Option Contract Adjustments
New Methods as of September 2007

Presented by
The Options Industry Council
Option Contract Adjustments

Options involve risks and are not suitable for everyone. Prior to buying or selling options, an investor must receive a copy of *Characteristics and Risks of Standardized Options*. Copies may be obtained by contacting your broker or The Options Industry Council at One North Wacker Drive, Chicago, IL 60606.

In order to simplify the computations, commissions, fees, margin interest and taxes have not been included in the examples used in these materials. These costs will impact the outcome of all stock and options transactions and must be considered prior to entering into any transactions. Investors should consult their tax advisor about any potential tax consequences.

Any strategies discussed, including examples using actual securities and price data, are strictly for illustrative and educational purposes only and are not to be construed as an endorsement, recommendation, or solicitation to buy or sell securities. Past performance is not a guarantee of future results.
Presentation Outline

- Standardized contract terms
- What are adjustments?
- Significant terms
- 2 for 1 and 4 for 1 stock splits
  - 2 for 1 split example
- All other stock splits and stock distribution
  - 3 for 2 split
  - 4 for 3 split
  - 10% stock distribution
- Mergers, takeovers, spin-offs
  - merger – all cash
  - merger – stock and cash
Note

- Most contract adjustment scenarios used in this presentation are typical but hypothetical. In some cases, however, real-life examples are used.

- Beyond common stock splits, the terms of each corporate action are different, and the possibilities are infinite.

- The contract adjustments made to any class of equity options involved in an underlying corporate action (split, distribution, merger, etc.) are carefully outlined in bulletins published online by both The OCC and the exchanges listing those option classes.
For More on Contract Adjustments

Go to comprehensive online class: 

*Contract Adjustments*

OIC Website: [www.888options.com](http://www.888options.com)
Terms of Equity Option Contracts

• Standardized since exchange-listed and traded
  - secondary marketplace made possible
  - auction market – competitive bids and offers
  - facilitates opening and closing of positions

• Assumption made in this class
  - contracts being adjusted = regular equity options
  - not previously adjusted
  - required adjustments made on public information
Standardized Contract Terms

- Terms of each put and call:
  - underlying stock
  - unit of trade = 100 underlying shares
  - strike price (whole number + 1/8 increments)
  - expiration month/date
  - American-style exercise
  - contract multiplier = 100

- Premium paid or received:
  - quoted price x 100 multiplier
  - $3.50 price x 100 = $350 total premium
What are Contract Adjustments?

- Changes to contract terms due to underlying corporate actions:
  - stock splits
  - special cash and/or stock distributions
  - take-overs
  - mergers
  - spin-offs
  - corporate reorganization

- These decisions made by corporations
  - stock and option markets respond
Adjustments

OCC By-Laws: Article VI – Section 11:

• All adjustments to the terms of cleared contracts are made by adjustment panels of the OCC Securities Committee
  - two representatives of each exchange that trades the affected options
  - a representative of OCC who votes only in the event of a tie

• The adjustment panels consider each corporate event on a case-by-case basis
Investors’ Awareness

• Bulletins issued: OCC and listing exchanges
  - corporate actions announced and/or effected
  - updated as necessary

• Investors’ responsibilities:
  - stay informed about positions
  - awareness of corporate actions
  - understand fully terms of corporate actions
  - understand ramifications of adjustments
  - know important contract adjustments dates
Where to Find Contract Adjustments?

OCC Website: www.theocc.com
(Home Page)
Typical Adjustments

• Adjustments may be made to:
  - number of contracts held
  - available strike prices (and codes)
  - units of trade ("deliverables")
  - option symbols

• Review: “XYZFL” option
  - “XYZ” = option symbol
  - “F” = expiration month code (June call)
  - “L” = strike price code (60)
  - sometimes referred to as “tickers”
  - together = XYZ June 60 call
Significant Terms: “Deliverable”

- Same as “unit of trade”
- Generally 100 underlying shares
- May be adjusted to include:
  - newly distributed shares (same or other)
  - distributed cash
  - rights
  - bonds
  - other forms of securities
- Changes hands when call/put exercised
Significant Terms: “Aggregate Exercise Amount”

- Also known as “aggregate contract value”
- Equals strike price x 100 multiplier
  - total amount paid/received for deliverable
  - when long option exercised or short is assigned

- Example: XYZ June 60 call
  - aggregate exercise amount = $60 x 100 = $6,000
  - unadjusted option = 100 shares for $6,000
  - adjusted option = new deliverable for $6,000

- Determines adjusted option ITM/ATM amount
Significant Terms: “Cash-in-Lieu Amount”

- **Fixed** cash amount attached to deliverable
  - in lieu of fractional shares after some splits or stock distributions
  - OCC declares stock value on which cash amount based

- Example: 4 for 3 split
  - stockholder receives 1.3333 share for each held
  - deliverable theoretically = 133.33 shares

- Deliverable (when option exercised):
  - 133 shares plus...
  - cash-in-lieu of .33 share
Adjustment Methods as of September 2007

• Adjusted as in past
  - 2 for 1 and 4 for 1 stock splits
  - mergers, take-overs, spin-offs, reorganizations

• New adjustment methods
  - all other splits
  - all special stock + some cash distributions
  - as existing method for mergers, take-overs, etc.

• Reasons for new methods
  - avoid need for rounding strike prices
  - avoid need for adjusting multiplier – always 100
2 for 1 and 4 for 1 Stock Splits: Method in Continued Use

Adjustments are made to:

- Number of outstanding contracts in account
  - proportionally increased
  - 2 for 1: 1 call before split = 2 calls after split
  - 4 for 1: 1 call before split = 4 calls after split

- Strike prices and strike price codes
  - proportionally decreased
  - 2 for 1: June 60 calls before = June 30 calls after
  - 4 for 1: June 100 calls before = June 25 calls after
2 for 1 and 4 for 1 Stock Splits: Method in Continued Use

Adjustments not made to:

• Deliverable
  - 100 underlying split shares

• Contract multiplier
  - remains 100
  - for premium calculation
  - for calculating aggregate exercise amounts

• Option symbols

New class of options not listed after split
2 for 1 Split: Example

- **Long 1 XYZ June 60 call**

- **XYZ splits 2 for 1**
  - long 1 June 60 call → long 2 June 30 calls
  - deliverable → 100 split XYZ shares (per call)
  - existing XYZ options → XYZ options

- **Aggregate exercise amounts**
  - before: $60 strike x 100 multiplier = $6,000
  - after: $30 strike x 100 multiplier = $3,000 (per call)

- **Premium = quoted price x 100 multiplier**
Other Splits and Stock Distribution: New Method

• Adjustments are made to:
  - deliverable
  - option symbols

• Adjustments not made to:
  - strike prices (and codes)
  - number of outstanding contracts in account
  - 100 contract multiplier

**New class of options is listed after split**
When Deliverable Is Adjusted

- Per new adjustment methods for
  - splits other than 2 for 1 and 4 for 1
  - special stock distributions (dividends)
  - some special cash distributions (strike not decreased)

- To calculate value of underlying for option pricing and in-, at- and out-of-the-money amounts
  - current underlying value × deliverable
  - plus any cash-in-lieu amount (if applicable)

- Example in each following scenario
3 for 2 Split: Example

• Long 1 NVDA Oct 35 call (option symbol = UVA)

• NVDA splits 3 for 2
  - long 1 Oct 35 call → long 1 Oct 35 call
  - deliverable → 150 (3 ÷ 2 x 100) split NVDA shares
  - existing UVA options → UWV options

<table>
<thead>
<tr>
<th>Strike</th>
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3 for 2 Split: Example

- Aggregate exercise amount
  - $35 strike x 100 multiplier = $3,500
  - after exercise: 150 split shares bought/sold for $3,500

- Premium = quoted price x 100 multiplier
3 for 2 Split: Example

• NVDA at $36.67 after split

• Adjusted Oct 35 call $1.67 in-the-money?
  - aggregate exercise amount = $35 x 100 = $3,500
  - deliverable value = $36.67 x 150 shares = $5,500.50
  - option is $2,000.50 in-the-money!
  - $20.00 (rounded) to buy or sell for intrinsic value

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4 for 3 Split: Example

• Long 1 XYZ June 40 call

• XYZ splits 4 for 3
  - long 1 June 40 call → long 1 June 40 call
  - existing XYZ options → XXX options
  - deliverable → 133.33 \((4 \div 3 \times 100)\) split XYZ shares
  - OCC: cash-in-lieu based on split XYZ at $31.50
  - cash-in-lieu of .33 XYZ share = $31.50 \times .33 = $10.40

• Adjusted deliverable (per contract)
  - 133 split shares + $10.40 cash
4 for 3 Split: Example

- **Aggregate exercise amount**
  - $40 strike x 100 multiplier = $4,000
  - exercise: 133 split shares + $10.40 bought/sold for $4,000

- **XYZ at $31.50 after split**

- **Adjusted June 40 call $8.50 out-of-the-money?**
  - aggregate exercise amount = $40 x 100 = $4,000
  - deliverable = $31.50 x 133 shares + $10.40 = $4,200
  - option is $200 in-the-money!
  - $2.00 to buy or sell for intrinsic value
5% Stock Dividend/Distribution

• Long 1 VGR Oct 22.5 call

• VGR declares 5% special stock dividend
  - 100 shares before → 105 shares after
  - 1 VGR Oct 22.5 call → 1 GVX Oct 22.5 call
  - adjusted deliverable → 105 VGR shares

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5% Stock Dividend/Distribution

• Aggregate exercise amount
  - $22.5 strike x 100 multiplier = $2,250
  - after exercise: 105 shares bought/sold for $2,250

• Premium = quoted price x 100 multiplier
5% Stock Dividend/Distribution

- VGR at $22.60 after stock dividend

- Adjusted Oct 22.5 call $.10 in-the-money?
  - aggregate exercise amount = $22.5 x 100 = $2,250
  - deliverable = $22.60 x 105 shares = $2,373
  - option is $123 in-the-money!
  - $1.23 to buy or sell for intrinsic value

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Odd Stock Dividend/Distribution

- **Note**
  - if fractional shares distributed - deliverable would include whole shares + cash

- **Example**
  - if .6340 share distributed per share held
  - deliverable → 163.40 shares
  - adjusted to 163 shares + cash-in-lieu of .40 share
Mergers/Takeovers/Spin-Offs: Method in Continued Use

- Adjustments are generally made to:
  - deliverable
  - option symbols

- Adjustments are not made to:
  - strike prices (and codes)
  - number of outstanding contracts in account
  - 100 contract multiplier

**New** class of options **may** be listed after adjustments are made
Merger – All Cash

• XYZ Company merging into ABC Company
  - ABC will pay $95 per XYZ share
  - 1 XYZ share → right to receive $95 cash
  - 100 shares → right to receive $9,500

• After consummation date
  - trading on stock and options halts concurrently
  - settlement: OCC’s cash settlement system

• Payment
  - difference: aggregate contract value and cash deliverable
  - cash payment fixed
  - in-the-money options have value – others do not
## Merger – All Cash

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<tr>
<th>Call Option</th>
<th>Deliverable Value</th>
<th>Aggregate Exercise Value</th>
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<td>$500</td>
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<td>XYZ 95 call at-the-money</td>
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<td>XYZ 100 call out-of-the-money</td>
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<thead>
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<th>Put Option</th>
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Merger – Stock and Cash

- XYZ Company merging into ABC Company

- ABC will pay for each XYZ share
  - .50 share ABC stock + $3.50 cash
  - for 100 shares = 50 shares ABC + $350

- Long 1 XYZ June 25 call

- Contract adjustments
  - long 1 XYZ June 25 call → long 1 XXX June 25 call
  - deliverable → 50 shares ABC + $350
Merger – Stock and Cash

• Aggregate exercise amount
  - $25 strike x 100 multiplier = $2,500

• After exercise:
  - 50 ABC shares + $350 cash changes hands for $2,500

• Premium = quoted price x 100 multiplier
  - reflects value of existing ABC shares + fixed $350

  New class of options will be listed after adjustments are made.
Merger – Stock and Cash

- With ABC currently at $31 after adjustments

- Deliverable value
  - 50 ABC x $31/share = $1,550
  - fixed $350 cash amount
  - $1,900 total

- Adjusted June 25 call in- or out-of-the-money?
  - aggregate exercise amount = $25 x 100 = $2,500
  - current deliverable value = $1,900
  - option is $600 ($6.00) out-of-the-money!
Conclusion

- Investor’s responsibility to understand ramifications of adjustments made to contracts
- All adjustments outlined in OCC and exchange bulletins
- Care should be taken in closing out correct contracts after adjustments
- Adjusted options not always in- or out-of-the-money as they may seem at first glance
- Beware of arbitrage opportunities that are not really there – understand contract adjustments fully
- For adjustment clarification consult your broker or representative at 1-888-OPTIONS
OIC is having a 2007 Year-End Sale Nov. 1 – Dec. 31!

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