## Preflop using Holdem Resources Calculator

HRC wants HJ to open 21.7% of hands and that BB should defend with only 26% of hands (almost equally split between calls and raises). This defence range is a lot tighter than a regular chip-ev strategy where the BB should defend 78% of hands, mostly by calling.

The bottom row shows the HRC setup and also the calculated bubble factors. Notice that the bubble factor for the BB (1.80) is larger than the HJ (1.53), but that both of these are quite high. Both players should therefore proceed with caution.



When BB defends postflop the bubble factor causes the required equity to increase. In the hand the HJ bets roughly 1/3 pot on all three streets. In a chip-ev situation we would need 25% equity to call, but with a bubble factor of 1.8 we now need roughly 45% equity.

Disclaimer: I am not entirely sure if applying the bubble factor to equities when considering non all-in bets is valid since bubble factors are calculated with the assumption that one of the player's stack is at risk. In a three barrel spot the required equity (effective "bubble factor") gradually increases since the last chips in your stack are worth more than the first (i.e. each chip in the river call reduces tournament equity more than the chips in the flop call).

## Postflop using Flopzilla

The BB raising ranges above are quite aggressive and I therefore converted some of the raises into calls before using Flopzilla. I also modified the HJ ranges slightly. Below the ranges is the equity graph from flopzilla before any action is done on the flop (HJ is green, BB is blue). We see that the HJ has the range advantage and that neither player has a nut advantage.



On the flop we let the HJ c-bet 81.5% of range (all made hands and any kind of draw), while the BB defends by calling with 51.8% of hands (made hands + flush draws).



On the turn equities run closer, giving the BB a slight range advantage. Also on the turn the HJ has few draws. The HJ should therefore check behind often.



The river depends a lot on how the HJ plays the turn. Some alternatives to consider:

- A. HJ ignores the change in equity and continues betting a wide range on the turn. BB defends with top pair and better, KK-JJ and some flush/straight draws.
- B. HJ bet a polarized range on the turn consisting of two pairs or better for value and flush draws as semi-bluffs. BB defends with top pair and better.
- C. HJ expands the polarized range in B by adding AK-AT and 99-77 (i.e. expand both top and bottom of the range). BB defends with top pair and better.







