

Analysis: DIX-GEX Sell Signals

PARAMETERS

Data Source: (squeezemetrics.com SPX download)

DIX-GEX Sell Signal Definition

$DIX < 0.4 + 1\text{-day DIX decline} + 1\text{-day GEX decline} + GEX \text{ positive and } SPX > EMA(20)$

RESULTS

- Between May, 2011 and Friday, September 6, 2019, there were 2101 data records
- 101/2101 trading instances met criteria for a sell signal.
- 101 sell signals presented during 28 rallies that preceded selloffs whose drawdowns ranged from -0.8% to -20.2% (peak-to-trough).
- Only one rally climaxed ahead of a significant market correction without DIX-GEX signaling (Spring 2012).
- 21 sell signals were "late", appearing after SPX closed below its EMA(20).
- The true positive rate for sell signals was 101/122 (83%).
- On average, signals presented 28 days prior to a subsequent drawdown low (range 0 - 122 days).
- On average, 66% of an ensuing drawdowns were avoided were one to close a long position in SPX, based solely on the DIX-GEX sell signal (range 5.6% - 100%).
- 16 DIX-GEX sell signals would have averted over 90% of losses that were to follow.
- On days when GEX was positive and DIX was < 0.40 , the average 1-day change in DIX was -4% (range $< -1\%$ to -21%) and average 1-day change in GEX was -28% (range $< -1\%$ to -257%).
- There was no correlation between the size of 1-day drops in DIX and GEX and the losses their respective signals averted.
- Sell signals were conspicuously absent during extended rallies.
- When plotted on a price chart, sell signals cluster during late ascending auctions.

CONCLUSION

- This analysis substantiates the value in using a dark pool index (DIX) and aggregate gamma exposure index (GEX) to protect profits accrued in long SPX positions and avert losses attributable to drawdowns.