Equity Derivatives Strategy

Derivatives for Asset/Fund Managers

Eli Vichman

Head of Emerging Markets Volatility Trading, RBS

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Why use Derivatives? – Transforming risk profile and Enhancing returns

Transform Risk Profiles

- Investors are usually not risk-neutral, so can find opportunities in the derivatives market as they are typically priced as “risk-neutrally”
- More importantly, derivatives allow investors to manage the distribution of their potentials returns, not just their expectation
  - Risk Reduction
  - Return enhancing
- The alteration of portfolio risk-rewards may only be achieved using derivatives.
- Derivatives can be used to quickly exploit opportunities across asset classes
  - Alpha transport
  - Cash Equitisation
  - Portfolio transition

Enhancing returns

- Embedded Alpha: Getting paid to buy stock lower down or sell stock higher up.
- Financing and Dividend plays: Take advantage of the stock borrow market
- Tax management.
- Relative value trading.
- Taking advantage of implied volatility.
Who use Derivatives?

**Asset managers**
- Return enhancement, e.g. call overwrite
- Risk management, e.g. hedging with puts.
- Alpha transport
  - Cash equitisation
  - Portfolio Transitions
  - Asset allocation
- Risk recycling

**Hedge funds (directional and macro)**
- Leverage
- Risk management
- Cash flow management
- Alpha transport

**Hedge funds (volatility arbitrage)**
- Relative Value ("arbitrage")
- Risk management
- Cash flow management
- Risk recycling

**Fund-of-funds**
- Alpha transport
- Risk management

**Corporates**
- M&A
- Asset/Liability management
- Risk management

**Retail, Private banks and their clients**
- Investment
- Market Access
- Risk management (mainly PB)

**Pension funds / Insurance companies**
- Risk management – portfolio hedging
- Asset/Liability management
- Regulatory
- Alpha transport
- Risk recycling
Products

Commonly used products

• Delta One
  • Forwards/Futures
  • Swaps – TRS/PRS
  • Exchange Traded Funds - ETFs
• Options
  • Vanilla calls and puts
  • Barrier options
  • Outperformance options
  • Basket options (average or “rainbow”)
• Volatility and correlation products
  • Variance and volatility swaps
  • Options on volatility/variance
  • Covariance and correlation swaps
• Dividend Swaps
• Dispersion

Underlyings

• Indices
• Single Stocks
• Sectors and ETFS
• Baskets
• Hybrid baskets
• Synthetic indices

Wrappers

• OTC Swaps - ISDA
• Exchange traded
• Certificates (collateralised)
• Structured notes
• Listed Warrants
• Funds
• SPV
• CPPI
• Access products
• p-Notes
• LEPOs
Current climate - What should you be doing now and why?

What we are seeing:

- Massive underperformance of skew & low levels of implied volatility
- ATM implied volatility trading near historic lows despite 15% move down in spot
- Market makers now prepared to sell downside optionality for less
- Demand for upside participation, playing the bounce

What does this mean?

- Cheap portfolio protection, low implied volatility AND shallow skew have brought the cost of put protection down
- Overwriting upside calls enables you to sell rich implied volatility, can collect good premium for selling OTM calls
- Low absolute levels of implied volatility mean stock replacement has gotten cheaper:

<table>
<thead>
<tr>
<th>.RDXUSD 16-Dec-11 100% C E</th>
<th>Implied Vol</th>
<th>39.24%</th>
<th>=&gt;</th>
<th>29.24%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Option Price %</td>
<td>11.50%</td>
<td>=&gt;</td>
<td>8.50%</td>
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</tbody>
</table>

- Stock replace: Why tie up capital when can participate with limited downside risk?
- Since upside calls are in demand cheapest way to participate is via call spreads:

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<th>% price</th>
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</tr>
</thead>
<tbody>
<tr>
<td>.RDXUSD 16-Dec-11 100% C E</td>
<td>8.50%</td>
<td>29.24%</td>
</tr>
<tr>
<td>.RDXUSD 16-Dec-11 115% C E</td>
<td>3.10%</td>
<td>26.90%</td>
</tr>
<tr>
<td></td>
<td>5.40%</td>
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Transforming risk profiles – enhancing return or reducing risk

**Strategy**

**Selling naked calls** – collect premium, with the view that the market will fall.

**Call overwriting** – selling calls at a “target” price enhances yield through collecting premium. The stock is called away, but at an acceptable price, if it rallies beyond the strike.

**Put underwriting** – equivalent to buying the stock at a lower price, while also collecting premium.

**Buying collars** – offers limited downside protection, while maintaining some exposure to upside appreciation.

**Cash equitisation.** An investor uses an opposing position to their portfolio in either futures or total return swaps (TRS) to switch between cash and underlying risk asset.

**Overlaying puts/Buying calls (cash extraction)** – limits downside risk on the investor to the premium paid.

**Buy naked puts** – take a downside view on the market whilst limiting potential downside to the premium paid.
Cash extraction – buying call in lieu of buying stock

**Strategy**
- An investor sells a stock and replaces the position with a call option.
- Embedded stop loss on the downside (Premium paid), while replicating the upside as holding the underlying.
- Low implied volatility and/or strong rally in the underlying are major considerations to put on this strategy.

**Boosters – 1x2 call ratio overlays**

**Strategy**
- An investor holding a stock, buys an ATM call option and sells 2 higher strike call options on that stock.
- The overlay will double near upside returns, however it gives up further upside.
- Appropriate if investor considers the upside potential to be limited.
- Typically the overlay is constructed to be zero cost.
Risk reversals

Strategy
• Rather than buying the stock, an investor can buy an OTM call and fund the purchase by selling an OTM put.
• May be able to buy more than one call option to obtain leverage to the upside.
• Takes advantage of implied volatility skew.
• Usually constructed to be costless.

Collars

Strategy
• An investor holding a stock buys a put option on that stock and funds the purchase through selling an upside call option.
• More typically constructed at index level for portfolio protection.
• Usually constructed to minimise premium.
Put-spread collars

Strategy
- An investor holding a stock buys a put option on that stock and funds the purchase through selling an upside call option and a lower strike put option.
- Selling put option reduces overall premium relative to a collar, however gives limited downside protection.

Put ladders

Strategy
- An investor holding a stock buys a put option on that stock and funds the purchase through selling two lower strike put options.
- Offers limited downside protection, however lower premium relative to a put and overlay retains upside exposure.
- Appropriate if investor considers the downside potential to be limited as double downside below the lower strike.
Dividend strategies

Dividend Plays
Can take a view on the level of future dividend payouts either via dividend swaps or vanilla options

Unique insight into fundamentals of Russian companies gives you a good vantage point from which to trade

- Dividend swaps

- Vanilla options
  Buy div / buy put
  Sell div / buy call

Strategy
- Put call parity of options allows for investors to trade implied dividends.
- A combination of stock, forward and financing is packaged to create a dividend swap.
- Fund managers have a better view on near-term earnings and dividends compared to valuation.
- Dividend payments are “pulled-to-realised” in that exit is governed by company fundamentals.
Future Trends

Outperformance options
• Calls and puts are available on the outperformance of one asset versus another. For example, an investor can purchase a call option on the outperformance of mid-caps versus large-caps.

Barrier options
• Options with embedded "knock-out/knock-in" barriers can be significant cheaper than their vanilla equivalents. For example a Euro Stoxx 1-year ATM put option, with a 75% barrier trades significantly cheaper than the vanilla ATM put.

Variance swaps / Volatility swaps
• Investors use volatility products to diversify returns and provide more macro-based hedging strategies.

Best-of/Worst-of basket options
• Options can be written on the ex-ante worst/best performing member of a basket. Typical examples are a call option on the worst-of basket of selected overweight names or a put on the best-of basket of global indices. Both options can have a significant discount to more vanilla alternatives.

Accumulators/Decummulators
• Structures that allow investors to build/reduce stock positions over time at a guaranteed price which is at a discount / premium to the current spot price.

Dynamic underlyings
• Indices based on an algorithm are proving to be popular alternatives, particularly for investors with well advanced portfolio allocation selection.

Autocallables.
• Product which offers a high conditional coupon, with possibility of early redemption of full principal based on the performance of the underlying. Soft capital protection at maturity from the Knock In Put. Suitable for sideways or slightly upward trending market.
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