

第十一期期权基础实战班第六课



Market(Delta)-Neutral Condition

在上一课中我们提到Long/short Delta with Vega neutral

- 但我们也同时观察到股票一般遵循EPE模式
 - 大概30%时间拥有趋势，70%时间处于震荡的环境
 - 此时股票可以低吸高抛，但时机比较难以掌握
- 期权除了交易delta，同时还可以对volatility进行交易
 - 在震荡开始和末端，价格方向不确定时，应该寻求long/short volatility的机会



Straddle & Strangle

Long Volatility: Long Call, Long Put; Short Volatility: Short Call, Short Put

Call与Put数量一致

相同到期日，一般为两个月

Strike Price可以一样可以不同

- 若相同，一般为ATM，策略称为Straddle
- 若不同，一般为取离ATM Strike price相同价距的OTM Price，策略称为Strangle

Greeks

Delta

- Hedged, 维持在低值

Gamma*

- Positive when long Vol
- Negative when short Vol

Vega

- Positive when long Vol
- Negative when short Vol

Theta

- Negative when long Vol
- Positive when short Vol

DELTA NEUTRALITY

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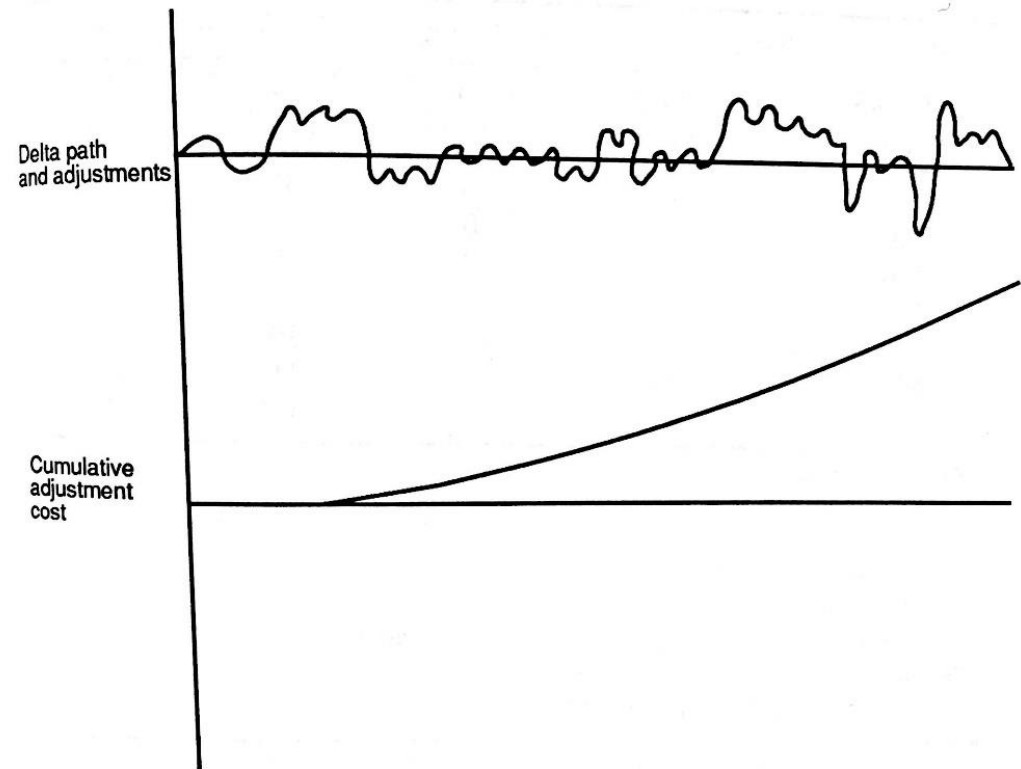


FIGURE 11.16 The depiction of oscillating delta hedge paths and cumulative costs due to adjustments.



常见图形

Long Volatility – Both HV and IV are low

Tight Trading setup, but breakout direction unknown

- Mixed time frame condition
- Mixed market condition

- Tight range break out
- Triangle break out



Straddle & Strangle ?

同为Long Volatility策略， Straddle和Strangle之间如何选择？

Straddle较Strangle而言，

- 有着较高的POP
- 但价格较昂贵

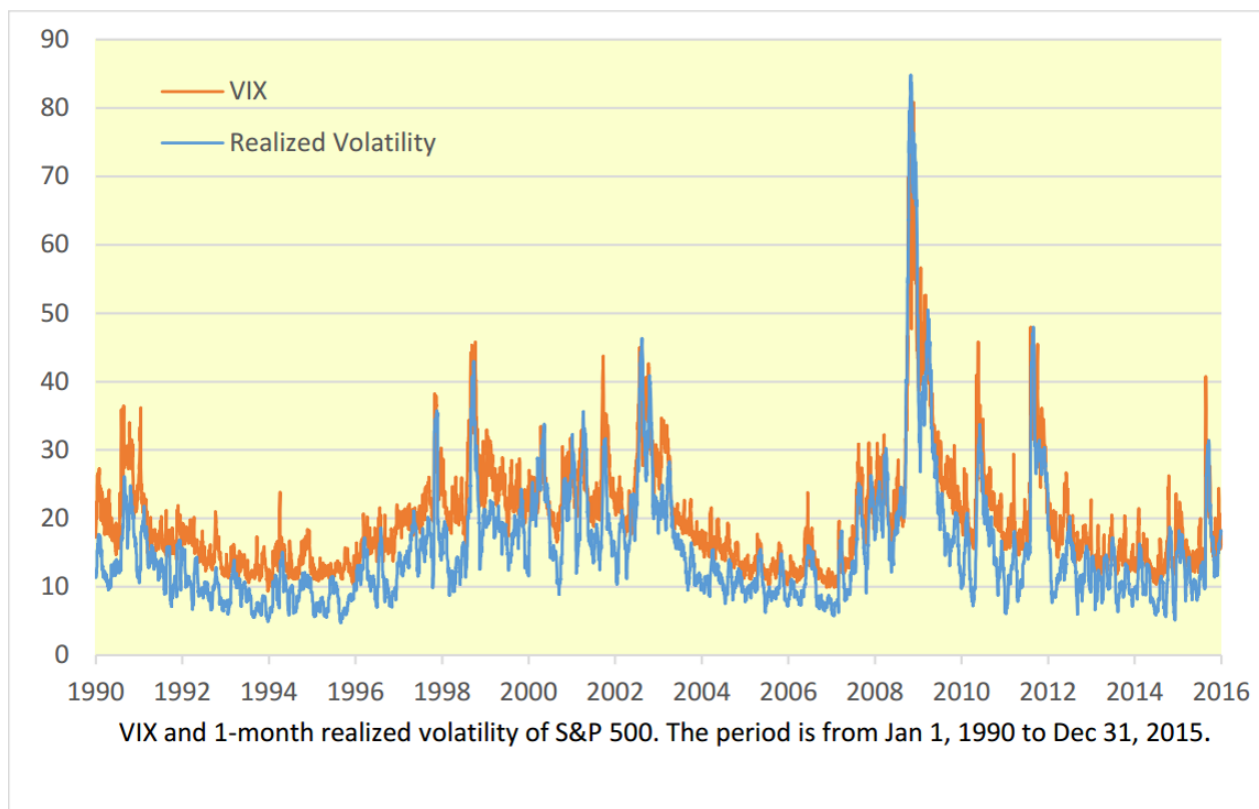
*Unbalanced Strangle

- 取离ATM Strike price不同价距的OTM Price
- 表现一定的direction bias

Shorting Volatility?

对于Long Straddle/Strangle而言，Short Straddle/Strangle更为普遍

- Volatility从高处下跌是必然的，但volatility从低处上涨却可能迟迟不来
- Implied Volatility从统计上长期高于Historical Volatility





Shorting Strangle

Strike Price选择

- Unbalanced – 结合CC和short put的经验，在阻力支撑位处卖出相应的期权
- 1 Std Dev – 同时卖出 Delta为0.15的Call和Put，获得胜率大概为68%(1 Std Dev)的Strangle

Short call与Short Put可以根据价格到达阻力或支撑分开leg in

若只是想从短期内波动率下跌（例如ER）中获利，应该同时Leg in

*Covered Strangle

- 持有股票的同时卖出OTM Put和Call



Shorting Strangle

Range Trading

但注意一般不选择盘整很久的标的物，尤其小心IVR超过50%时

与Long Straddle/Strangle相反，偏向于选择EPE模式Expansion后进行交易

- Expansion后IV还处于较高位置
- 大涨大跌后盘整的可能性大大增大



Shorting Strangle

1. Rolling your Position to further month
2. Partial closing your position – closing the losing side, keep the winning side
3. Closing your position after vol collapse



Improving The Strategy

Straddle/Strangle同时卖出Naked Call和Put，会绑定大量Buying Power

如何改善？

- 通过构建Butterfly 或 Condor来达到目的
- Buying the Wings – 给Straddle和Strangle两翼买入OTM option降低BP Requirement



Butterfly & Condor

Long/short Volatility (期权类型要保持一致)

- Long/Short two ATM Option
- Short/Long one ITM Option
- Short/Long one OTM Option

相同到期日，一般为两个月

核心的Strike Price可以一样可以不同

- 若相同，一般为ATM，策略称为Butterfly
- 若不同，一般为取离ATM Strike price相同价距的OTM Price，策略称为Condor

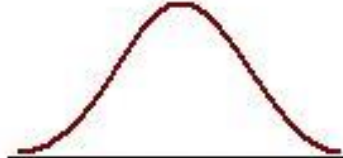
Skewness & Kurtosis

Skewness

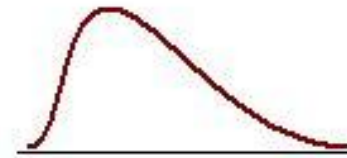
The coefficient of Skewness is a measure for the degree of symmetry in the variable distribution.



Negatively skewed distribution
or Skewed to the left
Skewness < 0



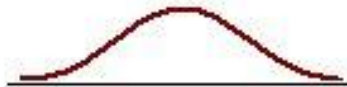
Normal distribution
Symmetrical
Skewness $= 0$



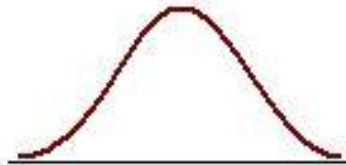
Positively skewed distribution
or Skewed to the right
Skewness > 0

Kurtosis

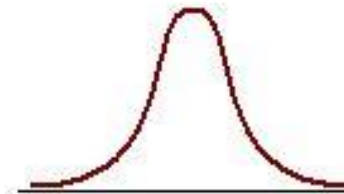
The coefficient of Kurtosis is a measure for the degree of peakedness/flatness in the variable distribution.



Platykurtic distribution
Low degree of peakedness
Kurtosis < 0



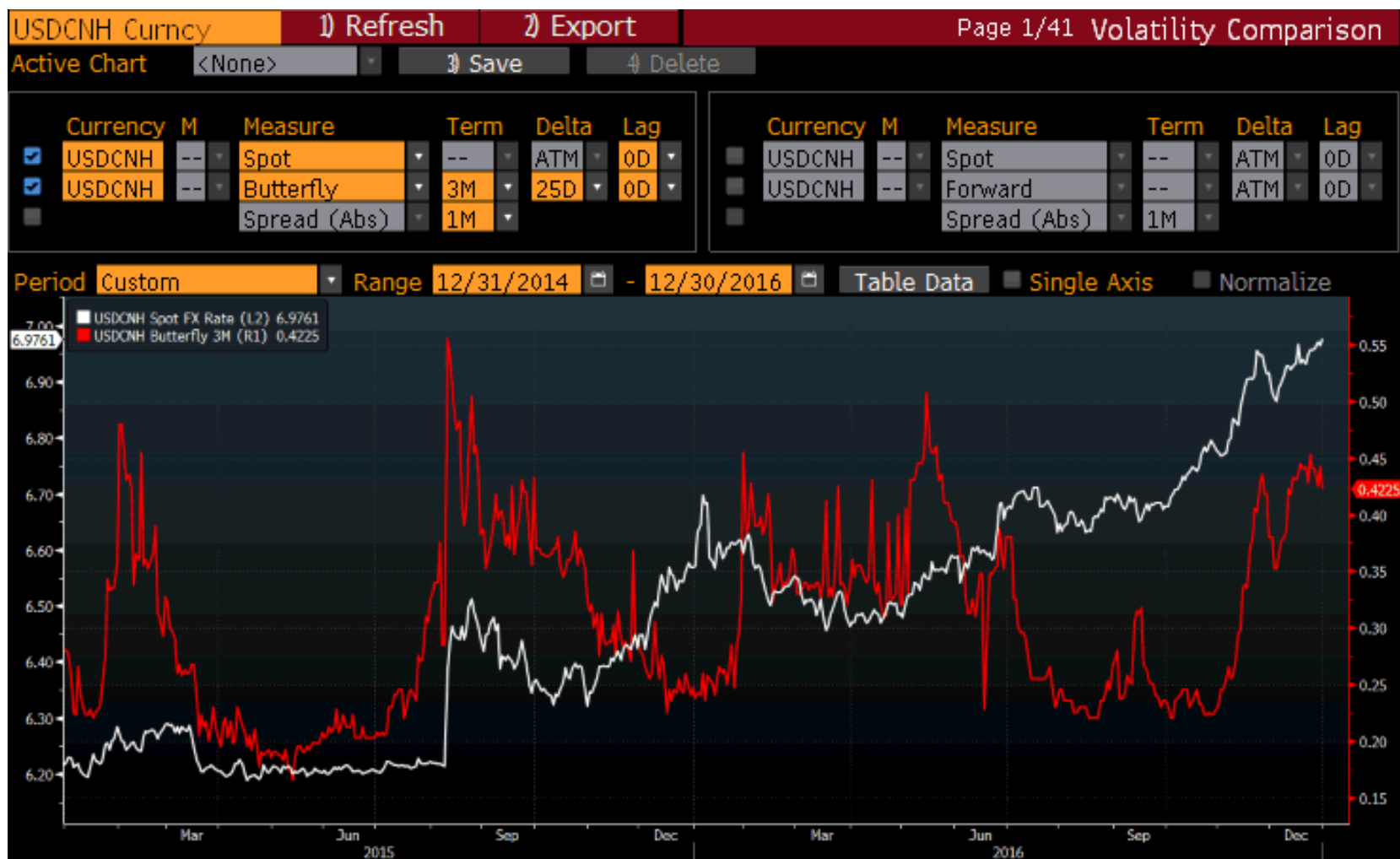
Normal distribution
Mesokurtic distribution
Kurtosis $= 0$



Leptokurtic distribution
High degree of peakedness
Kurtosis > 0

Kurtosis

Kurtosis增大预示标的未来波动增大，但方向不明





Improving The Strategy

- Butterfly Spread和Condor Spread虽然较Straddle/Strangle降低了BP Requirement，但涉及到了两个期权的购买，这样变相降低了我们潜在收益
- 还有什么优势可以用于增加我们的潜在收益呢？ Volatility Skewness
- 我们在拆分Butterfly/Condor Spread是会发现其实它们都是由一个Bullish Spread和一个Bearish Spread构成的
- 如果我们把Bullish Spread改为Credit Put Spread，而将Bearish Spread改为Credit Call Spread就能利用Skewness



Iron Butterfly & Iron Condor

Short Volatility

- Short two ATM Option(Put & Call)
- Long one OTM Call
- Long one OTM Put

相同到期日，一般为两个月

核心的Strike Price可以一样，可以不同

- 若相同，一般为ATM，策略称为Iron Butterfly
- 若不同，一般为取离ATM Strike price相同价距的OTM Price，策略称为Iron Condor



Iron Butterfly & Iron Condor

两种理解方式：

- OTM Credit Put Spread + OTM Credit Call Spread
- Short Strangle + Two OTM wings(Long Put & Call)

两种Leg-in方法：

- 遇到阻力区域leg in Credit Call Spread, 在支撑区域leg in Credit Put Spread
- 参考Short Strangle交易方法，待IV下降后选择buy wings释放Buying Power
 - Wings Strike Price的选择



Iron Butterfly & Iron Condor

当持有IC时，

- 考虑到持有时间较长，潜在收益有限
- 期间IV可能有所变化，长期保持Short Vega不够灵活
- 价格在Range中波动，也提供了不少的交易机会

可以考虑交易Vertical Spread来增加收入

- Debit: 判断IV短暂回升时，中和IC的short Vega的属性
- Credit: 判断IV继续下跌



Iron Butterfly & Iron Condor

如何计算ER时标的物可能的移动范围？

$$1 \text{ Std Dev Movement} = \frac{STOCK \text{ PRICE} \times IV \times \sqrt{Days \text{ to Exp}}}{\sqrt{365}}$$

在ER交易Iron Condor的Short Option可以为1 Std Dev，但比较推荐以这个价格变化范围为参照，利用短暂的High IV 构建一个Wide Iron Condor

ER过后随着Volatility collapse，配合实际情况或清仓，或在IC Range中交易ATM Spread来提高收益

The Most Common Spread?

Volume by Spread Type - E-mini S&P 500 Weekly and End-of-Month Options - 02/26/2018

