Avoiding Option Trading Traps:
What to look for Strategies for Success

Presented by
Lawrence G. McMillan
“The Option Strategist”
www.OptionStrategist.com
5 Common Problem Areas

• Option Buying
• Covered call writing
• Bull Spreads
• LEAPS covered writes
• Running with the crowd
What Makes An Option Purchase Profitable?

• Foremost:
  – Favorable movement by the underlying

• Secondarily:
  – An increase in implied volatility
Call Buying Problems

• Getting too theoretical
• Using the wrong strike price
• Not factoring in implied volatility
• Buying the wrong quantity
Which Option To Buy?

- “The shorter term your horizon, the higher the delta should be.”
- **Day traders**: use the underlying
- **Short-term position traders**: buy in-the-money, short-term
- **Intermediate-term position traders (3 months or more)**: buy at the money.
- **Long-term**: can consider LEAPS, at- or out-of-money
Always Use a Model
(especially in volatile situations)

• It’s okay to buy an “expensive” option if you know that’s what you’re doing
• …but you limit your profitability solely to the primary effect (stock price)
"What-If Analysis"
One Month After Purchase

Bought 3-month call struck @ 80 for $8
(Assumes IV remains constant)

$ Profit/Loss

Stock Price

60 70 80 90 100 110

Doubles at 94
Profits anywhere above 83
**What-If Analysis**

One Month After Purchase

Bought 3-month call struck @ 80
Implied Volatility very high at purchase

IV stays high

Stock rises 10 points in 30 days, yet you lose!

IV falls to "normal" levels
Always Use a Model (for your sanity)

- Eliminates frustration when things go “wrong”
  - For example, “I’m always losing money even when the underlying stock makes a quick 3- or 4-point move in my favor”
The “frustration” problem: Part I, the bid-asked spread

• XYZ = 115 in July;
• Sept 130 call: 8 bid, 9 asked
  Delta: 0.46
• Stock must rise nearly 2.25 to overcome bid-asked spread:

\[
\text{spread} = \frac{\text{distance to overcome “the vig”}}{\text{delta}}
\]
The “frustration” problem: 
Part II, Implied Vol changes

• XYZ = 115 in July;
• Sept 130 call: 8 bid - 9 asked
  Implied Volatility: 95%

Black-Scholes model:
  exposure is 16 cents per percentage point change in implied volatility
The “frustration” problem:

Suppose XYZ stock rises 4 points, but your option is only bid at 8-1/4!! What happened?

(implied volatility dropped to 85%)

Delta:   option gains  +1.84 (4 x 0.46)
Volatility: option loses -1.60 (-10 x 0.16)
Bid-asked spread:        -1.00

Net: a loss of -0.76
is what the model “predicted”

(Maybe you bought that call because it was the lowest strike you could ‘afford’; in-the-money would be better)
How Many Options Should I Buy?

Risk Management

Risk a fixed percent of your account on each trade (3%, e.g.)

Automatically increases when you win and decreases when you lose

Example: Account size = $100,000
You plan to risk 5 points on a stock trade

Therefore, buy 600 shares of stock (3% risk)
How Many Options Should I Buy?

You could figure your risk = premium, but that’s unrealistic.

Option costs 10 points ($1000)
So buy 3,
if your account size is $100,000
(3% risk)
How Many Options Should I Buy?

More likely scenario: you see XYZ break out at 100, and want to buy calls. But if it falls back to 95, the breakout is negated and you want to be out.

What is the call buyer’s risk in this case?
How Many Options Should I Buy?  
*Using the model to estimate risk.*

Oct 100 call costs 10 today ($1000).  
What would it be worth if XYZ fell to 95 in a week? A month?

Black-Scholes model says:
In 1 week, if XYZ = 95, Oct 100 call = 7
Therefore, risk = 3 points ($300)  
so you can buy 10 calls, *not* 3!
Covered Writing Problems

- Failure to understand and limit the risk
- Under-estimating stock ownership
- Unwilling to let stock be called away
Covered Call Writing Positives

• Increased income from stock
• Profits even if stock unchanged
• Less risky than stock ownership (downside protection for stock)
Covered Call Writing Negatives

- Limited Profit Potential
- Large downside risk potential
Covered Call Writing: Example

XYZ: 48
July 50 call: 3

Buy 100 shares XYZ
and sell 1 XYZ July 50 call

Net Debit: 45 points, plus commission
## Results At Expiration

**B XYZ @ 48**

<table>
<thead>
<tr>
<th>Stock Price</th>
<th>Stock Profit</th>
<th>Option Price</th>
<th>Option Profit</th>
<th>Total Profit</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>-$800</td>
<td>0</td>
<td>+$300</td>
<td>-$500</td>
</tr>
<tr>
<td>45</td>
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<td>0</td>
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<tr>
<td>48</td>
<td>0</td>
<td>0</td>
<td>+$300</td>
<td>+$300</td>
</tr>
<tr>
<td>50</td>
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<td>55</td>
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<tr>
<td>60</td>
<td>+$1200</td>
<td>10</td>
<td>-$700</td>
<td>+$500</td>
</tr>
</tbody>
</table>

**Sell July 50 call @ 3**

<table>
<thead>
<tr>
<th>Stock Price</th>
<th>Stock Profit</th>
<th>Option Price</th>
<th>Option Profit</th>
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<td>40</td>
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<td>45</td>
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<tr>
<td>48</td>
<td>0</td>
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<td>50</td>
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<td>10</td>
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</tbody>
</table>
Covered Writing Terms

At Expiration:

Maximum Profit Potential ($500 above 50)
Profit If Unchanged ($300 at 48)
Downside Breakeven Point (45)
Downside Risk (below 45)
Profit Graph At Expiration

Covered Call Writing Example
Profit/Loss At Expiration

Maximum Profit Potential
Pft if Unchanged
Downside Breakeven Point
Downside Risk
Comparison To Owning Stock

Covered Write Vs. Stock Ownership

Profit

Owning stock is better

Covered write is better

Strike

Stock Price
Total Return Concept

• View the covered write as an entity unto itself -- a complete strategy involving both the stock and the option, including dividends received and margin expenses.

• Willing to let the stock be called away

• Calculate the pertinent returns if the write is held until expiration
Writing vs. Stock Already Owned

“If you are unwilling to let your stock be called away, then you are writing naked calls for all intents and purposes.”
Refusing to let stock be called:

Classic “disaster” scenario:

Don’t want stock called away

Plan to roll calls up or out

Rolling up eventually incurs debits

So naked puts are sold to reduce debits

Stock crashes and wipes out the investor (e.g., PG, LLY, XRX, )
A “Better” Approach: Rolling for Credits

• Decide on a price at which you wouldn’t mind being called away
  • Can be far out-of-money
• Plan to be fully covered at that price
• Sell against only a portion today
Rolling for credits: example

Own 10,000 XYZ (70); would sell at 100

Sell 20 June 70’s today

If XYZ = 80, roll up to 30 Sept (?) 80’s

If XYZ = 90, roll up to 60 Sept 90’s

If XYZ = 100, roll up to 100 Dec 100’s

Each roll is to be done for a credit, so at the end you get 100 plus whatever credits.
Final Thoughts

• Strategy has large downside risk, so choose stocks wisely -- don’t just rely on the percentage returns.

• Don’t over-leverage

• Don’t get “stuck” in a stock; use a stop loss of some sort
Bull Spread Problems

...or any vertical spread strategy

- Over-use of strategy
- Failure to realize spread won’t widen quickly
- Enamored with credit spreads
Bull Spread

• Vertical Spread

• Makes money if the underlying rises in price

• Can be implemented with either calls or puts
Call Bull Spread

Buy call at one strike,
sell call (expiring in same month)
at a higher strike.
### Bull Spread - example

**XYZ:** 32

**Oct 30 call:** 3  
**Oct 35 call:** 1

**Results at expiration:** (Buy 1, Sell 1)

<table>
<thead>
<tr>
<th>XYZ</th>
<th>Oct 30 Pft</th>
<th>Oct 35 Pft</th>
<th>Total Pft</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>-$300</td>
<td>+$100</td>
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<tr>
<td>30</td>
<td>-300</td>
<td>+100</td>
<td>-200</td>
</tr>
<tr>
<td>32</td>
<td>-100</td>
<td>+100</td>
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<td>35</td>
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<td>+100</td>
<td>+300</td>
</tr>
<tr>
<td>40</td>
<td>+700</td>
<td>-400</td>
<td>+300</td>
</tr>
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</table>
Call Bull Spread - Profit Graph

BULL SPREAD

Maximum Risk Area

Maximum Profit Area

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Call Bull Spread Mechanics

• Debit Spread

• Risk is fixed = initial debit (2 pts.)

• Maximum profit potential = difference in strikes - initial debit
  = 5 - 2 = 3

• Breakeven point =
  Lower strike + initial debit
  = 30 + 2 = 32
Call Bull Spread: Implementation

- Objective: to reduce risk of owning the long call, but still allow room for a large percentage gain on the upside.

- Often used when options are expensive, especially when the call being sold has a higher implied volatility than the call being bought.
Call Buy vs. Bull Spread

Call Buy vs. Bull Spread
In 30 Days

$ Profit/Loss

70 80 90 100 110 120 130 140

Stock

Jan 90 call: 13
Jan 110 call: 3
Vertical Spread “Problem”

Bull Spread Profit Picture
(originally established 3 months before expiration)

In 30 Days

In 60 Days

Buy 1 call: 90 strike
Sell 1 call: 110 strike
Debit: 10 Points
Countering the “Problem”

• Space the strikes more widely

• Start with strikes out-of-the-money
  (caution: probability of profit is lower when you do this)
Degrees of Aggressiveness

XYZ: 100

Oct 80 call: 22
Oct 90 call: 13
Oct 110 call: 3
Oct 120 call: 1

“High Probability:”
buy Oct 80, sell Oct 90 for 9 point debit

“Aggressive:”
buy Oct 110 call, sell Oct 120 call for a 2 point debit
Bull Spreads Using Puts

- Very similar to call spread: buy lower strike, sell higher strike
- But, this is a *credit* spread
- Profit potential = credit received
- Breakeven = high strike - credit rcvd
- Risk = distance between strikes minus credit received = margin required
- In-money vs. out-of-money?
Put Credit (Bull) Spread Example

\[
\text{XYZ: 80}
\]

\[
\begin{align*}
\text{Jan 65 put: 1} & & \text{Jan 60 put: 0.5} \\
\text{Buy Jan 60 put, Sell Jan 65 put: 1/2 cr} & \\
\text{Profit potential: 0.5 (high probability)} & \\
\text{Risk} = 5 - 0.50 = 4.50 = \text{margin rqmt} & \\
\text{Breakeven} = 65 - 0.50 = 64.50
\end{align*}
\]
Put Credit Spreads

• Deeply out-of-money spreads: Usually the strategy referred to when you see “96% winners!”

• In reality, overall expected return is small: high probability of making a little, small probability of losing much more.

• You are buying an expensive option to protect an expensive option: spinning your wheels?
Out-money Credit Spread Cautions

• Where do you place stop loss?
  • Higher or lower strike?
  • Expiration?
• Early assignment risk is usually something to be avoided
  • Especially with index options
• One loss can wipe out 10 - 15 winners
LEAPS Problems

• “Covered Writing” against LEAPS
  • is more like a bull spread
  • has more risk than you might think
  • can lose money on the upside
Diagonal Spreads

• The general term used to describe any spread in which the options have different expiration dates and different striking prices

• Most typically, one buys a longer-term option and sells and shorter-term option in a diagonal spread (but not always)
Diagonal Bull Spread

Modestly popular strategy, especially where LEAPS are concerned

Buy a long-term option (in-the-money) and continually write short-term options against during its life.

Sometimes thought of as a substitute for covered call writing, as well.
Comparing Bull Spreads

XYZ: 105
April 100 call: 10.5
April 110 call: 5.5
LEAPS (2-yr) 100 call: 26
LEAPS (2-yr) 110 call: 21.5

3 different bull spreads: buy 100 strike, sell 110 strike:
1) “Regular” short-term bull spread: uses April calls
2) “Regular” LEAPS spread: uses the LEAPS calls
3) “Diagonal” buy LEAPS call, Sell April call
Bull Spread Comparison

Bull Spread Comparison at April expiration

LEAPS Bull Spread

Short-term Bull Spread

Diagonal Bull Spread
Diagonal Bull Spreads

LEAPS seems best if it doesn’t fall too far. But what if they all rise a lot?

Bull Spread Comparison
At April Expiration – At High Prices

April
LEAPS
Diagonal
Diagonal Spread “Problem”

You are paying extra time value when you establish the position.

So, if the options all go to parity while you’re in it, you will do worse than a “normal” position would.
How To Avoid Running With The Crowd

BECOME A CONTRARIAN

• Put-call Ratios

• Implied Volatility (high or low)
PUT-CALL RATIOS

For any group of options, you can calculate the ratio of puts traded to calls traded

“Normal”: volume only

“Dollar Weighted”: price times volume
PUT-CALL RATIOS

• Any stock, index or sector
• All equity options
• All futures options on a single underlying commodity (all gold futures options, e.g.)
Contrary Theory

“TOO MUCH” PUT BUYING IS BULLISH FOR THE UNDERLYING

“TOO MUCH” CALL BUYING IS BEARISH FOR THE UNDERLYING
“NORMAL” Put-Call Ratio

\[
\text{Ratio} = \frac{\text{Volume of Puts Traded}}{\text{Volume of Calls Traded}}
\]

- Put buying generates high numbers
- Call buying generates low numbers

Keep a moving average (21 days?)
Equity-only

Put-call

Ratio
Breakdown as NYSE & NASD

21-DAY NYSE vs. NASD PUT/CALL RATIO

1999  2000  Date

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“Weighted” Put-Call Ratio

Dollar volume = option price x option volume

Ratio = \frac{\text{Sum of dollar volume of puts}}{\text{Sum of dollar volume of calls}}

Measures dollars being spent on bearish opinion vs. dollars being spent on bullish opinion
“Weighted” Put-Call Ratio

• Can be computed on the same stocks, futures, or indices as the “normal” ratio

• Generally gives more extreme readings

• Slightly improves the timing of the signals
Comparison of “weighted” and “normal” equity-only ratios
IBM
Put-call Ratio

21-DAY IBM PUT/CALL RATIO

Weighted
What Do You Buy?

General Theory

- 3-month, at-the-money option
- Planning to risk all unless signal reverses or profits build up (trailing stop)
### Stocks With Good Put-Call History

*(generally *not* takeover candidates)*

<table>
<thead>
<tr>
<th>AOL</th>
<th>HWP</th>
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</thead>
<tbody>
<tr>
<td>AXP</td>
<td>IBM</td>
</tr>
<tr>
<td>C</td>
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<td>GE</td>
<td>WMT</td>
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<tr>
<td>GM</td>
<td></td>
</tr>
</tbody>
</table>
Sectors With Good Put-Call History

Banking: $BKX
Pharmaceutical: $DRG
Hong Kong: $HKO
Japan: $JPN
Mexico: $MEX
Morgan Stanley High Tech: $MSH
NASDAQ-100: $NDX
Oil Service: $OSX
Russell 2000: $RUT
Semiconductor: $SOX
CBOE Tech: $TXX
Utility: $UTY
Gold & Silver: $XAU
Natural Gas: $XNG
# Futures With Good Put-Call History

<table>
<thead>
<tr>
<th>Australian Dollar</th>
<th>Lean Hogs</th>
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<tbody>
<tr>
<td>British Pound</td>
<td>Live Cattle</td>
</tr>
<tr>
<td>Cocoa</td>
<td>Natural Gas</td>
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<tr>
<td>Coffee</td>
<td>S&amp;P 500</td>
</tr>
<tr>
<td>Corn*</td>
<td>Silver</td>
</tr>
<tr>
<td>Cotton</td>
<td>Soybeans*</td>
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<tr>
<td>Crude Oil</td>
<td>Sugar</td>
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<tr>
<td>Deutsche Mark</td>
<td>Swiss Franc</td>
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<tr>
<td>Eurodollar</td>
<td>T-Bonds</td>
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<tr>
<td>Gold</td>
<td>Wheat*</td>
</tr>
<tr>
<td>Japanese Yen</td>
<td>*: grains are suspect</td>
</tr>
</tbody>
</table>

*Grains are suspect*
Using Implied Volatility

IMPORTANT BULLISH SIGNAL

1) If a market is collapsing rapidly
   AND

2) Implied volatility is RISING rapidly
   THEN when implied volatility peaks,
   the underlying is ready to rally
$VIX Buy Signals 1997-1999
Rating $VIX Buys 1997-99
Recent $VIX Activity
Tracking Recent Activity

$OEX$

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Mad Cow Disease
More Uses of Implied Volatility

WARNING OF EXPLOSION!

When Implied Volatility reaches extremely low levels

THEN

THE UNDERLYING IS ABOUT TO MAKE AN EXPLOSIVE MOVE!

(but we don’t know in which direction)
Nokia

NOK

193.500 188.000 191.500 20000215

100.0

90.0

80.0

70.0

60.0

50.0

40.0

30.0

20.0

Implied Volatility

Lowest IV to date

Stock Price

Bot Apr 105
str for 26

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The best one of all?
Summary

• Always use a model

• Trade all markets

• Use follow-up strategies

• Only trade in accordance with your personal philosophy
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