You are currently working at a special situations and merger arbitrage hedge fund, and have just been alerted to the following headline.

New Conglomerate Co. (NCC) has just made an unsolicited tender offer to acquire 100% of Brain Power Corp (BPC). The terms of the deal is for BPC shareholders to get 0.45 shares of NCC and $4.00 cash in exchange for one share of BPC. The deal is contingent on whether 50% of the BPC shareholders tender their shares by the end of the trading week.

BPC shares were trading at $20.00 as of Friday's close, and have since been halted until 9:30AM Monday morning.

You are analyzing the deal and trying to correctly price the fair value of BPC. Given that NCC is currently trading at $58.00, and the company is so large that the acquisition will have essentially no effect on the value of NCC, you have managed to price the fair value of BPC using the following equation:

\[
P_{BPC} = 20 \times (1 - p) + (0.45P_{NCC} + 4) \times p
\]

Where \(p\) is the probability of the acquisition occurring

In other words, there's a chance that the acquisition will succeed in which case one share of BPC will be worth 0.45 times the value of one share in NCC plus $4 cash. If the acquisition fails, the stock will fall back to its pre-acquisition price of $20.00.

The key to valuing the stock is to evaluate the probability of the acquisition occurring. The proxies have been sent out to shareholders, and, in a rather simplistic sense\(^1\), you assume the following:

Each day, 20% of the shareholder base will submit their votes to accept or decline the deal, and this will be released publicly.

By the end of the week, if more than 50% of shareholders have voted to accept the deal, the acquisition succeeds.

In an effort to generate trading profits, you plan to create a model to calculate the fair price of BPC shares based on the information released by the company.

\(^1\) This is very much simplified to motivate the case.
Mergers and Acquisitions #1 – MA1

This trading simulation represents the one week of trading for Brain Power Corp (BPC) and New Conglomerate Co (NCC). The one week is simulated over a 5 minute trading period, where each minute represents one trading day.

You are to use the information provided by the company's news releases to accurately model the value of BPC. Then, submit trades to reflect your views as to whether you believe the market is overvaluing or undervaluing the likelihood of the acquisition occurring.

You will be able to buy or short sell up to 200,000 shares of stock, and there are no trading costs associated with the orders.