VolSignals

VIP MENTORSHIP

LET THE MARKET WORK FOR **YOU**

OPTIONS | **DEALER HEDGING DYNAMICS**

Dynamic Delta Hedging – "Second Order Derivatives"

DEALER HEDGING DYNAMICS | **GAMMA Γ**

*How does DELTA change when the **underlying** changes?*
*…the answer to this question is **<u>Gamma</u>**.*

Gamma is the **change in delta** <u>per one point (dollar) move</u>.
↪ ***Gamma** is sometimes referred to as the **change in delta** <u>per 1% move</u>.*

If you're LONG an Option (you own it), you're LONG Gamma.

If you're SHORT an Option (you sold it), you're SHORT Gamma.

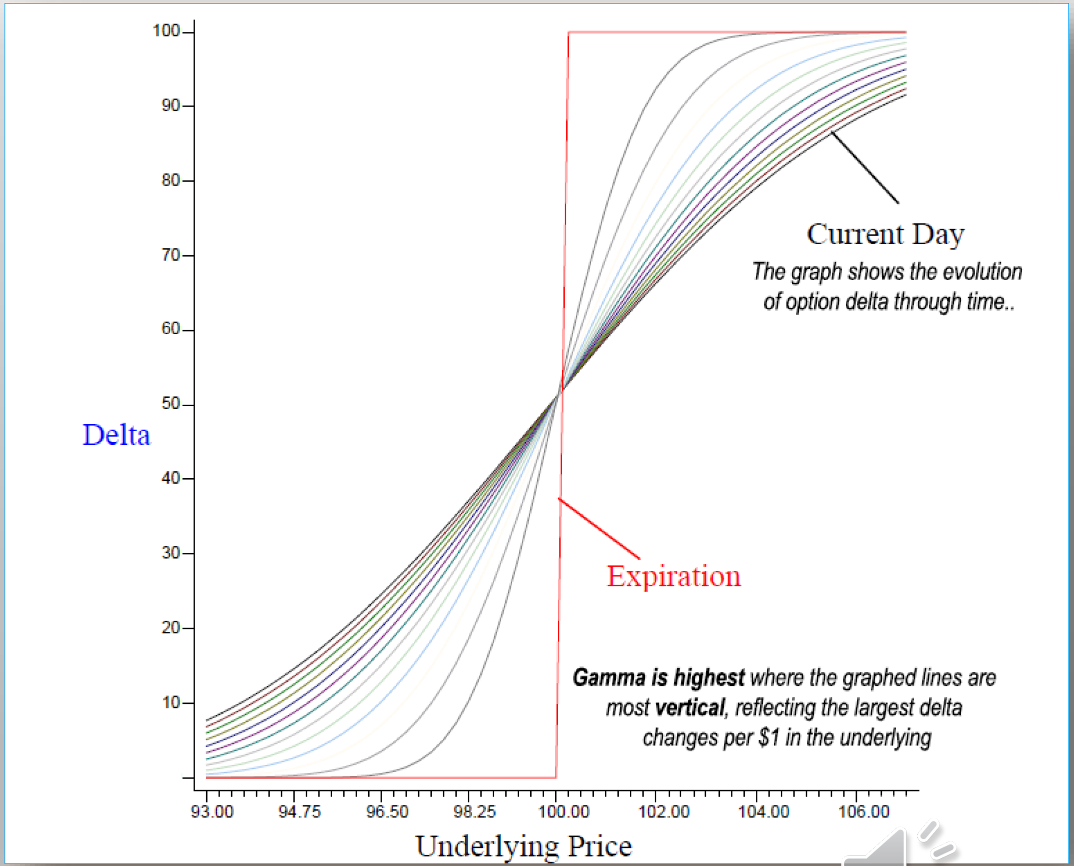
If your position is LONG Gamma…

- *When SPX goes UP, your delta is HIGHER (more positive)*
- *When SPX goes DOWN, your delta is LOWER (more negative)*

You benefit from movement in ANY direction
***And your payouts are convex**. With every marginal dollar of movement, you make more **per dollar** from that movement.*

If your position is SHORT Gamma…

- *When SPX goes UP, your delta is LOWER (more negative)*
- *When SPX goes DOWN, your delta is HIGHER (more positive)*



DEALER HEDGING DYNAMICS | **GAMMA Γ**

Some options have **more** Gamma than others…

*Gamma is **higher** when:*

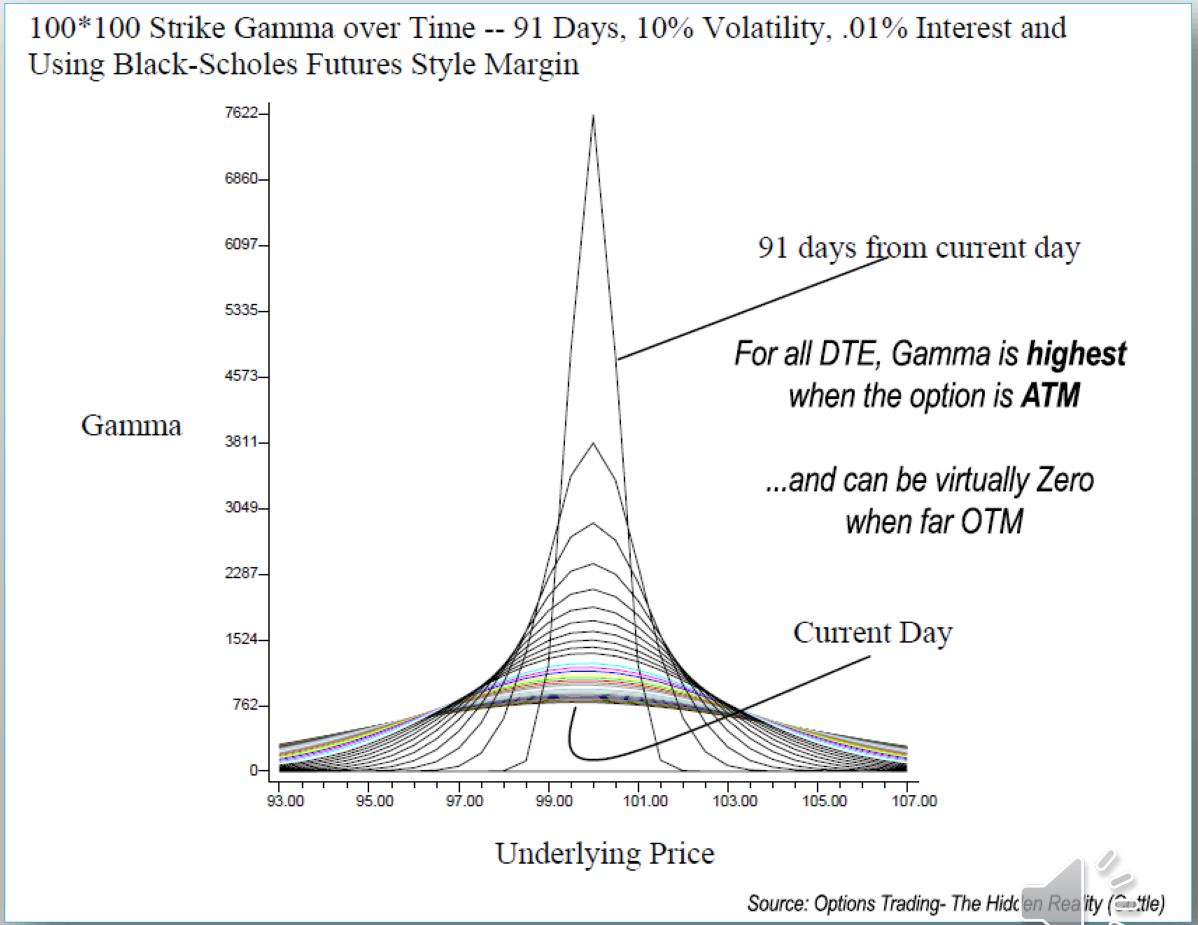
- *Time to expiration (DTE) is **shorter***
- *Implied Volatility is **lower***
- *Options are **At-the-Money***

*Gamma is **lower** when:*

- *Time to expiration (DTE) is **longer***
- *Implied Volatility is **higher***
- *Options **not At-the-Money***

↪ ***Gamma is additive*** *as we build spreads & portfolios out of option contracts. Whether 2 legs or 2 million legs- the Gamma of an options portfolio is found by adding together the individual Gammas for every option in the portfolio.*

↪ ***Gamma changes quickly*** *relative to spot price when IV is low or the option is nearing expiration, as is the case with 0DTE positioning.*



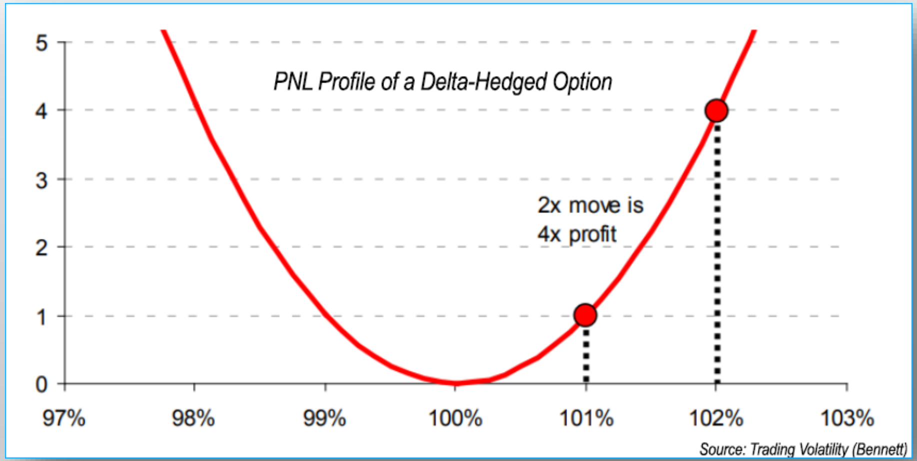
DEALER HEDGING DYNAMICS | **GAMMA HEDGING**

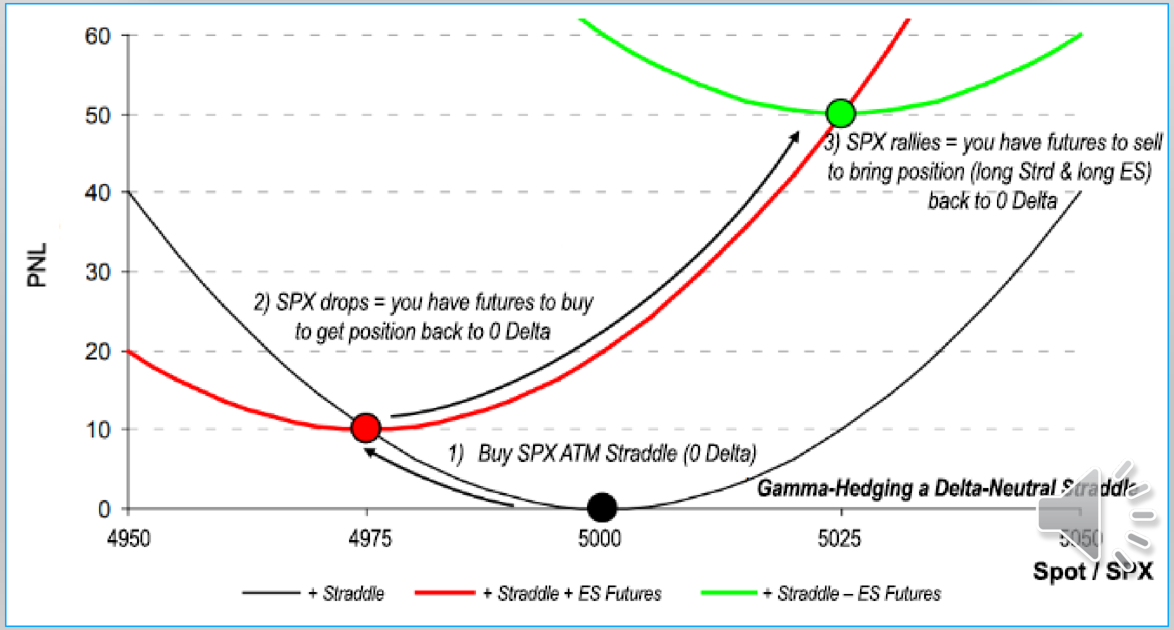
<u>Gamma is…</u>

- ***Change in delta*** *per dollar change in the underlying*
- *…but dealers don't *want* delta, so <u>they hedge it</u>…*

<u>Gamma Hedging: If dealers are…</u>

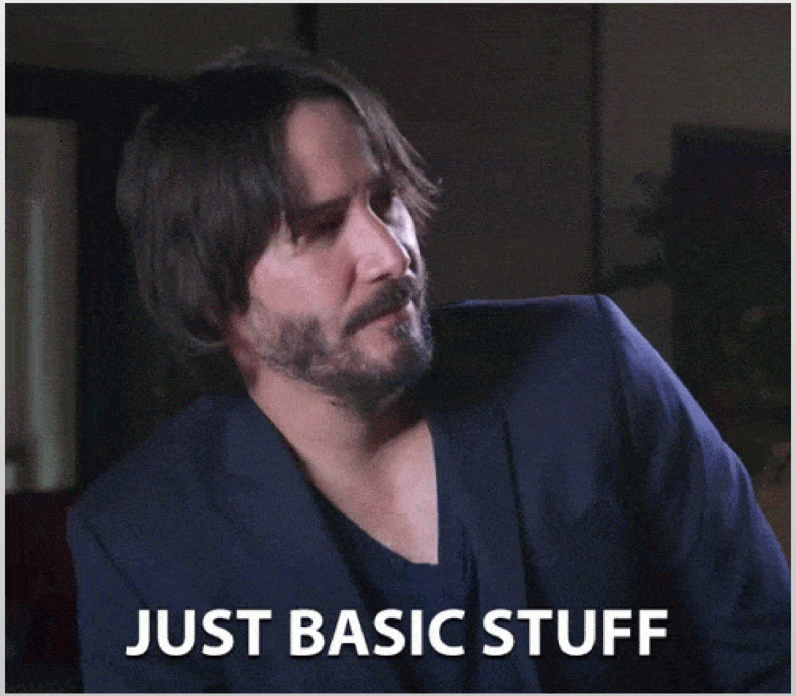
- *Long Options / Long Gamma*
  - *If the market goes UP they have futures to SELL*
  - *If the market goes DOWN they have futures to BUY*
  - *This is called "gamma-scalping"*
- *Short Options / Short Gamma*
  - *If the market goes UP they have futures to BUY*
  - *If the market goes DOWN they have futures to SELL*





NEXT UP | **DEALER GAMMA HEDGING**

TIME TO ENTER THE *(RISK)* ***MATRIX…***



Let's leave behind hedging ***simple options***

…and look at hedging ***option portfolios*** *in practice*

Up Next: *Dealer Gamma Hedging >>*