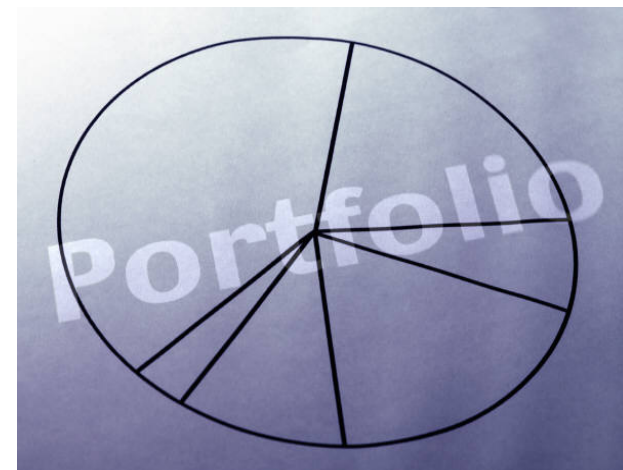




**Montréal
Exchange**

STRATEGY SESSION

BUYING CALLS



Selecting the right call is as important as selecting the right stock

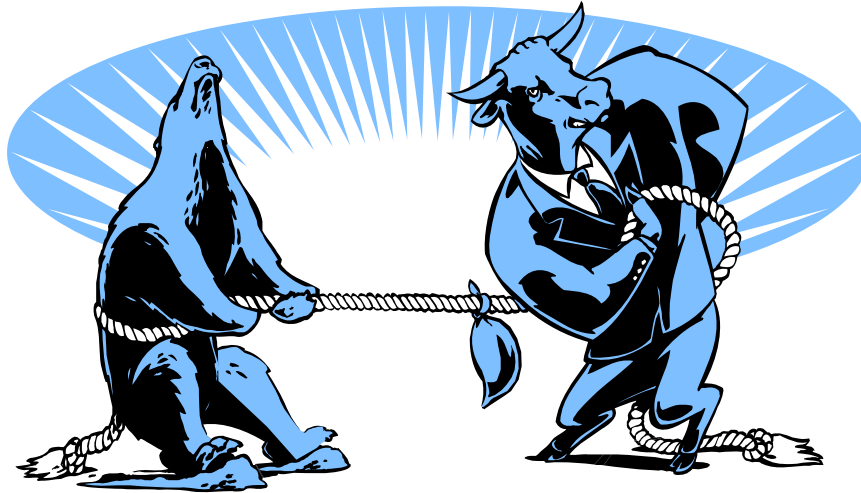
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MARKET UPDATE



Major concerns

- ▶ European debt woes
- ▶ US economic malaise
 - Housing and jobs
- ▶ Lack of political will



European Union?



▶ A Greek Default!

- Estimates of \$1.1 trillion euros of total debt
- Hard or orderly default, contagion, exit from EU
 - Germany will discuss options on Tuesday
- What might we learn from Iceland?

▶ European Financial Stability Facility (EFSF)

- \$440 billion euro bailout fund is no bazooka!
- Woefully inadequate?

▶ Are Eurobonds a solution?



US Response...

Twist, Torque and Shout?

- ▶ On Wednesday Fed announces twist to the tune of US \$400 billion ~ 35% allocated to long term
- About the amount of US governments issuance of new long term debt over the next year (US\$ 13B per month)
- Sell shorter term bonds that are on the Fed's balance sheet and buy longer term maturities
- The objective is to flatten the yield curve.
- ▶ No new money!
- ▶ Markets reaction?
- More to do with statement than Twist?



Potential



- ▶ Make mortgage rates more attractive
- ▶ Kick start housing sector
- ▶ Increase value of US dollar which should dampen inflation expectations
- ▶ Make equities more attractive, which could add to wealth effect



Unintended Consequences



- ▶ A flat yield curve negatively impacts banks
 - It may increase loan demand, but with lower margins, banks will tighten credit standards
 - With no new net effect to credit
- ▶ To enhance margins & maintain profitability, banks may seek out lower quality loans with higher margins
 - That's what got us here in the first place



The Shout Strategy

A new jobs initiative and deficit reduction strategy

- ▶ President Obama unveils \$450 billion jobs program in September.
- ▶ Combination of tax cuts for small business and infrastructure spending
- ▶ Tax millionaires
 - Impact investment capital?
- ▶ Ten year deficit reduction package with no affect on Medicare of Social Insurance?



Potential



- ▶ May create short term jobs which would lower the headline unemployment rate.
- ▶ If consumers feel comfortable that they will have a job, they are more likely to spend.
 - That too would benefit the economy.
- ▶ If markets believe long term debt reduction story, it would be seen as a positive



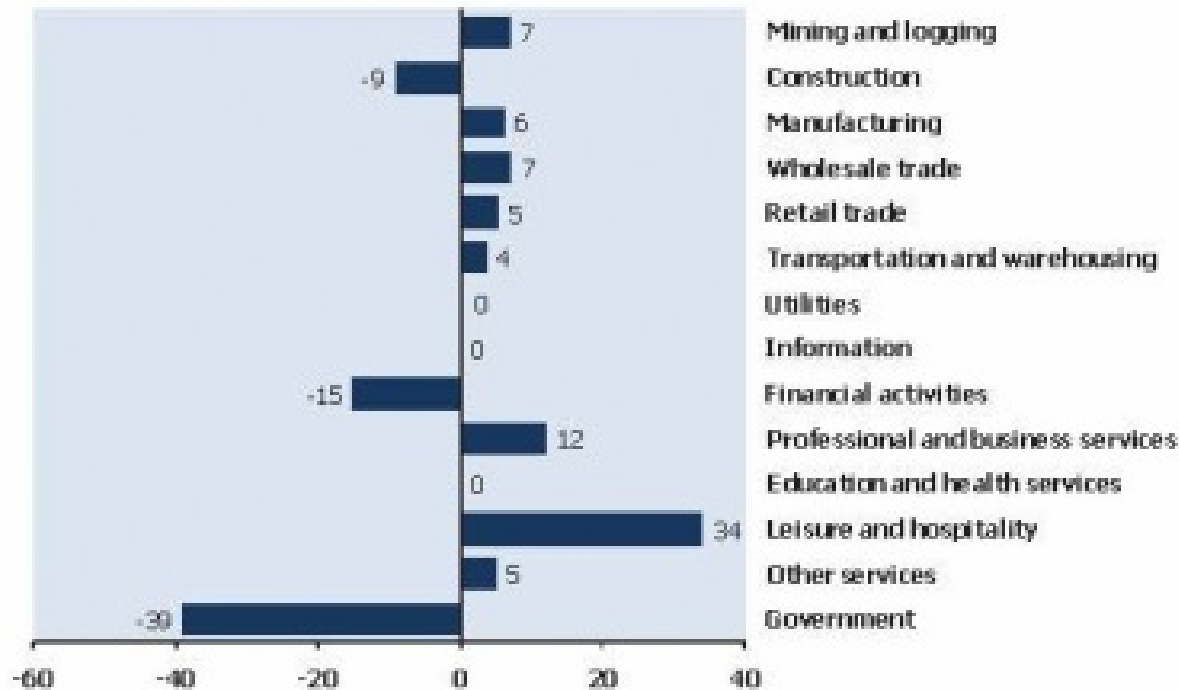
Where Have All The Jobs Gone?

Employment in total nonfarm

Over-the-month change, June 2011

Seasonally adjusted, in thousands

Total nonfarm
10



Source: Bureau of Labor Statistics, Current Employment Statistics survey, July 08, 2011.
Note: Data are preliminary.



The Problem...



- ▶ Misdirected stimulation could lead to stagflation
- ▶ Lackluster job growth may have more to do with government regulations, taxes and uncertainty.
 - A pro business environment?
 - Permanent cut in corporate tax rates.
 - Simplified tax code.
 - None of this is a short term fix!
- ▶ US government gridlock?
 - Obama wants results before Presidential election
 - Republicans would rather wait and see



Macro Outlook



- ▶ Gold rally? Inflation expectations or a weaker US dollar!
 - Neither of which is likely in 2011.
- ▶ Equities; more downside risk than upside potential?
 - S&P 500 range bound ; 1,000 to 1,300 (1136)
 - Canadian market; TSX Composite 10,000 – 12,500? (11,462)
 - Markets will overreact to unexpected surprises both up and down!
 - Earnings will continue to top expectations.
 - Best of class tech stocks will likely lead
 - Growth at any price, next years Facebook IPO.
- ▶ Longer term a barbell approach: cash flow and growth
 - Dividend paying stocks and covered call writing on gold and energy
 - Growth; long calls on best of class technology





Buying Calls



Why Buy Calls?



- ▶ Leverage with limited risk!
- ▶ Call buying requires a bullish view of the underlying stock and being adept at timing the move.
 - Technical analysis generally outweighs fundamentals when evaluating call buying opportunities.
- ▶ Call buying is a short term strategy in which most positions are sold within 30 to 90 days.
- ▶ Increase your odds with better selection metrics
 - Strike price, Timing, Delta, Volatility, Risk and Reward



Pity the poor call buyer?

Time for a reality check



- ▶ Do 80% to 90% of options expire worthless?
 - That statistic may be misleading as it does not account for the way most people trade options.
- ▶ Time is a wasting asset?
 - How significant is this for traders with short term horizons?
- ▶ Low probability of success?
 - Call buyers earn 50% on their investment 20% of the time!
 - Covered call writers earn 20% on their investment 50% of the time.



Time and the call buyer



- ▶ Time works against the call buyer.
- ▶ Time premium is highest when the stock is at the striking price of the call.
- ▶ Time premium is lowest for deep in or out-of-the-money calls.
- ▶ Time premium decays exponentially.
 - Time decay occurs more rapidly as the option nears expiration



Strike price

And its relationship to the stock price



- ▶ In-the-money calls: more expensive, slightly less risk, can be profitable with small upside moves in the underlying stock.
- ▶ At-the-money calls tend to be the most active and efficiently priced, moderate risk, moderate potential.
- ▶ Out-of-the-money calls: cheaper, greater risk of loss, more profitable if stock experiences a sharp rally.
 - Traders should NOT base their decision about which call to buy solely on the basis of cost. You may end up with the right stock but the wrong option.



The Relevancy of “Time”!



- ▶ Short term at-the-money calls will most closely mirror the performance of the underlying stock.
 - Greatest rewards and greatest risk
- ▶ Intermediate term calls offer a moderate amount of risk and reward.
- ▶ Longer term calls carry less risk are more expensive, and less rewarding.
 - Many investors are willing to buy longer term calls because on a percentage basis they are perceived as having good value!



XYZ Assumptions

Date: September 10, 2011

XYZ at \$100 per share

Volatility 50.00%

Dividends 0.00

Interest Rate 2.00%

October Options

| <u>Calls</u> | <u>Strike</u> | <u>Puts</u> |
|--------------|---------------|-------------|
| 11.55 | 90 | 1.39 |
| 8.45 | 95 | 3.28 |
| 5.83 | 100 | 5.67 |
| 3.68 | 105 | 8.52 |
| 1.97 | 110 | 11.80 |

January Options

| <u>Calls</u> | <u>Strike</u> | <u>Puts</u> |
|--------------|---------------|-------------|
| 16.75 | 90 | 6.08 |
| 14.14 | 95 | 8.47 |
| 11.77 | 100 | 11.11 |
| 9.64 | 105 | 13.98 |
| 7.73 | 110 | 17.06 |

November Options

| <u>Calls</u> | <u>Strike</u> | <u>Puts</u> |
|--------------|---------------|-------------|
| 13.62 | 90 | 3.28 |
| 10.77 | 95 | 5.44 |
| 8.28 | 100 | 7.95 |
| 6.12 | 105 | 10.79 |
| 4.27 | 110 | 13.93 |

April Options

| <u>Calls</u> | <u>Strike</u> | <u>Puts</u> |
|--------------|---------------|-------------|
| 20.32 | 90 | 9.15 |
| 17.89 | 95 | 11.72 |
| 15.64 | 100 | 14.48 |
| 13.57 | 105 | 17.40 |
| 11.66 | 110 | 20.49 |



Expectation:

Immediate Significant Move



- ▶ If you are expecting the underlying stock to move substantially in a very short time period, then you should seek the most return and not be as concerned about risk.
 - Buy short term out of the money calls.
 - Calls should have more than a week to expiry



Immediate Significant Move

XYZ at \$100 per share

Date: September 17, 2011

October Options

Stock Price \$ 107.00

| <u>Calls</u> | <u>Strike</u> | <u>Calls</u> | <u>Strike</u> | <u>Return</u> |
|--------------|---------------|--------------|---------------|---------------|
| 11.55 | 90 | 16.46 | 90 | 42.5% |
| 8.45 | 95 | 12.50 | 95 | 48.0% |
| 5.83 | 100 | 9.07 | 100 | 55.5% |
| 3.68 | 105 | 6.18 | 105 | 67.8% |
| 1.97 | 110 | 3.84 | 110 | 95.3% |



Expectation:

Uncertain as to the timing and the size of the move



- ▶ Call buying is not the best strategy given these circumstances.
- ▶ If you are less certain about time, perhaps not sure when the fundamentals will produce the expected results, and are not sure as to the extent of the move.
 - Look to buy in-the-money or at-the-money calls with at least six months to expiry



Uncertain as to timing?



XYZ at \$100 per share

April Options

| <u>Calls</u> | <u>Strike</u> |
|--------------|---------------|
| 20.32 | 90 |
| 17.89 | 95 |
| 15.64 | 100 |
| 13.57 | 105 |
| 11.66 | 110 |

Price Changes

Date: January 17, 2012
Stock Price \$ 107.00

| <u>Calls</u> | <u>Strike</u> | <u>Return</u> |
|--------------|---------------|---------------|
| 20.52 | 90 | 1.0% |
| 17.49 | 95 | -2.2% |
| 14.73 | 100 | -5.8% |
| 12.23 | 105 | -9.9% |
| 9.98 | 110 | -14.4% |






The Mathematics of Call Buying



The Role of “Delta”

Delta is a derivative of the option pricing formula. Delta provides a snapshot as to how much the price of the call is expected to move given a \$1.00 price change – up or down – in the underlying stock.



Date: September 10, 2011
XYZ at \$100 per share
Volatility 50.00%
Dividends 0.00
Interest Rate 2.00%

October Options

| <u>Calls</u> | <u>Strike</u> | <u>Delta</u> |
|--------------|---------------|--------------|
| 11.55 | 90 | 0.80 |
| 8.45 | 95 | 0.68 |
| 5.83 | 100 | 0.53 |
| 3.68 | 105 | 0.37 |
| 1.97 | 110 | 0.25 |



Delta Example

XYZ is expected to rise to \$104 within the next two weeks.

Date: September 10, 2011

XYZ at \$100 per share

Volatility 50.00%

Dividends 0.00

Interest Rate 2.00%

October Options

| <u>Calls</u> | <u>Strike</u> | <u>Delta</u> |
|--------------|---------------|--------------|
| 11.55 | 90 | 0.80 |
| 8.45 | 95 | 0.68 |
| 5.83 | 100 | 0.53 |
| 3.68 | 105 | 0.37 |
| 1.97 | 110 | 0.25 |



Delta Facts and Assumptions



- ▶ Delta is a dynamic derivative. It is a rate of change derivative that adjusts as the value of the underlying stock moves up or down.
- ▶ For our previous slide, and for individual traders, it is best to assume that delta does not change for purposes of short term analysis.



The Impact of Volatility

Traders tend to buy calls on low volatility stocks, because the calls appear cheap!

XYZ at \$100 per share

Volatility

50.00%

October Options

| <u>Calls</u> | <u>Strike</u> | <u>Delta</u> |
|--------------|---------------|--------------|
| 11.55 | 90 | 0.80 |
| 8.45 | 95 | 0.68 |
| 5.83 | 100 | 0.53 |
| 3.68 | 105 | 0.37 |
| 1.97 | 110 | 0.25 |

XYZ at \$100 per share

Volatility

30.00%

October Options

| <u>Calls</u> | <u>Strike</u> | <u>Delta</u> |
|--------------|---------------|--------------|
| 10.20 | 90 | 0.80 |
| 6.45 | 95 | 0.68 |
| 3.50 | 100 | 0.52 |
| 1.50 | 105 | 0.37 |
| 0.20 | 110 | 0.25 |



Volatility Expectations

Ranking within the context of the underlying stock's volatility



- ▶ Traders should have a list of stocks they follow and then a list of potential calls to buy on those stocks.
- ▶ Expectations for the underlying stocks should be based on technical or fundamental analysis or both.
- ▶ Call purchases should be ranked on the basis of potential and risk.
- ▶ Calls should be ranked on the basis of the volatility inherent in the underlying stock. In other words, assume that the underlying stock will rise or fall within the context of its' historic volatility



Ranking Calls



- ▶ Assume no change in volatility
- ▶ Evaluate options for different periods (30, 60, 90 days)
- ▶ Assume underlying stock will move up or down within the parameters of its historic volatility for the time period being evaluated.
- ▶ To adjust annual implied volatility for a specific time, multiply volatility by the square root of time.

$$Vt = V \times \sqrt{t} \quad Vt = .50 \times \sqrt{60/360} = .2041$$



Ranking Calls By Volatility



XYZ at \$100 per share > XYZ at \$106.12
 Implied Volatility 30.00% 60 day 12.25%

January Options

| Calls | Strike | Delta | Value | Pct |
|-------|------------|-------|-------|-------|
| 12.80 | 90 | 0.80 | 15.94 | 24.6% |
| 9.80 | 95 | 0.68 | 12.07 | 23.1% |
| 7.22 | 100 | 0.53 | 8.72 | 20.8% |
| 5.02 | 105 | 0.37 | 5.91 | 17.8% |
| 3.18 | 110 | 0.25 | 3.63 | 14.1% |

XYZ at \$100 per share > XYZ at \$110.21
 Implied Volatility 50.00% 60 day 20.41%

January Options

| Calls | Strike | Delta | Value | Pct |
|-------|------------|-------|-------|-------|
| 16.75 | 90 | 0.80 | 21.13 | 26.2% |
| 14.14 | 95 | 0.68 | 17.65 | 24.9% |
| 11.77 | 100 | 0.53 | 14.52 | 23.3% |
| 9.64 | 105 | 0.37 | 11.71 | 21.5% |
| 7.73 | 110 | 0.25 | 9.22 | 19.4% |



Ranking calls on a risk adjusted basis

Evaluating calls on the basis of risk versus reward



1. Assume, during a fixed period (30, 60, 90 days), that a stock will advance or decline within its implied volatility.
2. Estimate call prices and % gain after advance
3. Estimate call prices and % loss after decline
4. Calculate a ranking by dividing the percent return from 2 by the percent loss from 3.



Ranking Calls Risk vs. Reward



XYZ at \$100 per share Range > \$ 93.88 to \$ 106.12
Implied Volatility 30.00% 60 day 12.25%

January Options

| <u>Calls</u> | <u>Strike</u> | <u>Up</u> | <u>Pct</u> | <u>Down</u> | <u>Pct</u> | <u>Rank</u> |
|--------------|---------------|-----------|------------|-------------|------------|-------------|
| 12.80 | 90 | 15.94 | 24.6% | 6.79 | -46.9% | 0.52 |
| 9.80 | 95 | 12.07 | 23.1% | 4.20 | -57.1% | 0.40 |
| 7.22 | 100 | 8.72 | 20.8% | 2.19 | -69.6% | 0.30 |
| 5.02 | 105 | 5.91 | 17.8% | 0.69 | -86.2% | 0.21 |
| 3.18 | 110 | 3.63 | 14.1% | 0.05 | -98.4% | 0.14 |



Ranking Calls Risk vs. Reward



XYZ at \$100 per share Range > \$ 89.79 to \$ 110.21
 Implied Volatility 50.00% 60 day 20.41%

January Options

| <u>Calls</u> | <u>Strike</u> | <u>Up</u> | <u>Pct</u> | <u>Down</u> | <u>Pct</u> | <u>Rank</u> | <u>Rank</u> |
|--------------|---------------|-----------|------------|-------------|------------|-------------|-------------|
| 16.75 | 90 | 21.13 | 26.2% | 7.34 | -56.2% | 0.47 | 0.52 |
| 14.14 | 95 | 17.65 | 24.9% | 5.21 | -63.1% | 0.39 | 0.40 |
| 11.77 | 100 | 14.52 | 23.3% | 3.42 | -71.0% | 0.33 | 0.30 |
| 9.64 | 105 | 11.71 | 21.5% | 1.93 | -80.0% | 0.27 | 0.21 |
| 7.73 | 110 | 9.22 | 19.4% | 0.70 | -91.0% | 0.21 | 0.14 |





Follow Up Strategies



Follow Up Strategies

Assuming you have a profitable position



1. Do nothing
2. Close out the position at a profit
3. Sell the strike you are long for a profit and roll up to a higher strike
4. Initiate a spread by retaining the original call and selling against that position a call with a higher strike price.



Roll Up - XYZ Rallies to \$110 per share

Investor is long XYZ January 100 call

January Options

| <u>Calls</u> | <u>Strike</u> | <u>Value</u> | <u>Pct</u> |
|--------------|---------------|--------------|------------|
| 16.75 | 90 | 22.42 | 33.9% |
| 14.14 | 95 | 19.20 | 35.8% |
| 11.77 | 100 | 16.26 | 38.1% |
| 9.64 | 105 | 13.60 | 41.0% |
| 7.73 | 110 | 11.19 | 44.8% |

Sell XYZ Jan 100 call @ \$16.26

Buy XYZ Jan 110 call @ \$11.19

Revised Position:

Long XYZ January 110 call net cost: \$6.70



Spread - XYZ Rallies to \$110 per share

Investor is long XYZ January 100 call

January Options

| <u>Calls</u> | <u>Strike</u> | <u>Value</u> | <u>Pct</u> |
|--------------|---------------|--------------|------------|
| 16.75 | 90 | 22.42 | 33.9% |
| 14.14 | 95 | 19.20 | 35.8% |
| 11.77 | 100 | 16.26 | 38.1% |
| 9.64 | 105 | 13.60 | 41.0% |
| 7.73 | 110 | 11.19 | 44.8% |

Sell XYZ Jan 110 call @ \$11.19

Revised Position:

| | | | |
|-------|------------------|---|---------|
| Long | XYZ Jan 100 call | - | \$11.77 |
| Short | XYZ Jan 110 call | + | \$11.19 |
| | | | 0.58 |



Potential Scenarios



| January Options | | Scenarios | | | | |
|-----------------|---------------|--------------|------------|----------|----------|----------|
| <u>Calls</u> | <u>Strike</u> | <u>Value</u> | <u>Pct</u> | <u>1</u> | <u>2</u> | <u>3</u> |
| 16.75 | 90 | 22.42 | 33.9% | 28.51 | 19.47 | 5.25 |
| 14.14 | 95 | 19.20 | 35.8% | 23.96 | 15.54 | 3.13 |
| 11.77 | 100 | 16.26 | 38.1% | 19.76 | 12.05 | 1.47 |
| 9.64 | 105 | 13.60 | 41.0% | 15.95 | 9.01 | 0.23 |
| 7.73 | 110 | 11.19 | 44.8% | 12.55 | 6.42 | 0.05 |

1. XYZ Rallies to \$120
2. XYZ remains unchanged
3. XYZ declines to \$90



Follow Up Action

Assuming you have a losing position



1. Close out the position at a loss
2. “Roll down” to a bull call spread
 - Rolling down should have zero cost
 - If stock recovers, the spread allows you to cut or even eliminate your initial loss
3. “Roll out” to a calendar spread
 - Rolling out will have a cost
 - But the calendar spread gives you time



Rolling down the position



XYZ declines to \$90 per share

January Options

Sell two

| <u>Calls</u> | <u>Strike</u> | <u>Value</u> | <u>Pct</u> |
|--------------|---------------|--------------|---------------|
| 16.75 | 90 | 9.16 | -45.3% |
| 14.14 | 95 | 7.02 | -50.3% |
| 11.77 | 100 | 5.16 | -56.2% |
| 9.64 | 105 | 3.55 | -63.2% |
| 7.73 | 110 | 2.16 | -72.0% |

Equals \$10.32 credit

Buy one



Rolling out the position

XYZ declines to \$90 per share



| January Options | | April Options | | |
|-----------------|------------|---------------|--------|-------|
| Calls | Strike | Value | Pct | Value |
| 16.75 | 90 | 9.16 | -45.3% | 14.08 |
| 14.14 | 95 | 7.02 | -50.3% | 12.02 |
| 11.77 | 100 | 5.16 | -56.2% | 10.13 |
| 9.64 | 105 | 3.55 | -63.2% | 8.41 |
| 7.73 | 110 | 2.16 | -72.0% | 6.84 |

Sell two January 100 calls @

Buy one April 100 call @

Revised Position:

Long April 100 call

Short Jan 100 call



Strategy Comparison



| <i>Ex-ante results</i> | Strategy Rank | | | |
|------------------------|---------------|---|---|---|
| XYZ rallies to \$120 | 3 | 1 | 4 | 2 |
| XYZ remains unchanged | 2 | 4 | 1 | 3 |
| XYZ declines to \$90 | 2 | 4 | 3 | 1 |

1. Do nothing
2. Close position
3. Roll up
4. Spread





Real Life Market Examples



APPLE Inc.




- ▶ Sept 19, 2011, bot 100 APPL Oct 410 calls @ US \$14.496 (APPL @ ~ US \$407.50 at time of purchase)
 - Sept 19, 2011 APPL closed at US \$410.10
- ▶ Sept 21, 2011, sold 50 AAPL Oct 420 calls at US \$15.394 (APPL @ ~ US \$423 at time of sale)
 - Sept 21, 2011, APPL closed at US \$413.89
- ▶ Sept 22, 2011, sold 50 APPL Oct 430 calls at US \$7.950 (APPL @ US \$406 at time of sale)
 - Sept 22, 2011 APPL closed at US \$399.83



Resulting Position

Potential and Risk



| Trade | Security | Contracts | Price | Value |
|-------|--------------------|-----------|--------|-------------|
| Bot | APPL Oct 410 calls | 100 | 14.496 | -\$ 144,960 |
| Sold | APPL Oct 420 calls | 50 | 15.394 | \$ 76,970 |
| Sold | APPL Oct 430 calls | 50 | 7.950 | \$ 39,750 |
| | Net cost (Risk) | | | -\$ 28,240 |

Maximum Potential (APPL at \$430)

| | | | | |
|-------|--------------------|-----|--------|------------|
| Long | APPL Oct 410 calls | 100 | 20.000 | \$ 200,000 |
| Short | APPL Oct 420 calls | 50 | 10.000 | -\$ 50,000 |
| Short | APPL Oct 430 calls | 50 | - | \$ - |
| | | | | \$ 150,000 |



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