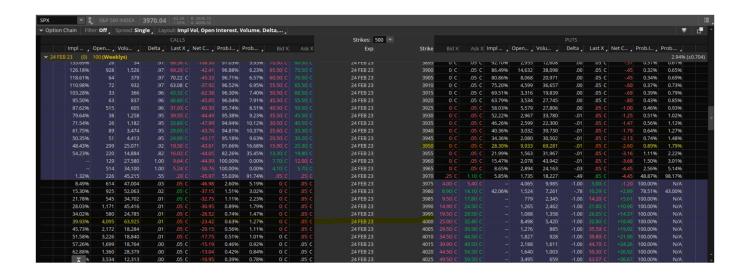
## Calvin Thomas

For SPX today, a single strike [\$3950 P] on SPX 0DTE traded \$28.211 billion (69,281 contracts). On 0dte today, a small range of \$3900-\$4000 (42 strikes total), 943,556 total contracts traded, or 33.54% of total notional SPX contract volume. Essentially, \$384.22 billion traded in 0DTE. Aggressive premium selling in 0DTE suppresses the IV% on sold strikes, thereby creating the opportunity to exploit IV% mean-reversion, via the opposing trade to retailers.

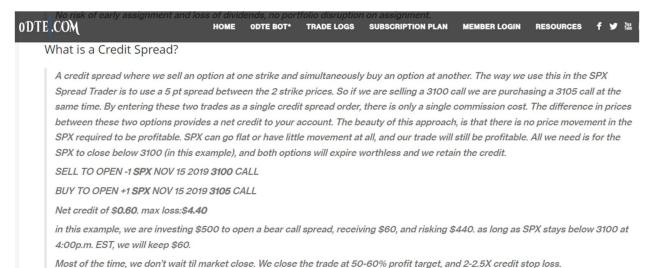
A single day of 21 Put & Call strikes has been traded aggressively enough by retail traders to overwhelm the SPX Index + SPY ETF volume compared to institutions; subsequently responding market makers providing options liquidity + delta-gamma hedging, and overall creating the currently observed short-to-mid-maturity intraday volatility. News has extensively covered the 0dte topic in the past few days. Why does this matter? Since the retail strategy of 0dte SPX selling expiry is self-documented by retail traders on youtube and forums, we can enter (buy) and exit (sell) exactly when retail traders sell and buy back their options end-of-day to directly exploit intraday volatility (serially auto-correlated daily log negative returns). This volume & strike information can be directly extracted via public options chains, and typically hint via sentiment analysis in forums, as to plans for specific future strikes & products sold.

If we assume, based on volume, that the average retail trader will sell close by strikes to opening bell price, somewhere between 20 delta to 45-ATM delta at 9:30AM-9:45AM bell, betting on a credit spread trade to limit loss (from publicly available sources on "Odte spx" strategies online – see image below). With retail traders entering until 10:30-11 AM and trading out in a few hours up to the closing bell, we should take the opposing trade at those exact times, purchasing on IV% mean-reversion in oversold strikes, and selling amidst high intraday volume and impl. vol. spikes, exactly when premium-sellers are desperate to buy back those same options. Your firm does not have as much risk as compared to retail traders holding until expiry, whether SPX or SPY, as SPX is cash-settled and the SPY margin and/or delivery requirement can be satisfied comfortably/exited with minimal risk. The retail trader with a small account size (<\$25,000) will likely be ordered by the brokerage to close out any position on SPX or SPY well before close with a loss greater than a few hundred to a few thousand dollars. For SPX & SPY, if a retailer can reasonably sell the initial 10 to 20 wide spread, many brokerage clauses (Charles Schwab, etc) dictate that positions without the sufficient margin req., and the customer themselves indicating close of position by morning/afternoon of, will be automatically closed by their trading desk (without warning) before 3 PM. The SPY requires delivery of the underlying, so this effect can be exploited to greater effect in this ETF. Naked (single-leg) sellers of Odte have the most pressure to close, as the position becomes increasingly ITM% approaching expiry (one-directional movement).

For option buyers with strikes greater than 35 delta (in a delta-neutral iron condor), there is a high probability (IV% suppression reduces initial price/prob.%) of hitting the strike ITM before stopping time at expiry, where the premium buyer is incentivized to hold the options as long as possible; as retailers are forced by brokerages to (Buy To Close) before 3 PM (depending on acct. size) and the high delta and gamma risk in the favor of the purchaser/against the seller. The ITM options also increase in value exponentially over time (positive exposure on options greeks) at the 0dte since there is a binary 0 or 1-to-1 delta profit at expiry. With micro-scaling, we can program deployed capital in small batches on a day-to-day basis (primarily Friday expiry) with dynamic risk-hedging to properly set TP/SL (1.5X; 2X max. profit), holding period max. few hours, & monitoring the trade. We can optimize the holding period as the primary lever of minimizing risk. Thank you for your time!



## (Risk: Serially autocorrelated negative log daily returns, aka multiple consecutive days of Losses): Typical Retail Strategy for selling ODTE options



1.50-0.60=**\$90** loss.

in this example, we would close it for \$0.20. So, we would make 0.60-0.20=\$0.40 profit. OR, we would stopped out at \$1.50 which is at

