September 27, 2025

Gamma In Action: The Hidden Forces Driving Price & Volatility

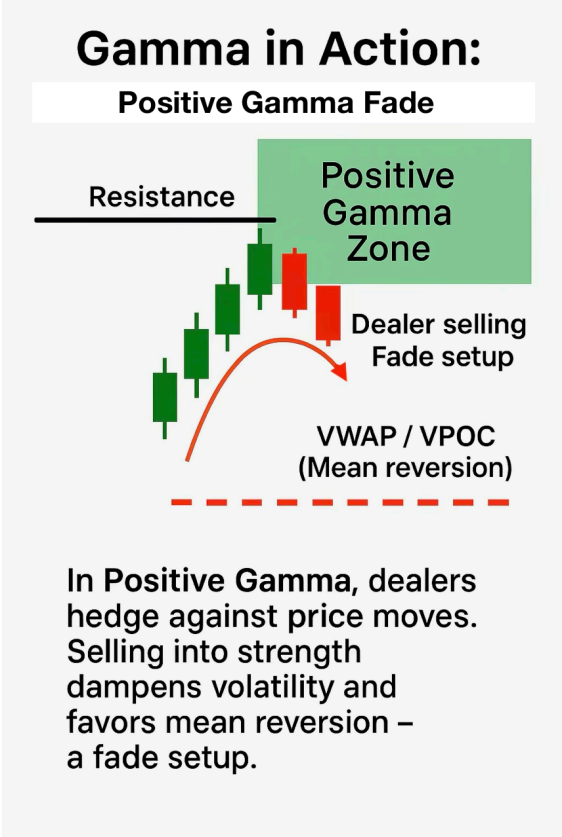
Gamma In Action

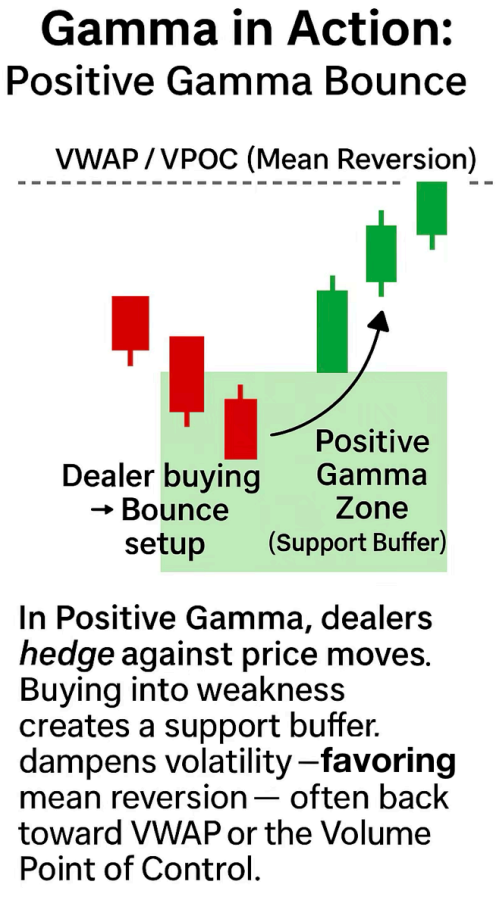
Gamma & Dealer Hedging Explained

Dealers who sell options don't want to take big directional bets in the market — they aim to stay **"delta neutral."** That means they balance their risk so they don't lose heavily if prices move up or down.

For example, if a trader buys a **call option** (the right to control 100 shares of stock), the dealer is on the other side of the trade. To protect himself, the dealer often buys some shares of the stock. Not all 100 shares right away — just enough to stay balanced within normal statistical price ranges. As price moves, the dealer's risk (delta) changes, and he may need to adjust by buying or selling more stock.

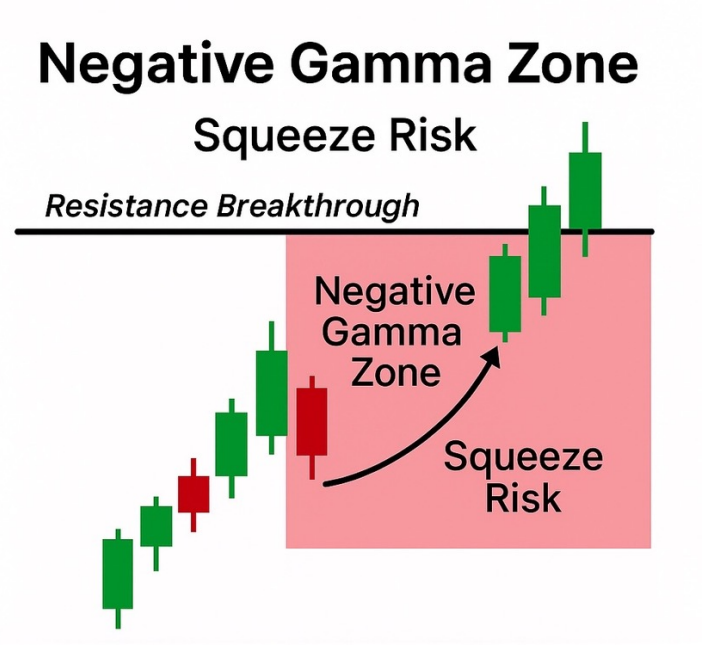
In **positive gamma zones**, these hedging adjustments lean **against** price moves. If price rises, dealers sell a little; if price falls, they buy a little. This *dampens volatility* and often causes **mean reversion** back toward the middle. Positive gamma acts like a **brake** on market swings.



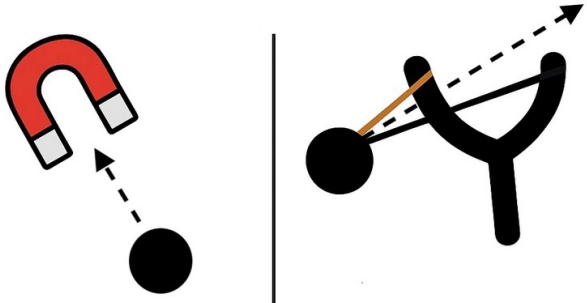


In **positive gamma**, hedging *consistently* leans against moves, calming volatility.

In **negative gamma zones**, things get trickier. Dealers' hedging can flip into **amplifying mode**, but it doesn't happen automatically with every tick. The big effect shows up **when price presses through the negative gamma zone**. At that point, option deltas shift sharply, and dealers are forced to hedge **with** the price move — buying as it rallies or selling as it drops. This can fuel **accelerations, squeezes, or flushes**, making volatility expand. Negative gamma acts like an **accelerator**.



Magnet vs Slingshot



Positive Gamma Zone

When price action approaches Positive Gamma Dealers react by buying when price is moving down from above or selling when price is moving up from below. This buying or selling dampens volatility and pushes price back towards the mean

Negative Gamma Zone

When price pushes through a Negative Gamma zone dealer hedging pressure increases because their exposure increases. Consequently, they can be forced to buy or sell in the direction of the price move

In **negative gamma**, hedging can **flip into amplifying mode**, but it really accelerates **when price presses through the zone and forces dealers to adjust aggressively**.

Negative Gamma Zones are tricky.

Hedging pressure increases as price **presses through** the zone, not just when it approaches. When this happens, the dealers' option exposures (deltas) shift sharply, forcing them to rebalance. That means dealers are often forced to buy as price rallies or sell as it drops. This feedback loop can accelerate moves in the direction of price, creating *squeeze* or flush risk and expanding volatility.

How Dealer Hedging Shapes Price