to try a split-strike synthetic short futures position.

Specifics:

Underlying Futures Contract:	March Eurodollar futures	
Futures Price Level:	92.70	
Days to Futures Expiration:	59	
Days to Options Expiration:	40	
Option Implied Volatility:	23.2%	
Option Position:	Long 1 Mar 92.50 Put	– 0.14 ($ 350)
	Short 1 Mar 92.75 Call	+ 0.20 ($ 500)
		+ 0.06 ($ 150)

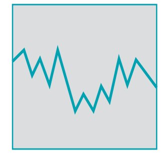
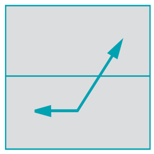
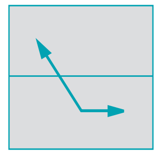
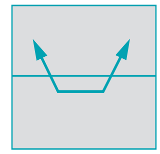
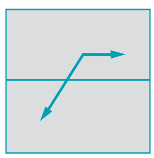
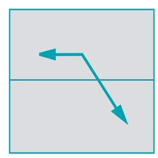
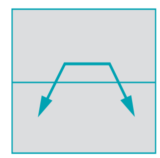
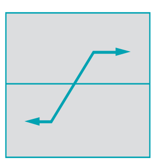
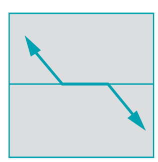
At Expiration:

Breakeven:	92.81 (92.75 strike + 0.06 credit)
Loss Risk:	Unlimited; losses mount above 92.81 breakeven.
Potential Gain:	Unlimited; profits increase as futures fall past 92.50 strike.

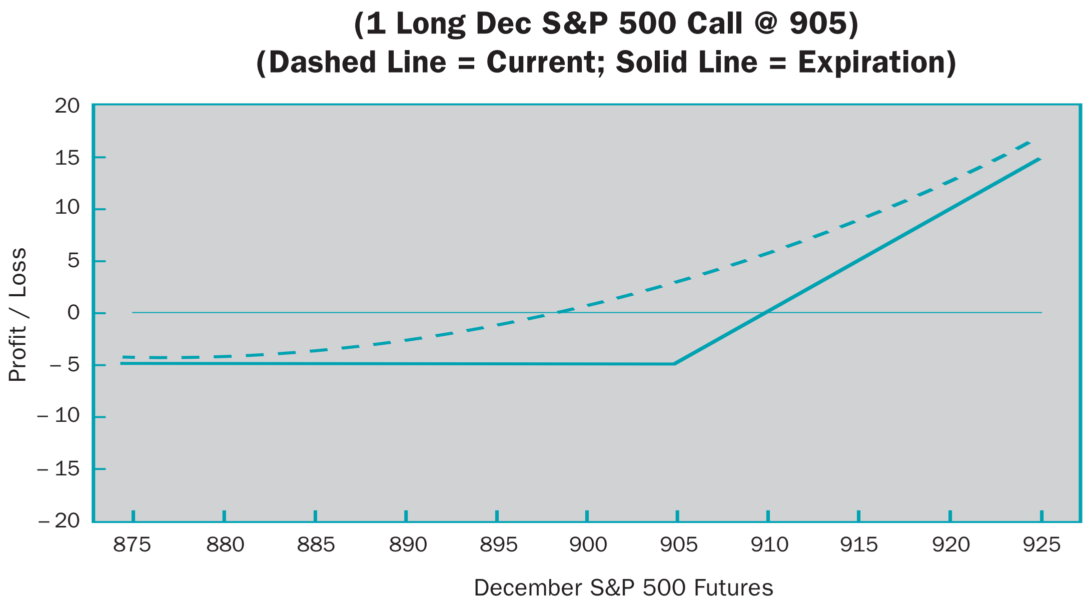
Things to Watch:

Implied volatility changing normally has no effect on this strategy. Therefore, if the trader has an opinion on volatility, he may find another strategy with a better risk/reward profile. Watch this position carefully; just like a short futures, this position has unlimited risk. Check the next page for follow-up strategies.

Follow-up Strategies

	BULLISH 	**BEARISH** 	**UNDECIDED** 
VOLATILITY RISING 	**5** **LONG CALL**  Buy two calls (one liquidates original short call) and liquidate long put	**7** **LONG PUT**  Liquidate short call	**15** **LONG STRANGLE**  Buy two calls (one liquidates original short call)
VOLATILITY FALLING 	**8** **SHORT PUT**  Sell two puts (one liquidates original long put) and liquidate short call	**6** **SHORT CALL**  Liquidate long put	**16** **SHORT STRANGLE**  Sell two puts (one liquidates original long put)
VOLATILITY UNDECIDED 	**9** **BULL SPREAD**  Buy a futures	**4** **SYNTHETIC SHORT FUTURES (SPLIT STRIKE)**  Hold on	Liquidate position

5 Long Call



Scenario:
A trader projects that stock market futures are poised for a large upward move in a short period of time. An increase in the underlying futures to 1315.00 or greater, and an increase in implied volatility by 4 percentage points, also seem likely. Consequently, the trader decides to buy a call.

Specifics:

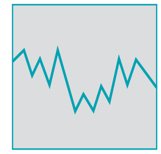
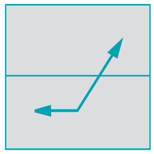
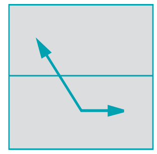
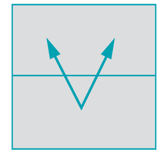
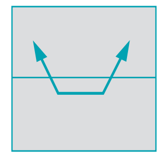
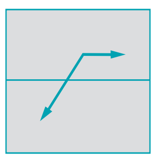
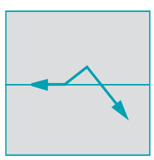
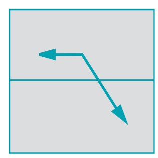
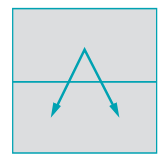
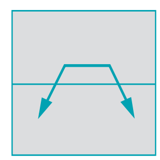
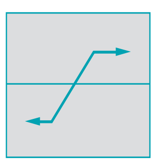
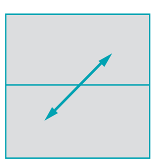
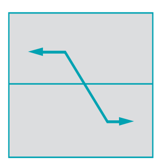
Underlying Futures Contract:	December S&P 500	
Futures Price Level:	900	
Days to Futures Expiration:	45	
Days to Options Expiration:	45	
Option Implied Volatility:	18.1%	
Option Position:	Long 1 Dec 905 Call	– 5.40 ($1350)

At Expiration:

Breakeven:	910.40 (905 strike + 5.40 premium)
Loss Risk:	Below 910.40; with maximum loss, at 905 or below, of 5.40.
Potential Gain:	Unlimited; profits continue to increase as futures rise above 910.40.

Things to Watch:
The trader will lose the volatility effect if this position is held to expiration. As soon as implied volatility rises to the expected level the trader may consider liquidating or transforming this position. Check the next page for appropriate follow-up strategies.

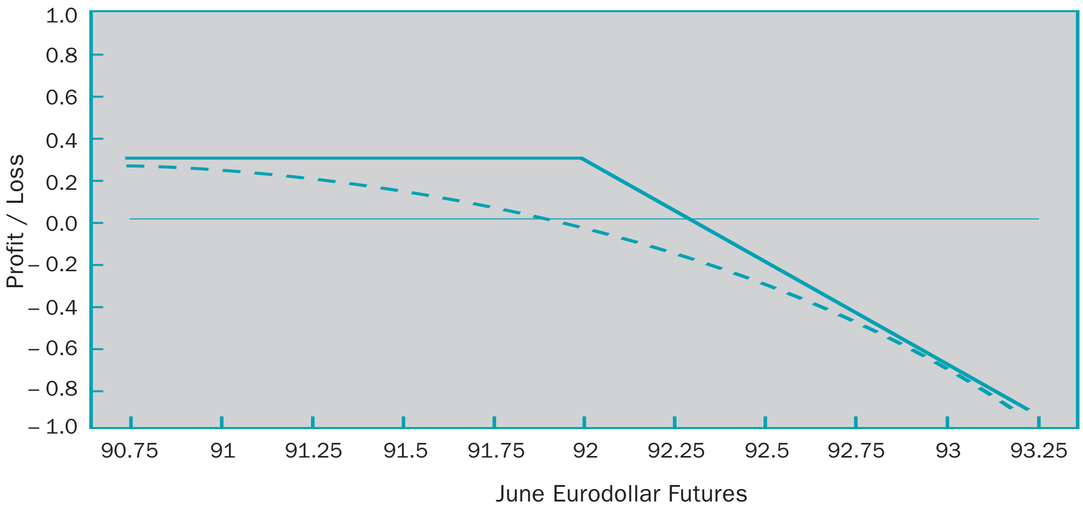
Follow-up Strategies

	BULLISH 	BEARISH 	UNDECIDED 
VOLATILITY RISING 	**5** **LONG CALL**  Hold on	**7** **LONG PUT**  Sell a futures	**13** **LONG STRADDLE**  Buy a put at same strike **15** **LONG STRANGLE**  Buy a put at a different strike
VOLATILITY FALLING 	**8** **SHORT PUT**  Liquidate long call and sell a put **17*** **RATIO CALL SPREAD**  Sell two higher strike calls	**6** **SHORT CALL**  Sell a call	**14** **SHORT STRADDLE**  Sell two calls (one liquidates original long call) and sell a put at same strike **16** **SHORT STRANGLE**  Sell two calls (one liquidates original long call) and sell a put at different strike
VOLATILITY UNDECIDED 	**9** **BULL SPREAD**  Sell a higher strike call **1** **LONG FUTURES**  Sell a put at same strike	**10** **BEAR SPREAD**  Sell a lower strike call	Liquidate position

* All ratio spreads and ratio backspreads need more analysis. These strategies do not fit neatly into any of the nine market scenarios. Define your market expectation more closely and work out examples with different market scenarios before choosing these strategies. Also, ratio strategies are sometimes done at ratios other than one by two.

6 Short Call

(1 Short Jun Eurodollar Call @ 92.00)
(Dashed Line = Current; Solid Line = Expiration)



Scenario:
After a large increase this trader now believes the Eurodollar market is in for a consolidation and a mild downward fall. Implied volatility is approaching all-time highs. Premiums, therefore, are relatively large. The trader wants to capture the inflated premium through the sale of one 92.00 call.

Specifics:

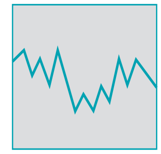
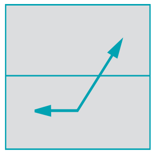
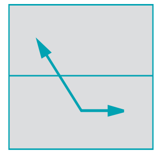
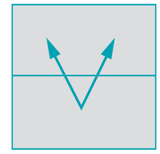
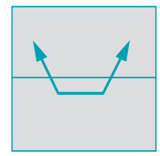
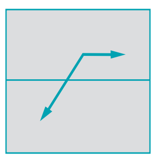
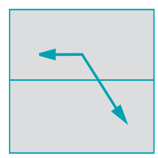
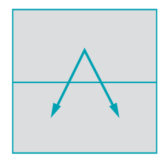
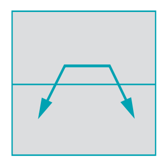
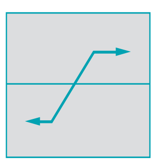
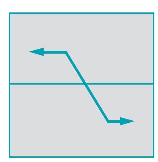
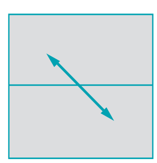
Underlying Futures Contract:	June Eurodollar		
Futures Price Level:	91.97		
Days to Futures Expiration:	30		
Days to Options Expiration:	30		
Option Implied Volatility:	34.4%		
Option Position:	Short 1 Jun 92.00 Call	+ 0.30	($750)

At Expiration:

Breakeven:	92.30 (92.00 strike + 0.30 premium)
Loss Risk:	Unlimited; losses continue to increase as futures rise above 92.30 breakeven.
Potential Gain:	Limited to the premium received. Maximum profit below 92.00 strike.

Things to Watch:
Although the trader is highly compensated for the risk assumed (with implied volatility high), the trader must watch this (and all) unlimited risk positions closely. Consider another strategy if the futures and/or volatility continue to rise. A review of the trade should occur at some predetermined place.

Follow-up Strategies

	BULLISH 	BEARISH 	UNDECIDED 
VOLATILITY RISING 	5 **LONG CALL** Buy two calls (one liquidates original short call)  19* **CALL RATIO BACKSPREAD** Buy two higher strike calls 	7 **LONG PUT** Liquidate short call and buy a put  20* **PUT RATIO BACKSPREAD** Buy a futures and buy two puts at a lower strike 	13 **LONG STRADDLE** Buy two calls (one liquidates original short call) and buy a put at same strike  15 **LONG STRANGLE** Buy two calls (one liquidates original short call) and buy a put at a different strike 
VOLATILITY FALLING 	8 **SHORT PUT** Buy a futures 	6 **SHORT CALL** Hold on 	14 **SHORT STRADDLE** Sell a put at same strike  16 **SHORT STRANGLE** Sell a put at a different strike 
VOLATILITY UNDECIDED 	9 **BULL SPREAD** Buy a call at a lower strike 	10 **BEAR SPREAD** Buy a call at a higher strike  2 **SHORT FUTURES** Buy a put at same strike 	Liquidate position

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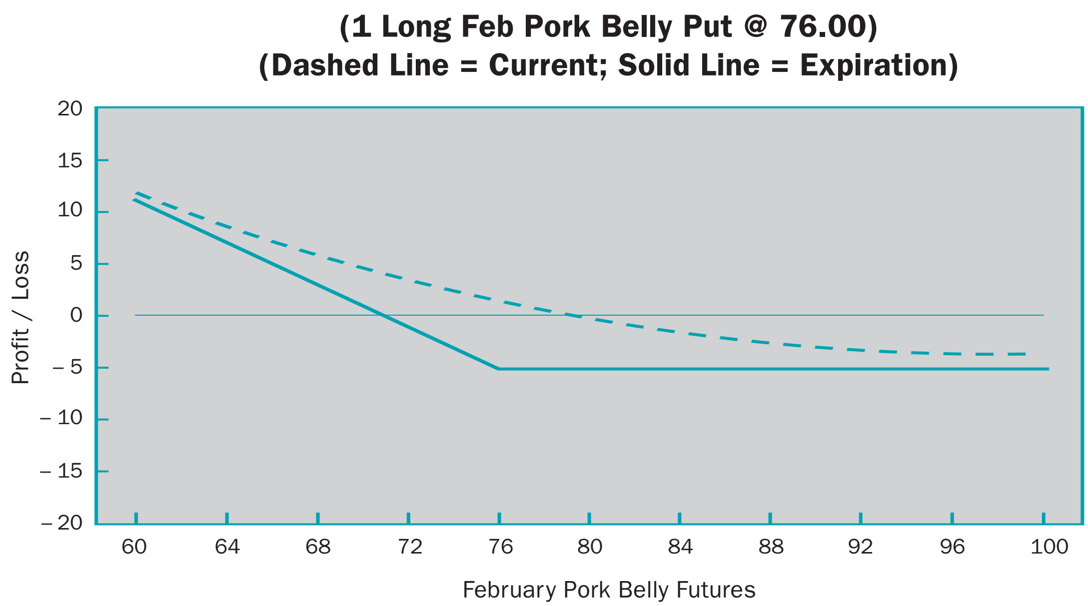
7 Long Put



Scenario:
Pork Bellies have been trading at contract highs of between 75 and 85 cents per pound. The trader feels that a major decline is very likely. However, the trader is not sure when it will come. He decides to buy a long-term put option. By doing this he initially has very little time decay. He can ride out a temporary upward move and still be in for the big break.

Specifics:

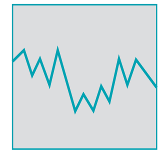
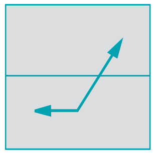
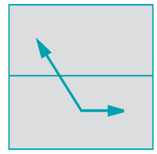
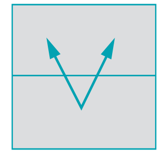
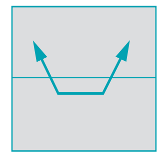
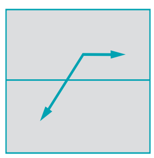
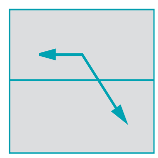
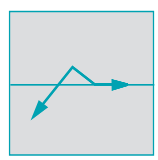
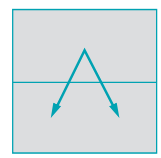
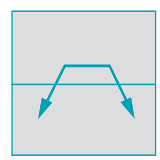
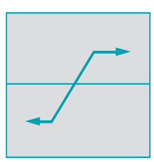
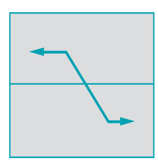
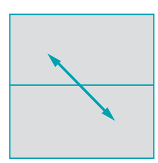
Underlying Futures Contract:	February Pork Bellies		
Futures Price Level:	80.15		
Days to Futures Expiration:	210		
Days to Options Expiration:	180		
Option Implied Volatility:	33.2%		
Option Position:	Long 1 Feb 76 Put	– 5.10	($2040)

At Expiration:

Breakeven:	70.90 (76.00 strike – 5.10 premium)
Loss Risk:	Limited to the premium paid. Loss above 70.90 with maximum loss of 5.10 above 76.00.
Potential Gain:	Unlimited, with profits increasing as the futures fall further and further past 70.90 breakeven.

Things to Watch:
This trader must be very bearish, with volatility increasing, to make this trade profitable. If held to expiration, the futures would have to fall more than 10% by expiration just to break even. Check the follow-up strategies if the futures fall or volatility rises to the levels expected before expiration.

Follow-up Strategies

	BULLISH 	BEARISH 	UNDECIDED 
VOLATILITY RISING 	**5** **LONG CALL**  Buy a futures	**7** **LONG PUT**  Hold on	**13** **LONG STRADDLE**  Buy a call at same strike **15** **LONG STRANGLE**  Buy a call at different strike
VOLATILITY FALLING 	**8** **SHORT PUT**  Sell two puts (one liquidates original long put)	**6** **SHORT CALL**  Liquidate long put and sell a call **18*** **RATIO PUT SPREAD**  Sell two puts at a lower strike	**14** **SHORT STRADDLE**  Sell two puts (one liquidates original long put), and sell a call at same strike **16** **SHORT STRANGLE**  Sell two puts (one liquidates original long put) and sell a call at different strike
VOLATILITY UNDECIDED 	**9** **BULL SPREAD**  Sell a put at a higher strike	**10** **BEAR SPREAD**  Sell a put at a lower strike **2** **SHORT FUTURES**  Sell a call at same strike	Liquidate position

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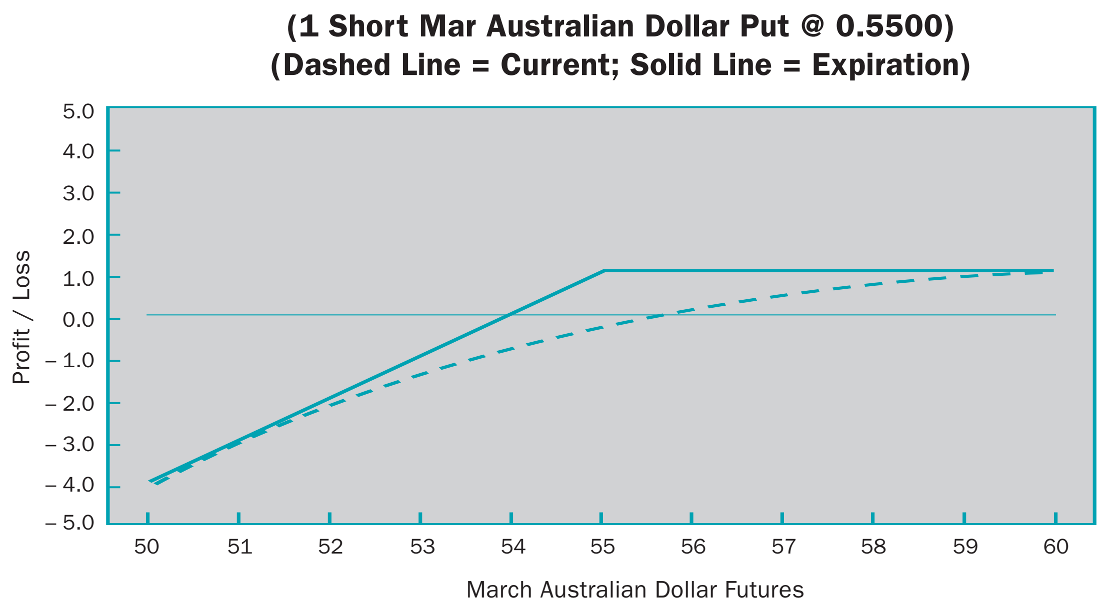
8 Short Put



Scenario:
This trader feels very strongly that Australian Dollar futures will not fall. He thinks, though, that the market has an equal chance of going up or leveling out. He also expects implied volatility to fall about 11%. The trader decides to sell a put option.

Specifics:

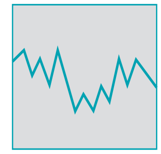
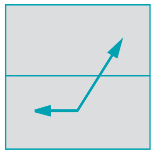
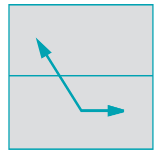
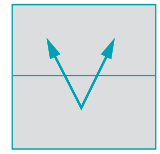
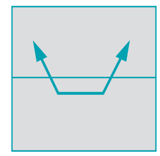
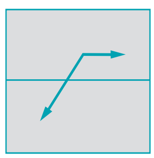
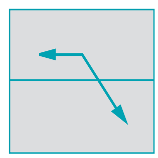
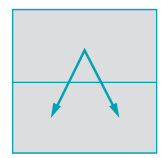
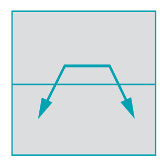
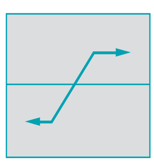
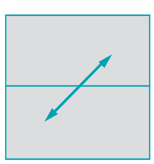
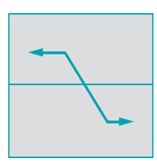
Underlying Futures Contract:	March Australian Dollar	
Futures Price Level:	0.5500	
Days to Futures Expiration:	50	
Days to Options Expiration:	40	
Option Implied Volatility:	14.1%	
Option Position:	Short 1 Mar 0.5500 Put	+ .0111 ($1110)

At Expiration:

Breakeven:	0.5389 (0.5500 strike – 0.0111 credit)
Loss Risk:	Unlimited; with losses increasing as futures fall past 0.5389 breakeven.
Potential Gain:	Limited to the premium received 0.0111 ($1110). This occurs when futures is above 0.5500 strike at option expiration.

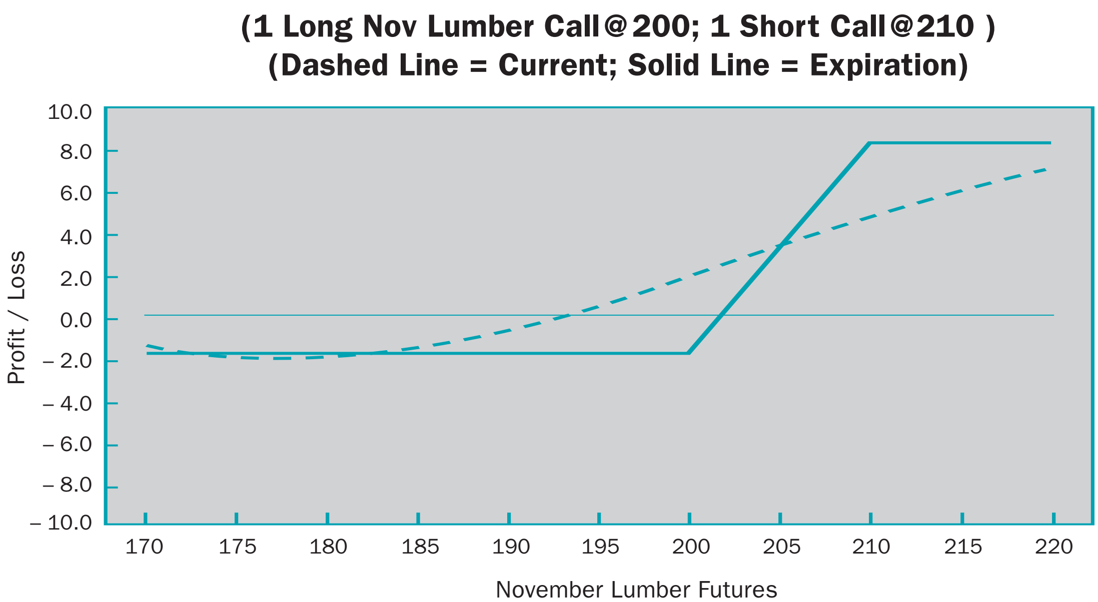
Things to Watch:
As with all unlimited risk situations, the trader must watch this position carefully. Special consideration must be give to foreign currency trading, due to foreign and domestic central bank policy changes. The worst scenario is to be in this position with volatility rising and futures falling. Always re-evaluate this position at some predetermined point.

Follow-up Strategies

	BULLISH 	BEARISH 	UNDECIDED 
VOLATILITY RISING 	**5** **LONG CALL** Liquidate short put and buy a call  **19*** **CALL RATIO BACKSPREAD** Sell a futures and buy two calls at a higher strike 	**7** **LONG PUT** Buy two puts (one liquidates original short put)  **20*** **PUT RATIO BACKSPREAD** Buy two puts at a lower strike 	**13** **LONG STRADDLE** Buy two puts (one liquidates original short put) and buy a call at same strike  **15** **LONG STRANGLE** Buy two puts (one liquidates original short put and buy call at a different strike 
VOLATILITY FALLING 	**8** **SHORT PUT** Hold on 	**6** **SHORT CALL** Sell a futures 	**14** **SHORT STRADDLE** Sell a call at same strike  **16** **SHORT STRANGLE** Sell a call at different strike 
VOLATILITY UNDECIDED 	**9** **BULL SPREAD** Buy a put at a lower strike  **1** **LONG FUTURES** Buy a call at same strike 	**10** **BEAR SPREAD** Buy at put at a higher strike 	Liquidate position

* All ratio spreads and ratio backspreads need more analysis. These strategies do not fit neatly into any of the nine market scenarios. Define your market expectation more closely and work out examples with different market scenarios before choosing these strategies. Also, ratio strategies are sometimes done at ratios other than one by two.

9 Bull Spread



Scenario:
The trader feels bullish on Lumber, but volatility is in question. He could try futures as an alternative, but wants the comfort of a limited loss position. He decides on a bull spread with the higher strike written at the top of his expected trading range of 210.

Specifics:

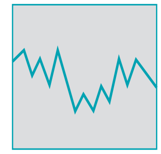
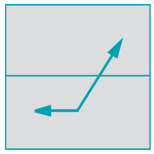
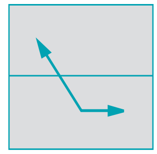
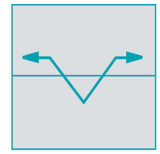
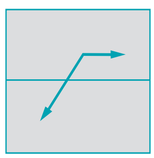
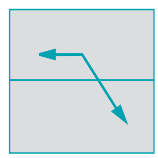
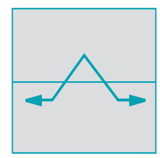
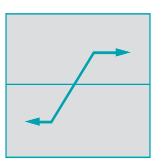
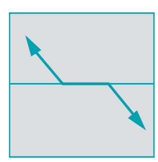
Underlying Futures Contract:	November Lumber		
Futures Price Level:	193.00		
Days to Futures Expiration:	60		
Days to Options Expiration:	40		
Option Implied Volatility:	18.6%		
Option Position:	Long 1 Nov 200 Call	– 2.10	($315)
	Short 1 Nov 210 Call	+ 0.50	($ 75)
		– 1.60	($240)

At Expiration:

Breakeven:	201.60 (200.00 strike + 1.60 debit)
Loss Risk:	Limited to premium paid. Losses increase below 201.60 to a maximum loss below 200.00 of 1.60 ($240).
Potential Gain:	Limited to difference between strikes less debit paid (10.00 – 1.60) 8.40 ($12,600). Gains mount above 201.60 with maximum profit at 210.00.

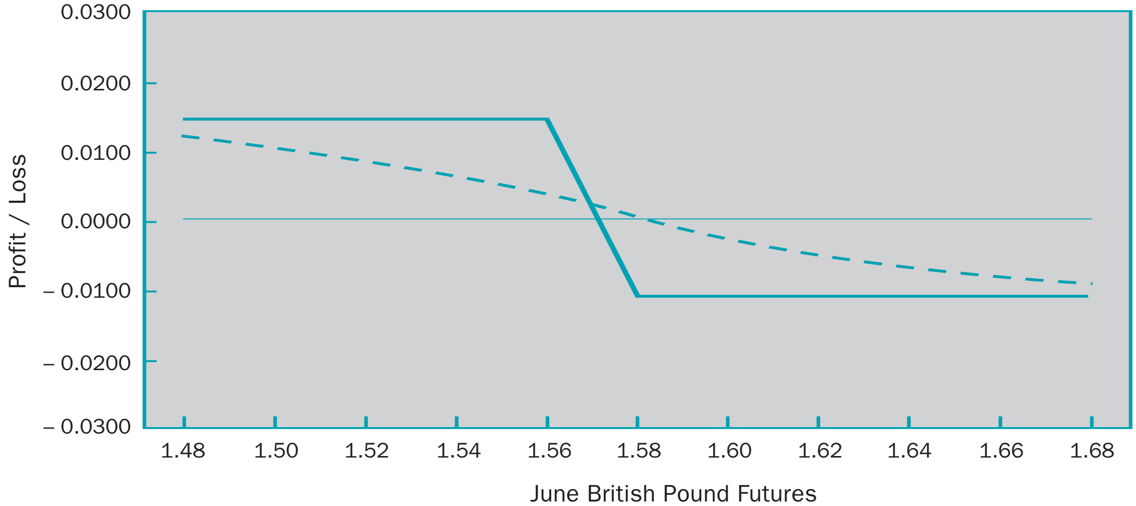
Things to Watch:
Volatility changes affect this spread very little. Therefore, if the trader has an opinion on volatility, one of the other strategies may work better. Check the next page for follow-up strategies.

Follow-up Strategies

	BULLISH 	**BEARISH** 	**UNDECIDED** 
VOLATILITY RISING 	**5** **LONG CALL**  If bull spread is constructed with calls then liquidate short call; if bull spread is constructed with puts then liquidate short put and buy futures	**7** **LONG PUT**  If a bull spread is constructed with puts then liquidate short put; if bull spread is constructed with calls then liquidate short call and sell futures	**12** **SHORT BUTTERFLY**  Add a bear spread at lower strikes
VOLATILITY FALLING 	**8** **SHORT PUT**  If bull spread is constructed with puts then liquidate long put; if bull spread is constructed with calls then liquidate long call and buy futures	**6** **SHORT CALL**  If bull spread is constructed with calls then liquidate long call; if bull spread is constructed with puts then liquidate long put and sell futures	**11** **LONG BUTTERFLY**  Add a bear spread at higher strikes
VOLATILITY UNDECIDED 	**9** **BULL SPREAD**  Hold on	**4** **SYNTHETIC SHORT FUTURES (SPLIT STRIKE)**  Sell a futures	Liquidate position

10 Bear Spread

(1 Long June BP Put @ 1.5800; 1 Short Put @ 1.5600)
(Dashed Line = Current; Solid Line = Expiration)



Scenario:
This trader is convinced the British Pound market is going to fall. The trader does not expect a sharp drop, just a gradual decline to about 1.5600 US$/pound. He decides on a bear spread with the written put at the target price.

Specifics:

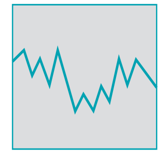
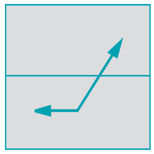
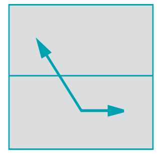
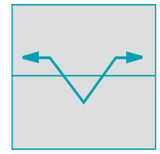
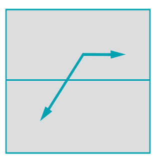
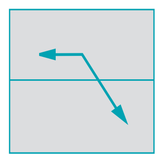
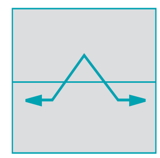
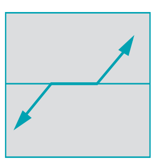
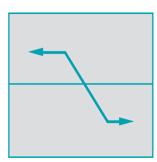
Underlying Futures Contract:	June British Pound		
Futures Price Level:	1.5850		
Days to Futures Expiration:	80		
Days to Options Expiration:	70		
Option Implied Volatility:	12.0%		
Option Position:	Long 1 Jun 1.5800 Put	– .0320	($2000.00)
	Short 1 Jun 1.5600 Put	+ .0210	($1312.50)
		– .0110	($ 687.50)

At Expiration:

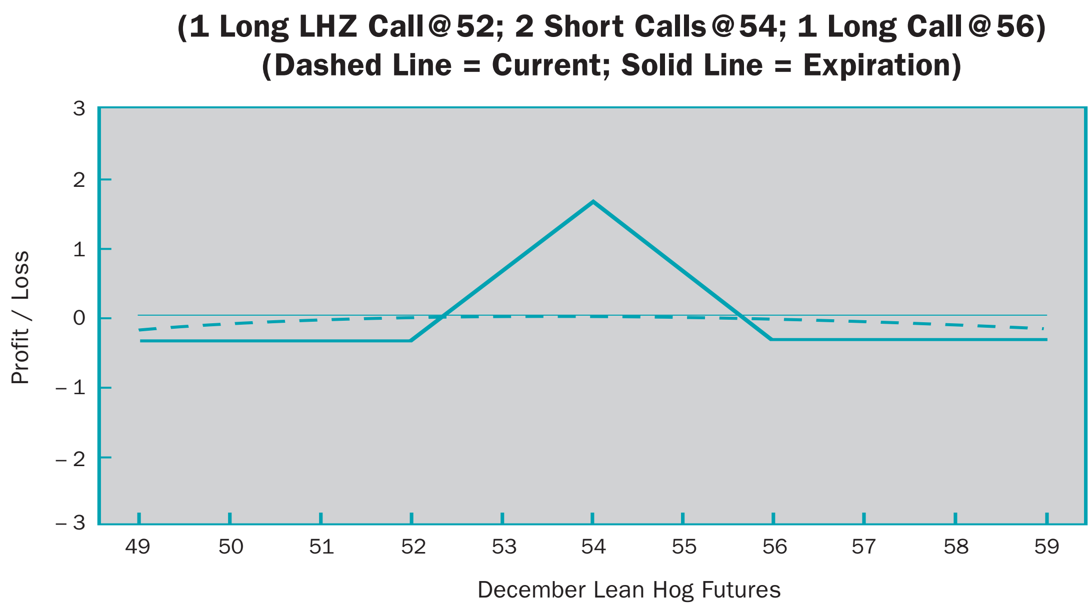
Breakeven:	1.5690 (1.5800 strike – .0110 debit)
Loss Risk:	Losses start above 1.5690, but limited to the debit paid. Maximum loss above 1.5800.
Potential Gain:	Gains mount as futures fall below 1.5690. Maximum profit of .0090 ($562.50) at or below 1.5600 (the difference between strikes .0200 – debit .0110).

Things to Watch:
If the trader had a target price in mind, this would be an effective strategy. Why should the trader pay for an option with unlimited potential when he thinks the move is limited? Selling an option at the target price will reduce the cost of an outright long option.

Follow-up Strategies

	BULLISH 	**BEARISH** 	**UNDECIDED** 
VOLATILITY RISING 	**5** **LONG CALL**  If bear spread is constructed with calls then liquidate short call; if bear spread is constructed with puts then liquidate short put and buy futures	**7** **LONG PUT**  If a bear spread is constructed with puts then liquidate short put; if bear spread is constructed with calls then liquidate short call and sell futures	**12** **SHORT BUTTERFLY**  Add a bull spread at higher strikes
VOLATILITY FALLING 	**8** **SHORT PUT**  If bear spread is constructed with puts then liquidate long put; if bear spread is constructed with calls then liquidate long call and buy futures	**6** **SHORT CALL**  If bear spread is constructed with calls then liquidate long call; if bear spread is constructed with puts then liquidate long put and sell futures	**11** **LONG BUTTERFLY**  Add a bull spread at lower strikes
VOLATILITY UNDECIDED 	**3** **SYNTHETIC LONG FUTURES (SPLIT STRIKE)**  Buy a futures	**10** **BEAR SPREAD**  Hold on	Liquidate position

11 Long Butterfly



Scenario:
The trader currently has a #17 Ratio Call Spread. He thinks this is still a good position. However, he is worried that the futures may increase dramatically on the upside, leaving him with a substantial loss. He adds a long call and converts the position into a long butterfly.

Specifics:

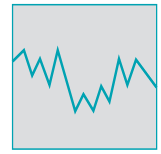
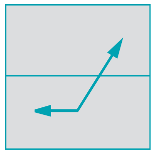
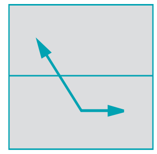
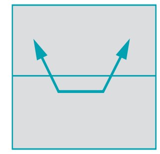
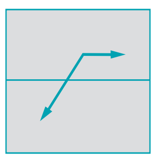
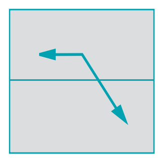
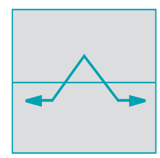
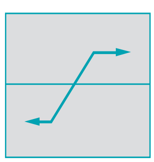
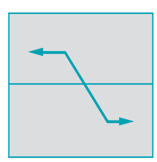
Underlying Futures Contract:	December Lean Hogs		
Futures Price Level:	52.50		
Days to Futures Expiration:	74		
Days to Option Expiration:	45		
Option Implied Volatility:	21.5%		
Option Position:	Long 1 Dec 52.00 Call	– 1.825	($547.50)
	Short 2 Dec 54.00 Calls	+ 0.950	($285.00)
	Long 1 Dec 56.00 Call	– 0.450	($135.00)
		– 0.375	($112.50)

At Expiration:

Breakeven:	Downside: 52.375 (52.00 strike + 0.375 debit). Upside: 55.625 (56.00 strike – 0.375 debit).
Loss Risk:	Losses start above 55.625, or below 52.375, but limited to the debit paid. Maximum loss above 56.00 strike or below 52.00 strike.
Potential Gain:	Gains peak at strike of written calls. Maximum profit of 1.625 ($487.50).

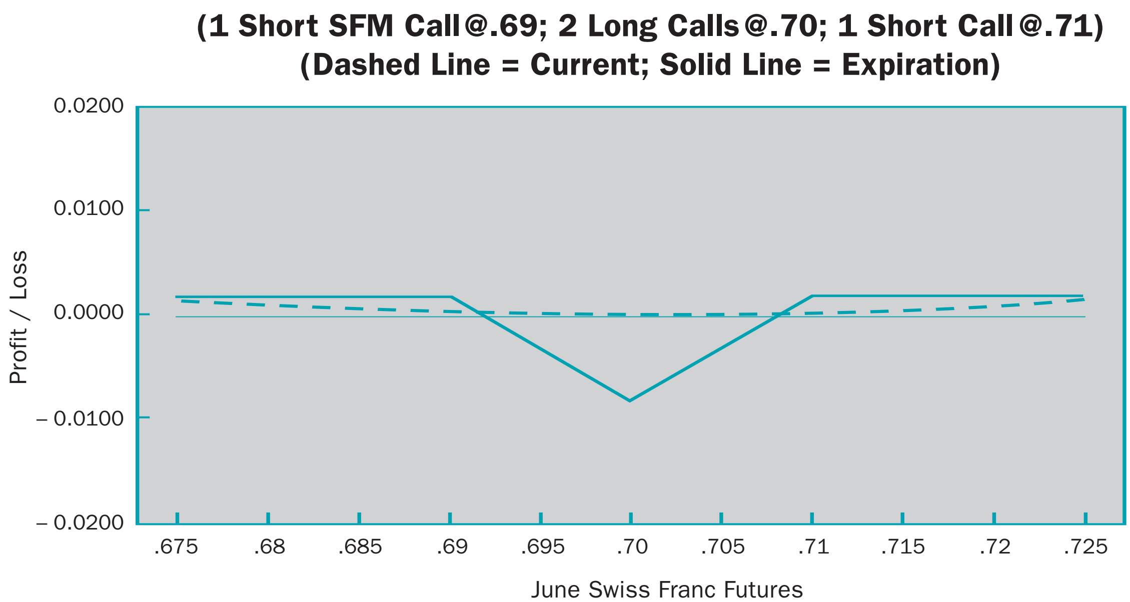
Things to Watch:
There is not much risk in this position. Volatility has little effect. Avoid follow-up strategies unless you are quite certain of a particular move. Nearly every follow-up to this strategy requires more than one trade—possibly incurring large transaction costs.

Follow-up Strategies†

	BULLISH 	**BEARISH** 	**UNDECIDED** 
VOLATILITY RISING 	**5** **LONG CALL**  If the long butterfly is constructed with calls, then liquidate all options but one long call	**7** **LONG PUT**  If the long butterfly is constructed with puts, then liquidate all options but one long put	**15** **LONG STRANGLE**  If the long butterfly is constructed with two calls and two puts, then liquidate the short call and the short put
VOLATILITY FALLING 	**8** **SHORT PUT**  If the long butterfly is constructed with puts, then liquidate all options but one short put	**6** **SHORT CALL**  If the long butterfly is constructed with calls, then liquidate all options but one short call	**11** **LONG BUTTERFLY**  Hold on
VOLATILITY UNDECIDED 	**9** **BULL SPREAD**  Liquidate a bear spread	**10** **BEAR SPREAD**  Liquidate a bull spread	Liquidate position

† It is very difficult to convert a butterfly into another strategy with one or even two transactions. Normally, for off-floor-traders, this trade would not be entered into as transaction costs can be substantial. Also, follow-up trades can add to commission costs, making it very difficult to realize a profit.

12 Short Butterfly



Scenario:
This trader currently has a #19 Call Ratio Backspread, but now feels that the underlying futures will not explode on the upside. Instead, the trader feels that the market has an equal chance of going up or down, and thus converts the position into a short butterfly.

Specifics:

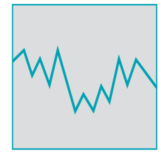
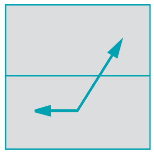
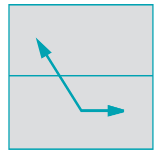
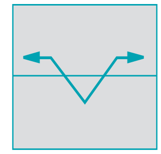
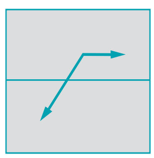
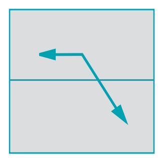
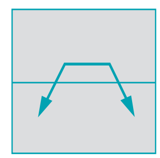
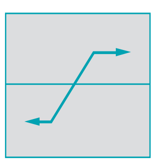
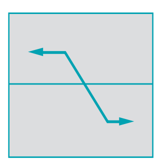
Underlying Futures Contract:	June Swiss Franc			
Futures Price Level:	0.7000			
Days to Futures Expiration:	30			
Days to Option Expiration:	20			
Option Implied Volatility:	12.2%			
Option Position:	Short 1 Jun 0.6900 Call	+ 0.0129	($1612.50)	
	Long 2 Jun 0.7000 Calls	– 0.0068	($ 850.00)	x 2
	Short 1 Jun 0.7100 Call	+ 0.0031	($ 387.50)	
		+ 0.0024	($ 300.00)	

At Expiration:

Breakeven:	Downside: 0.6924 (0.6900 strike + 0.0024 credit). Upside: 0.7076 (0.7100 strike – 0.0024 credit).
Loss Risk:	Losses bottom at 0.7000 strike. Maximum loss of 0.0076 ($950).
Potential Gain:	Gains top out at original net credit of 0.0024 ($300). This occurs when futures rise above 0.7100 strike, or fall below 0.6900 strike.

Things to Watch:
There is not much risk in this position. Volatility has little effect. You should avoid follow-up strategies unless you are quite certain of a particular move. Nearly every follow-up to this strategy requires more than one trade—possibly incurring large transaction costs.

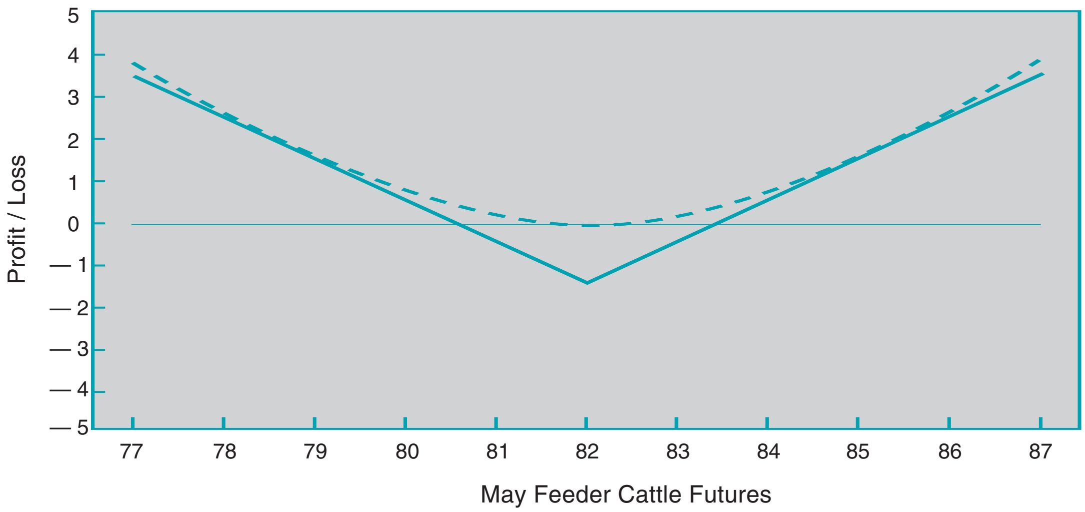
Follow-up Strategies†

	BULLISH 	BEARISH 	UNDECIDED 
VOLATILITY RISING 	**5** **LONG CALL**  If the short butterfly is constructed with calls, then liquidate all options but one long call	**7** **LONG PUT**  If the short butterfly is constructed with puts, then liquidate all options but one long put	**12** **SHORT BUTTERFLY**  Hold on
VOLATILITY FALLING 	**8** **SHORT PUT**  If the short butterfly is constructed with puts, then liquidate all options but one short put	**6** **SHORT CALL**  If the short butterfly is constructed with calls, then liquidate all options but one short call	**16** **SHORT STRANGLE**  If the short butterfly is constructed with two calls and two puts, then liquidate the long call and the long put
VOLATILITY UNDECIDED 	**9** **BULL SPREAD**  Liquidate a bear spread	**10** **BEAR SPREAD**  Liquidate a bull spread	Liquidate position

† It is very difficult to convert a butterfly into another strategy with one or even two transactions. Normally, for off-floor-traders, this trade would not be entered into as transaction costs can be substantial. Also, follow-up trades can add to commission costs, making it very difficult to realize a profit.

13 Long Straddle

(1 Long May Feeder Cattle Call @ 82; 1 Long Put @ 82)
(Dashed Line = Current; Solid Line = Expiration)



Scenario:
This trader looks at the low implied volatility and feels that options are relatively inexpensive. The expectation here is that this market is poised for a big move. However, the trader is not sure which way it will be. So a decision is made to buy both a call and a put.

Specifics:

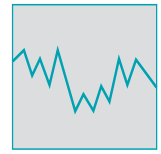
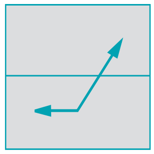
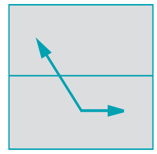
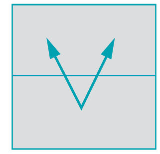
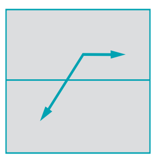
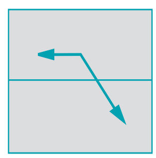
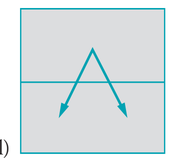
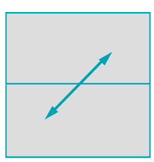
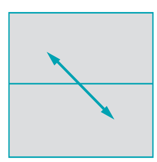
Underlying Futures Contract:	May Feeder Cattle		
Futures Price Level:	81.00		
Days to Futures Expiration:	20		
Days to Options Expiration:	20		
Option Implied Volatility:	8.4%		
Option Position:	Long 1 May 82.00 Call	– 0.25	($110.00)
	Long 1 May 82.00 Put	– 1.25	($550.00)
		– 1.50	($660.00)

At Expiration:

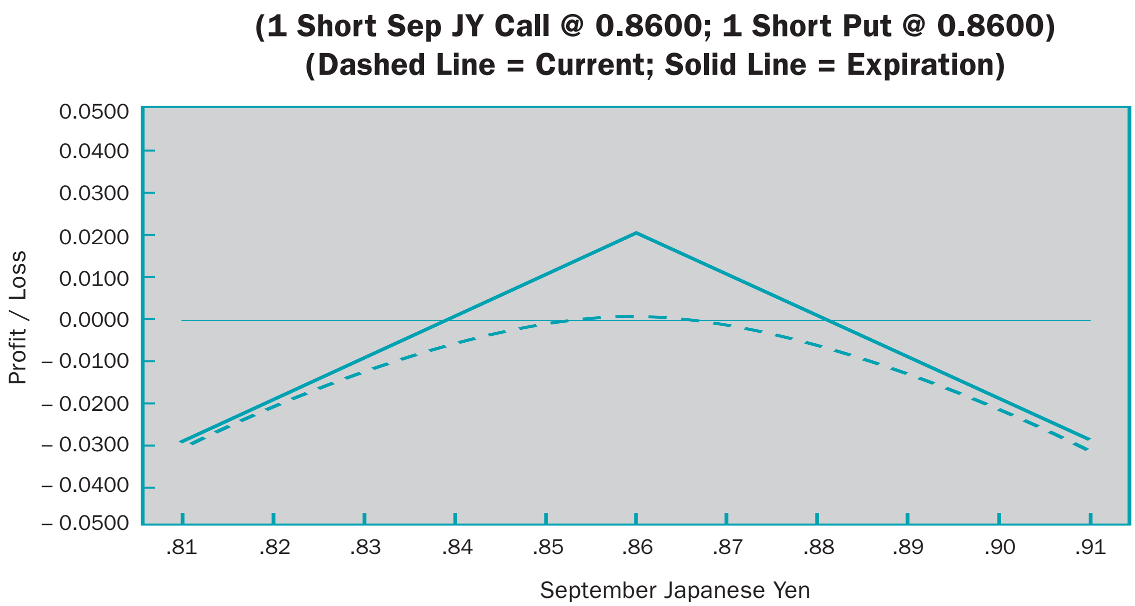
Breakeven:	Downside: 80.50 (82.00 strike – 1.50 debit). Upside: 83.50 (82.00 strike + 1.50 debit).
Loss Risk:	Losses bottom out at 82.00 strike with a maximum loss of 1.50 ($660).
Potential Gain:	Unlimited; gains begin below 80.50 breakeven and increase as futures fall. Also, gains increase as futures rise past 83.50 breakeven.

Things to Watch:
This is primarily a volatility play. A trader enters into this position with no clear idea of market direction, but a forecast of greater movement (risk) in the underlying futures.

Follow-up Strategies

	BULLISH 	**BEARISH** 	**UNDECIDED** 
VOLATILITY RISING 	**5** **LONG CALL**  Liquidate the long put	**7** **LONG PUT**  Liquidate the long call	**13** **LONG STRADDLE**  Hold on
VOLATILITY FALLING 	**8** **SHORT PUT**  Liquidate long call and sell two puts (one liquidates original long put)	**6** **SHORT CALL**  Liquidate long put and sell two calls (one liquidates original long call)	**14** **SHORT STRADDLE**  Sell two calls (one liquidates original long call) and sell two puts (one liquidates original long put)
VOLATILITY UNDECIDED 	**1** **LONG FUTURES**  Sell two puts (one liquidates original long put)	**2** **SHORT FUTURES**  Sell two calls (one liquidates original long call)	Liquidate position

14 Short Straddle



Scenario:
This trader finds a market with relatively high implied volatility. The current feeling is the market will stabilize after having had a long run to its present level. To take advantage of time decay and dropping volatility this trader sells both a call and a put at the same strike price.

Specifics:

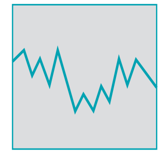
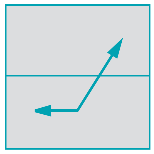
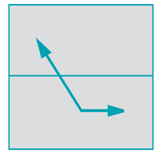
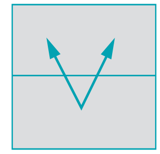
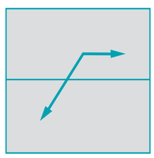
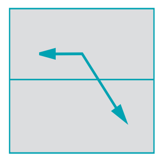
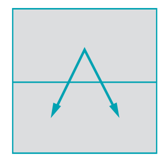
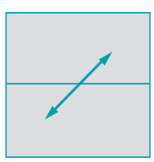
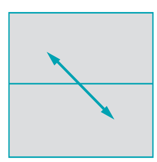
Underlying Futures Contract:	September Japanese Yen		
Futures Price Level:	0.8600		
Days to Futures Expiration:	40		
Days to Options Expiration:	30		
Option Implied Volatility:	12.6%		
Option Position:	Short 1 Sep 0.8600 Call	+ 0.0100	($1250.00)
	Short 1 Sep 0.8600 Put	+ 0.0100	($1250.00)
		+ 0.0200	($2500.00)

At Expiration:

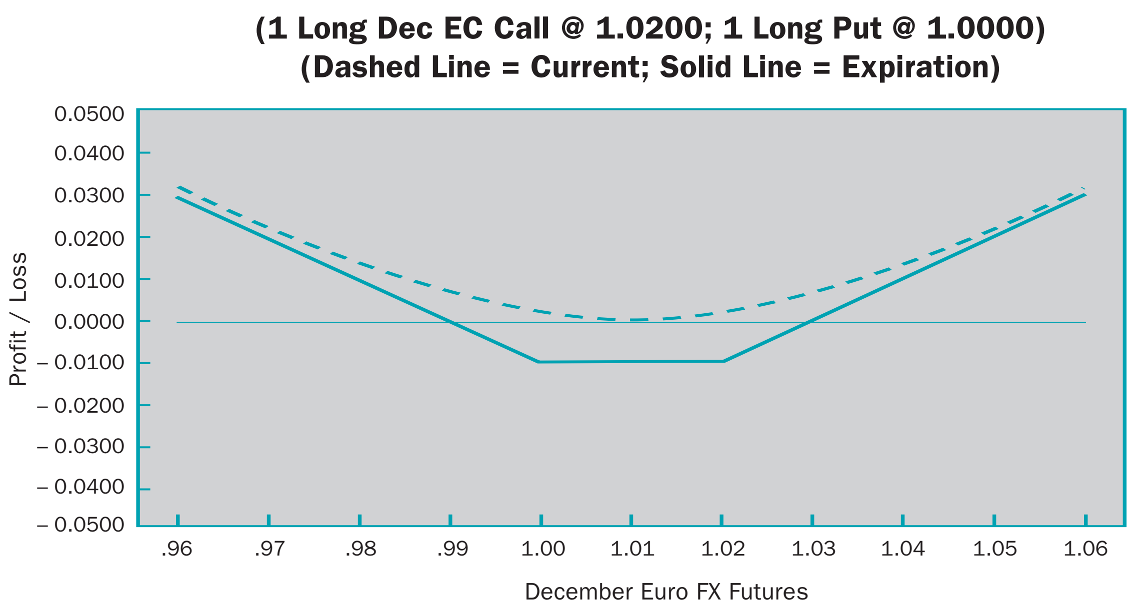
Breakeven:	Downside: 0.8400 (0.8600 strike – 0.0200 credit). Upside: 0.8800 (0.8600 strike + 0.0200 credit).
Loss Risk:	Unlimited; losses increase as futures fall below 0.8400 breakeven or rise above 0.8800 breakeven.
Potential Gain:	Limited to credit received; maximum profit of 0.0200 ($2500) achieved as position is held to expiration and futures close exactly 0.8600 strike.

Things to Watch:
This is primarily a volatility play. A trader enters into this position with no clear idea of market direction but a forecast of less movement (risk) in the underlying futures. Be aware of early exercise. Assignment of a futures position transforms this strategy into a synthetic short call or synthetic short put.

Follow-up Strategies

	BULLISH 	**BEARISH** 	**UNDECIDED** 
VOLATILITY RISING 	**5** **LONG CALL**  Buy two calls (one liquidates original short call) and liquidate short put	**7** **LONG PUT**  Buy two puts (one liquidates original short put) and liquidate short call	**13** **LONG STRADDLE**  Buy two calls (one liquidates original short call) and buy two puts (one liquidates original short put)
VOLATILITY FALLING 	**8** **SHORT PUT**  Liquidate short call	**6** **SHORT CALL**  Liquidate short put	**14** **SHORT STRADDLE**  Hold on
VOLATILITY UNDECIDED 	**1** **LONG FUTURES**  Buy two calls (one liquidates original short call)	**2** **SHORT FUTURES**  Buy two puts (one liquidates original short put)	Liquidate position

15 Long Strangle



Scenario:

This trader looks at the low implied volatility and feels that options are relatively cheap. The thinking here is that this market will have a very big move. However, the trader is not sure which way it will be, so he decides to buy both a call and a put. The trader saves on premiums by buying both options out-of-the-money. However, the trader must get an even larger move than a long straddle to make this strategy profitable by expiration.

Specifics:

Underlying Futures Contract:	December Euro FX		
Futures Price Level:	1.0100		
Days to Futures Expiration:	65		
Days to Option Expiration:	55		
Option Implied Volatility:	11.3%		
Option Position:	Long 1 Dec 1.0200 Call	– 0.0500	($ 625.00)
	Long 1 Dec 1.0000 Put	– 0.0048	($ 600.00)
		– 0.0098	($1225.00)

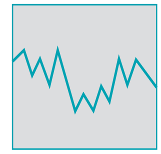
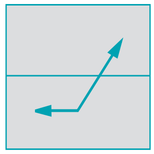
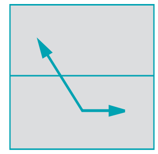
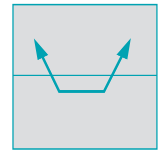
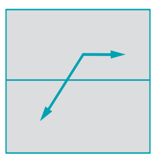
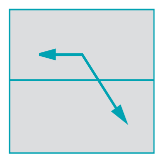
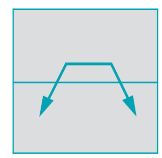
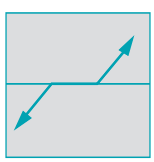
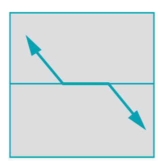
At Expiration:

Breakeven:	Downside: 0.5002 (1.0000 strike – 0.0098 debit). Upside: 1.0298 (1.0200 strike + 0.0098 debit).
Loss Risk:	Losses bottom at 0.0098 with a maximum loss between 1.0200 and 1.0000 strikes.
Potential Gain:	Unlimited; gains begin below .9902 and increase as futures fall. Also, gains increase as futures rise past 1.0298.

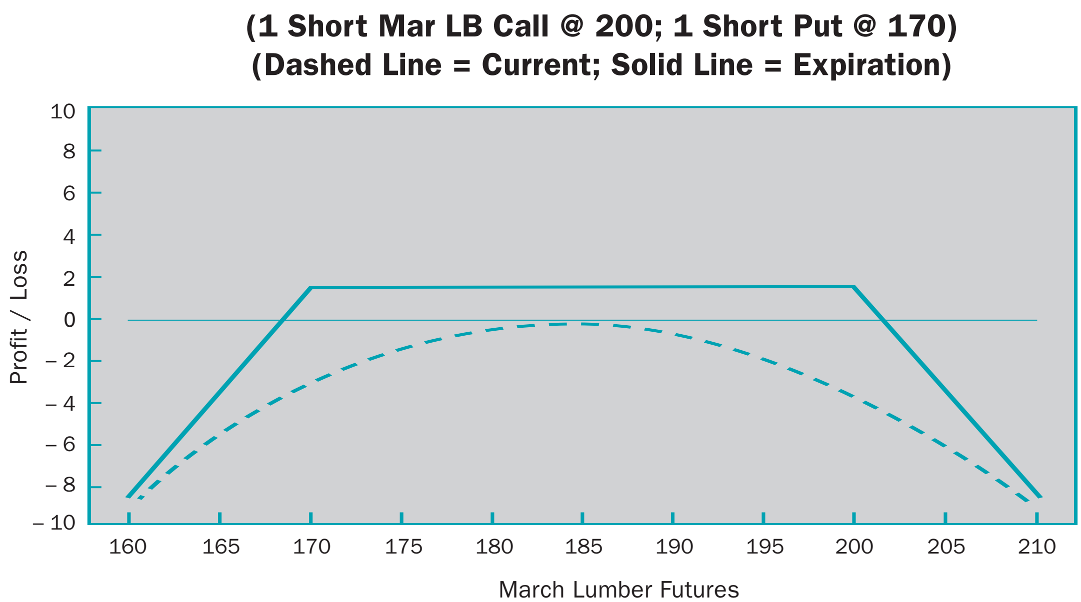
Things to Watch:

This is primarily a volatility play. A trader enters into this position with no clear idea of market direction but a forecast of greater movement in the underlying futures.

Follow-up Strategies

	BULLISH 	BEARISH 	UNDECIDED 
VOLATILITY RISING 	**5 LONG CALL**  Liquidate long put	**7 LONG PUT**  Liquidate long call	**15 LONG STRANGLE**  Hold on
VOLATILITY FALLING 	**8 SHORT PUT**  Sell two puts (one liquidates original long put) and liquidate the long call	**6 SHORT CALL**  Sell two calls (one liquidates original long call) and liquidate the long put	**16 SHORT STRANGLE**  Sell two calls (one liquidates original long call) and sell two puts (one liquidates original long put)
VOLATILITY UNDECIDED 	**3 SYNTHETIC LONG FUTURES (SPLIT STRIKE)**  Sell two puts (one liquidates original long put)	**4 SYNTHETIC SHORT FUTURES (SPLIT STRIKE)**  Sell two calls (one liquidates original long call)	Liquidate position

16 Short Strangle



Scenario:
This trader finds current implied volatility at relatively high levels. The expectation now is for a very lackluster trading month with no trend, and reduced volatility. The trader could sell a straddle, but feels more comfortable with the wider range of maximum profit of the short strangle.

Specifics:

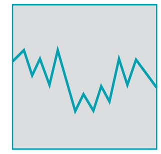
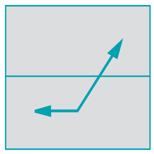
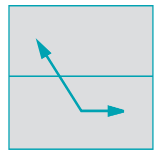
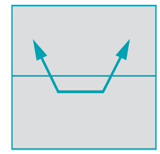
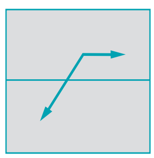
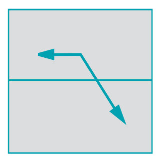
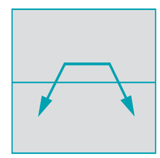
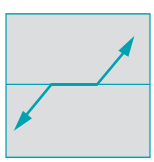
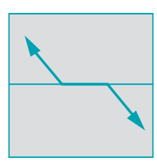
Underlying Futures Contract:	March Lumber		
Futures Price Level:	185.00		
Days to Futures Expiration:	65		
Days to Option Expiration:	45		
Option Implied Volatility:	19.4%		
Option Position:	Short 1 Mar 200.00 Call	+ 0.80	($120.00)
Long 1 Dec 1.0000 Put	Short 1 Mar 170.00 Put	+ 0.60	($ 90.00)
		+ 1.40	($210.00)

At Expiration:

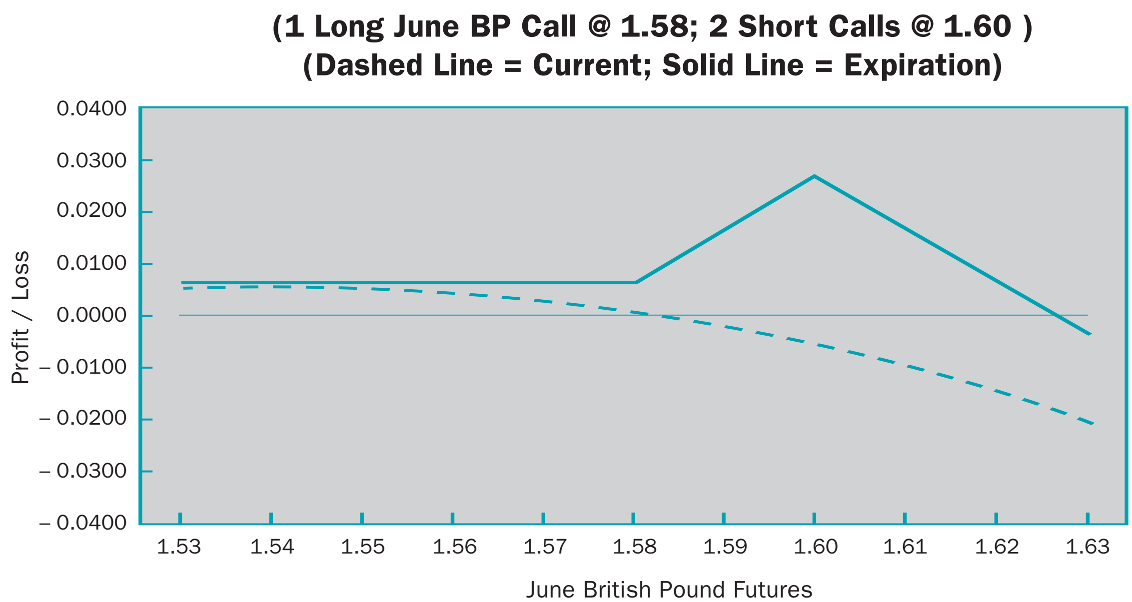
Breakeven:	Downside: 168.60 (170.00 strike – 1.40 credit). Upside: 201.40 (200.00 strike + 1.40 credit).
Loss Risk:	Unlimited; losses continue to mount as futures fall below 168.60 breakeven or rise above 201.40 breakeven.
Potential Gain:	Maximum gains occur between strikes (a 30.00 range of maximum profit).

Things to Watch:
There is a high probability that futures will expire in this range, thereby yielding the maximum profit. However, the profit received is relatively small for the amount that could be at risk if futures were to rally or drop sharply. Assignment of a futures position transforms this strategy into a synthetic short call or synthetic short put.

Follow-up Strategies

	BULLISH 	**BEARISH** 	**UNDECIDED** 
VOLATILITY RISING 	**5** **LONG CALL**  Buy two calls (one liquidates original short call) and liquidate short put	**7** **LONG PUT**  Buy two puts (one liquidates original short put) and liquidate short call	**15** **LONG STRANGLE**  Buy two calls (one liquidates original short call) and buy two puts (one liquidates original short put)
VOLATILITY FALLING 	**8** **SHORT PUT**  Liquidate short call	**6** **SHORT CALL**  Liquidate short put	**16** **SHORT STRANGLE**  Hold on
VOLATILITY UNDECIDED 	**3** **SYNTHETIC LONG FUTURES (SPLIT STRIKE)**  Buy two calls (one liquidates original short call)	**4** **SYNTHETIC SHORT FUTURES (SPLIT STRIKE)**  Buy two puts (one liquidates original short put)	Liquidate position

17 Ratio Call Spread



Scenario:

This trader finds current implied volatility at relatively high levels. Analysis of this market leads this trader to conclude that British Pound futures will trend very slowly up to about $1.60/pound. Also, there is a small chance that the pound may fall dramatically. The trader, therefore, likes the risk/reward profile of the ratio call spread with this outlook.

Specifics:

Underlying Futures Contract:	June British Pound			
Futures Price Level:	1.5800			
Days to Futures Expiration:	35			
Days to Option Expiration:	25			
Option Implied Volatility:	14.1%			
Option Position:	Long 1 Jun 1.5800 Call	– 0.0232	($1450.00)	
	Short 2 Jun 1.6000 Calls	+ 0.0146	($ 912.50)	x 2
		+ 0.0060	($ 375.00)	

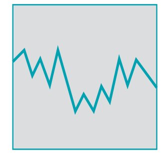
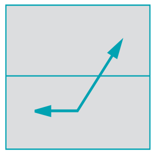
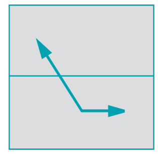
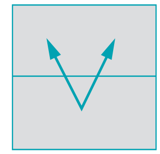
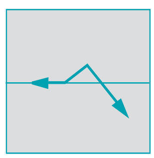
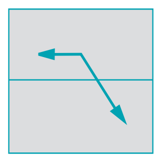
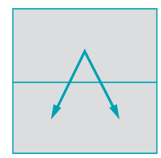
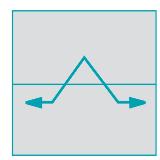
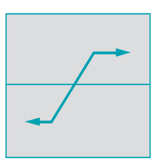
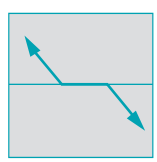
At Expiration:

Breakeven:	1.6260 (1.6000 strike + 0.02 difference between strikes + 0.0060 credit).
Loss Risk:	Unlimited; losses continue to mount as futures rise above 1.6260.
Potential Gain:	Maximum gain of 0.0260 ($1625.00) peaks at 1.6000 strike.

Things to Watch:

Do not enter into this position when there is a chance of an explosive upward move. In this particular situation, a profit is realized if futures fall. However, depending on the strikes chosen, a small loss may also occur.

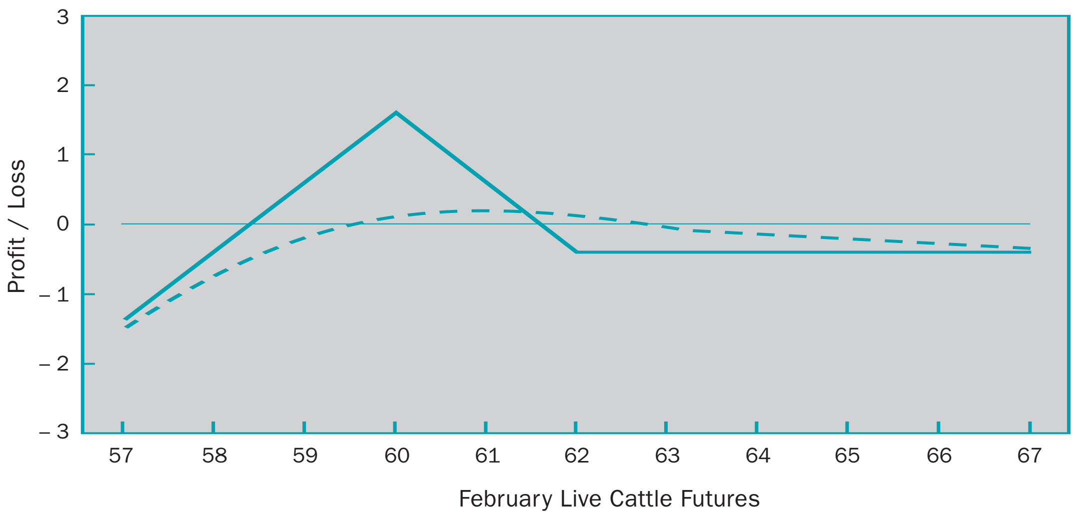
Follow-up Strategies

	BULLISH 	**BEARISH** 	**UNDECIDED** 
VOLATILITY RISING 	**5** **LONG CALL** Liquidate the two short calls 	**7** **LONG PUT** Liquidate the two short calls and sell futures 	**13** **LONG STRADDLE** Liquidate the two short calls and buy a put at same strike as original long call 
VOLATILITY FALLING 	**17*** **RATIO CALL SPREAD** Hold on 	**6** **SHORT CALL** Liquidate long call and liquidate one short call 	**14** **SHORT STRADDLE** Sell a put at same strike as original long call  **11** **LONG BUTTERFLY** Buy a call at an even higher strike than the original position 
VOLATILITY UNDECIDED 	**9** **BULL SPREAD** Liquidate one short call 	**4** **SYNTHETIC SHORT FUTURES (SPLIT STRIKE)** Liquidate one short call and sell futures 	Liquidate position

* All ratio spreads and ratio backspreads need more analysis. These strategies do not fit neatly into any of the nine market scenarios. Define your market expectation more closely and work out examples with different market scenarios before choosing these strategies. Also, ratio strategies are sometimes done at ratios other than one by two.

18 Ratio Put Spread

(1 Long Feb LC Put @ 62; 2 Short Puts @ 60)
(Dashed Line = Current; Solid Line = Expiration)



Scenario:
This trader feels that current implied volatility is at relatively high levels. The thinking here is that the market should consolidate after its big drop. The trader now believes reduced volatility and a slow downward drifting of price are likely. Consequently, an order to execute a ratio put spread is placed with the broker.

Specifics:

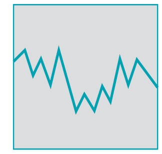
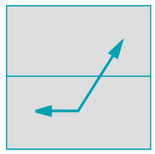
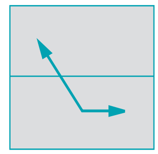
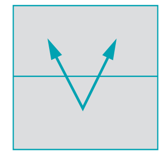
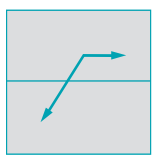
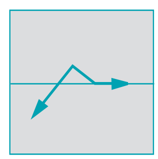
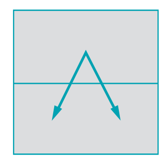
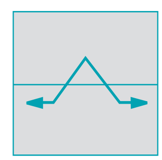
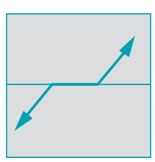
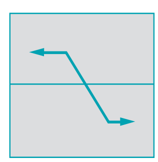
Underlying Futures Contract:	February Live Cattle		
Futures Price Level:	62.50		
Days to Futures Expiration:	30		
Days to Option Expiration:	20		
Option Implied Volatility:	15.5%		
Option Position:	Long 1 Feb 62.00 Put	– 0.675	($270.00)
Long 1 Dec 1.0000 Put	Short 2 Feb 60.00 Puts	+ 0.150	($ 60.00) x 2
		– 0.375	($150.00)

At Expiration:

Breakeven:	58.375 (60.00 strike – difference between strikes + 0.375 debit).
Loss Risk:	Unlimited; losses continue to mount as futures fall below 58.375.
Potential Gain:	Maximum gain of 1.625 ($650) peaks at 60.00 strike.

Things to Watch:
Be very sure that prices will not go into a sharp decline. But, if a slow drop is anticipated this may be a good strategy. A rally will produce a small gain or loss depending on the strikes chosen.

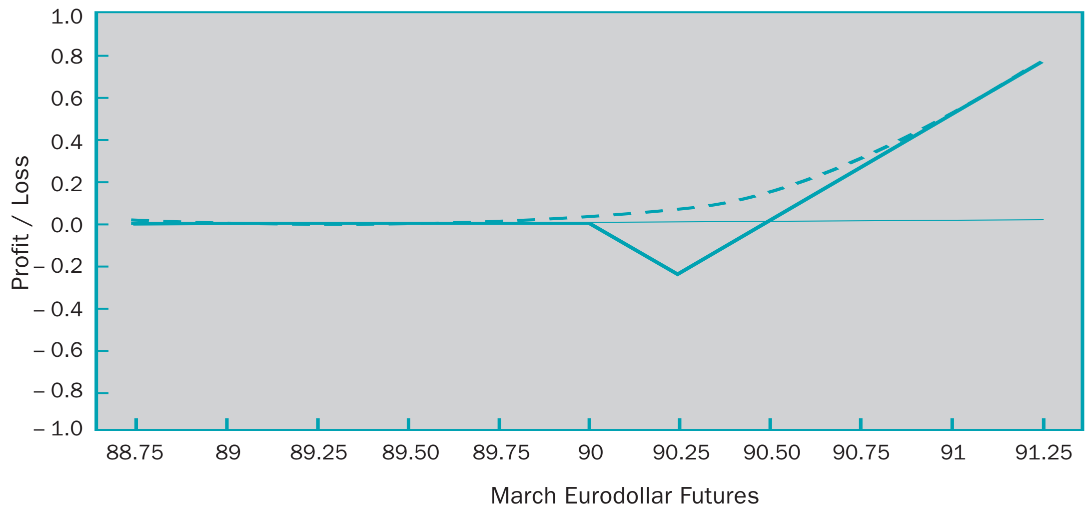
Follow-up Strategies

	BULLISH 	BEARISH 	UNDECIDED 
VOLATILITY RISING 	**5** **LONG CALL** Liquidate the two short puts and buy futures 	**7** **LONG PUT** Liquidate the two short puts 	**13** **LONG STRADDLE** Liquidate the two short puts and buy a call at same strike as original long put 
VOLATILITY FALLING 	**8** **SHORT PUT** Liquidate one short put and liquidate long put 	**18*** **RATIO PUT SPREAD** Hold on 	**14** **SHORT STRADDLE** Sell a call at strike of original long put  **11** **LONG BUTTERFLY** Buy a put at an even lower strike than the original positon 
VOLATILITY UNDECIDED 	**3** **SYNTHETIC LONG FUTURES (SPLIT STRIKE)** Liquidate one short put and buy a futures 	**10** **BEAR SPREAD** Liquidate one short put 	Liquidate position

* All ratio spreads and ratio backspreads need more analysis. These strategies do not fit neatly into any of the nine market scenarios. Define your market expectation more closely and work out examples with different market scenarios before choosing these strategies. Also, ratio strategies are sometimes done at ratios other than one by two.

19 Call Ratio Backspread

(1 Short Mar ED Call @ 90.00; 2 Long Calls @ 90.25)
(Dashed Line = Current; Solid Line = Expiration)



Scenario:
This trader notices the low implied volatility of the options. The expectation now is for the Eurodollar market to rally. But, the trader does not want to lose money if the market moves the other way. A strategy that fits this outlook fairly well is the call ratio backspread.

Specifics:

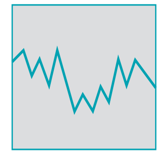
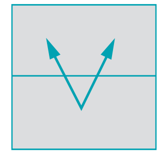
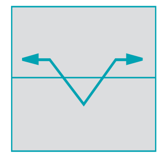
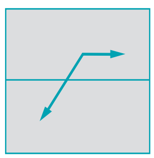
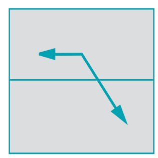
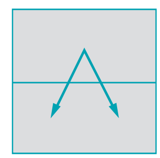
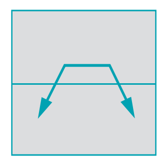
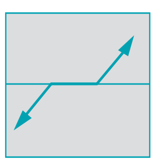
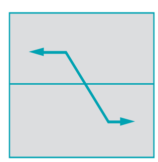
Underlying Futures Contract:	March Eurodollar		
Futures Price Level:	90.00		
Days to Futures Expiration:	60		
Days to Option Expiration:	40		
Option Implied Volatility:	14.6%		
Option Position:	Short 1 Mar 90.00 Call	+ 0.19 ($475.00)	
Long 1 Dec 1.0000 Put	Long 2 Mar 90.25 Calls	– 0.09 ($225.00)	x 2
		+ 0.01 ($ 25.00)	

At Expiration:

Breakeven:	90.49 (90.25 strike + 0.25 difference between strikes – 0.01 credit).
Loss Risk:	Limited to 0.24 ($600); occurs only at 90.25 strike.
Potential Gain:	Unlimited; gains mount as futures rise above the 90.49 breakeven point.

Things to Watch:
The worst situation would be a slow drifting of the price up toward the strike of purchased calls. Increased volatility helps this position, so the trader wants large upward price moves.

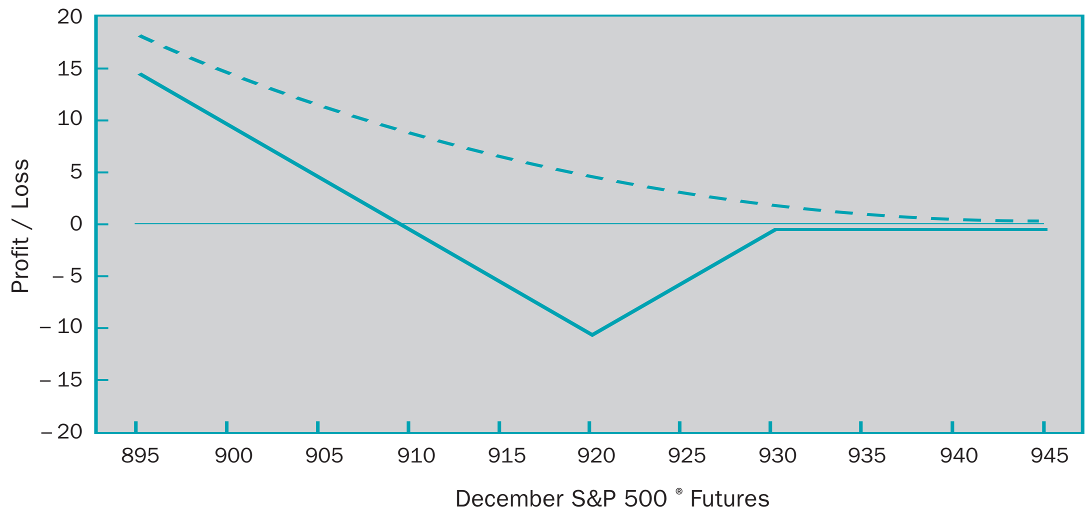
Follow-up Strategies

	BULLISH 	**BEARISH** 	**UNDECIDED** 
VOLATILITY RISING 	**19*** **CALL RATIO BACKSPREAD**  Hold on	**20*** **PUT RATIO BACKSPREAD**  Buy a put at same strike as the short call and sell a call at an even higher strike than the original position	**13** **LONG STRADDLE**  Buy a put at strike of original short call **12** **SHORT BUTTERFLY**  Sell a call at an even higher strike than original position
VOLATILITY FALLING 	**8** **SHORT PUT**  Liquidate two long calls and buy futures	**6** **SHORT CALL**  Liquidate the two long calls	**14** **SHORT STRADDLE**  Liquidate two long calls and sell a put at same strike as original short call **16** **SHORT STRANGLE**  Liquidate two long calls and sell a put at different strike than the original short call
VOLATILITY UNDECIDED 	**3** **SYNTHETIC LONG FUTURES (SPLIT STRIKE)**  Liquidate one long call and buy a futures	**10** **BEAR SPREAD**  Liquidate one long call	Liquidate position

* All ratio spreads and ratio backspreads need more analysis. These strategies do not fit neatly into any of the nine market scenarios. Define your market expectation more closely and work out examples with different market scenarios before choosing these strategies. Also, ratio strategies are sometimes done at ratios other than one by two.

20 Put Ratio Backspread

(1 Short Dec S&P 500 Put @ 930; 2 Long Puts @ 920)
(Dashed Line = Current; Solid Line = Expiration)



Scenario:
The trader is getting very nervous about the stock market. He is sure that the market is overvalued, but not sure when the break will occur. Also, the trader does not want to stand in front of a runaway bull market. This trader is will to NOT participate in upside gains to be certain that the position will be held when the market drops dramatically. He consequently enters into a put ratio backspread.

Specifics:

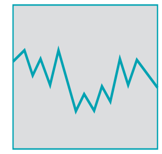
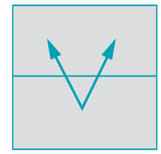
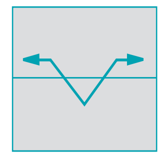
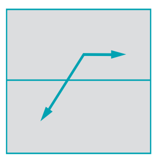
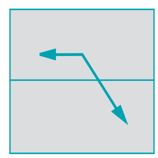
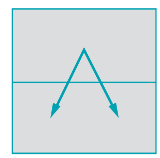
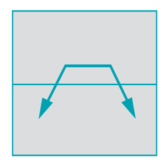
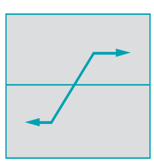
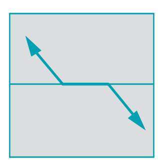
Underlying Futures Contract:	December S&P 500	
Futures Price Level:	940	
Days to Futures Expiration:	105	
Days to Option Expiration:	105	
Option Implied Volatility:	16.2%	
Option Position:	Short 1 Dec 930 Put	+ 7.10 ($1775.00)
Long 1 Dec 1.0000 Put	Long 2 Dec 920 Puts	– 4.00 ($1000.00) x 2
		– 0.90 ($ 225.00)

At Expiration:

Breakeven:	909.10 (920.00 strike – 10.00 difference between strikes – 0.90 debit).
Loss Risk:	Limited; losses bottom out at strike of long puts. At 920.00 the maximum loss of 10.90 ($2725.00) occurs.
Potential Gain:	Unlimited; gains mount as futures fall past 909.10 breakeven.

Things to Watch:
Depending on the exact strikes chosen, a trader could come away with a small gain or loss if futures continued their rally. The worst scenario is to have a mild bear market with volatility dropping.

Follow-up Strategies

	BULLISH 	BEARISH 	UNDECIDED 
VOLATILITY RISING 	**19*** **CALL RATIO BACKSPREAD**  Buy a call at same strike as the short put and buy a put at an even lower strike than original position	**20*** **PUT RATIO BACKSPREAD**  Hold on	**13** **LONG STRADDLE**  Buy a call at same strike as original short put **12** **SHORT BUTTERFLY**  Sell a put at an even lower strike than original position
VOLATILITY FALLING 	**8** **SHORT PUT**  Liquidate two long puts	**6** **SHORT CALL**  Liquidate two long puts and sell futures	**14** **SHORT STRADDLE**  Liquidate two long puts and sell a call at same strike as original short put **16** **SHORT STRANGLE**  Liquidate two long puts and sell a call at different strike than the original short put
VOLATILITY UNDECIDED 	**9** **BULL SPREAD**  Liquidate one long put	**4** **SYNTHETIC SHORT FUTURES (SPLIT STRIKE)**  Liquidate one long put and sell futures	Liquidate position

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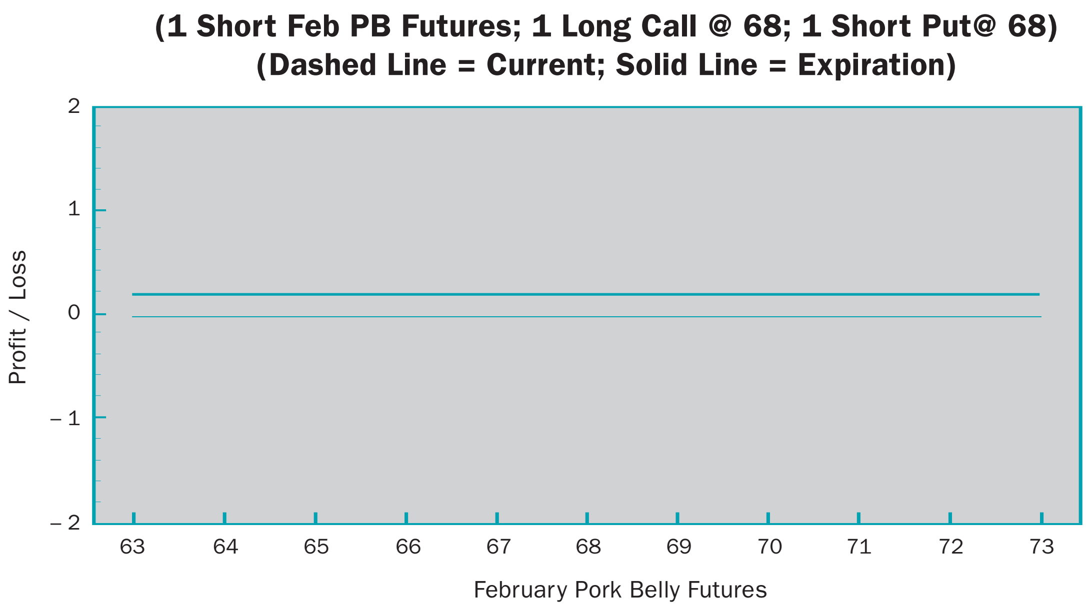
21 Box or Conversion / Reversal



Scenario:
This trader wants to take advantage of mis-pricing between futures and options. There are many ways that combinations of futures and/or options can generate a locked-in profit from mis-pricing. In this case, though, the synthetic long futures (long call + short put at same strike) is cheaper than the underlying futures. This trader can buy the synthetic futures and sell the actual futures to lock in a profit equal to the mis-pricing.

Specifics:

Underlying Futures Contract:	February Pork Bellies	
Futures Price Level:	68.30	
Days to Futures Expiration:	35	
Days to Option Expiration:	10	
Option Implied Volatility:	Call = 34%; Put 37.5%	
Option Position:	Long 1 Feb 68 Call	– 1.675 ($670.00)
	Short 1 Feb 68 Put	+ 1.550 ($620.00)
		– 0.125 ($ 50.00)
Long: Synthetic Futures	68.125	
Short 1 Feb Futures	68.300	
Locked-In Profit	+0.175 ($ 70.00)	

At Expiration:
Profit is "locked in" with amount received equal to the 0.175 ($70) less commission costs.

Things to Watch:
Rarely will the mis-pricing be great enough for off-floor traders to capitalize on it. Unwinding the position can create problems if all of the positions are not liquidated at exactly the same time. Also, be aware of the possible forced early assignment of the short option.

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