Non No-Arbitrage Constraints

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> Sorry it's the shittiest latex I have ever made, I hope that it's at least understandable.

"We use the average of the bid and ask quotes for each option contract and filter out options with zeros bids as well as those whose average quotes are less than \$3/8."

1. Download 'Highest Closing Bid';
2. download 'Lowest Closing Ask';
3. it's not clear how we can filter the zero bids, it might be possible that we can discard the ones with 'Last Traded Date' equal to 'yesterday' or 'the day before yesterday' (sorry for the terrible notation);
4. set mean('Highest Closing Bid','Lowest Closing Ask')<\$3/8 $\Rightarrow$ discard option (I am afraid we can do this only after the download).

"We also filter out quotes that do not satisfy standard no-arbitrage conditions."

1. Ok, we have another pdf for this (Sophia remember the mistaken condition on put prices). By the way, we need for sure:
   - 'Strike Price Times 1000';
   - 'Delta';
   - 'Gamma';
   - futures prices for S&P 500.

"Finally, we eliminate in-the-money options because they are less liquid than out-of-the-money and at-the-money options. We eliminate put options with strike prices of more than 103% of the underlying asset price ($K/S > 1.03$) and call options with strike prices of less than 97% of the underlying asset price ($K/S < 0.97$)."

1. Download 'Call/Put Flag' so we can differentiate the inequalities (unfortunately we don't have moneyness directly, so we have to set it after the download).

"delete days when less than 2 OTM calls and 2 OTM puts"

1. after the download.

"discard options with zero open interest"

1. it's from FE, feel free to decide about. Probably you can decide something also about the volume (both of them are donwloadable and you can check them before the download).

"exclude options with very long (>1 year) and very short maturity"

1. in 'Choose Days to Expiration (EXDATE - DATE): (Optional)' you can set it lower than one year (in trading days);
2. feel free to decide about 'very short maturity'.

Moreover, I would download 'Implied Volatility' (we'll need it later for sure).