

DecisionPoint

Decision 601: Deal or No Deal – the Show



Utility - Pleasure, happiness, satisfaction. (A positive result.)

The **Expected Value** of a lottery ticket is about 50 cents.

But because almost all of that 50 cents is wrapped up in the jackpot, a ticket really is only worth a nickel or so.

Core concept in decision-making.

Deal or No Deal - The Show

(The NBC description, then analysis.)

Hosted by Howie Mandel, "Deal or No Deal" is an exhilarating hit game show where contestants play and deal for a top prize of \$1 million in a high-energy contest of nerves, instincts and raw intuition.

Each night, the game of odds and chance unfolds when a contestant is confronted with 26 sealed briefcases full of varying amounts of cash - ranging from a measly penny to \$1 million. Without knowing the amount in each briefcase, the contestant picks one -- his to keep, if he chooses - until its unsealing at game's end.

The risk element kicks in when the player must then instinctively eliminate the remaining 25 cases - which are opened and the amount of cash inside revealed. The pressure mounts as in each round, after a pre-determined number of cases are opened, the participant is tempted by a mysterious entity known only as "the Banker" to accept an offer of cash in exchange for what might be contained in the contestant's chosen briefcase - prompting Mandel to ask the all-important question - *Deal or No Deal?*

As each case is opened, the likelihood of the player having a valuable cash amount in his or her own case decreases or increases. Viewers will see if, truly, fortune favors the bold. The contestant knows that as long as the larger cash prizes haven't been opened, the Banker's deals will only get higher. And if the conflicted contestant accidentally opens a case with a bigger cash value - the Banker's offer could suddenly evaporate.





This is the hand held version of the game (no models included...). The board is similar to the board on television.

- Left side of board dollar amounts from .01 to \$750.
- Right Side of the board dollar amounts from 1,000 to 1,000,000.
- Highest amounts 100 K, 200 K, 300 K, 400 K, 500 K, 750 K, 1 Million.
- 26 briefcases are below the board. One randomly holds \$1,000,000.
- That is the anchor, the goal of the game for you to pick the million-dollar suitcase (and that is the downfall of most people).
- Total combined value of all 26 brief cases is about 3.5 million dollars.
- 3.5 million divided by 26 = about 125,000 per case AVERAGE (mean).
- 125,000 is the **utility**, the actual value to NBC, of each case.
- Half the cases fall above \$1000, half below. Median (middle).
- Enormous disparity between median and average.
- Number of cases opened each turn prior to an offer. 6,5,4,3,2 then one at a time if you don't make a deal.
- Banker offers statistically "small" amounts to keep player playing. (usually)
- Contrast Principle of 1,000,000 vs. 100,000 vs. 25,000 add in taxes.

- It's almost anathema to be offered and accept \$99,000 or less with a few big amounts on the board.
- Things change at 101,000 and then at 200,000. There are a lot of 197,000 offers that are turned down.
- Million dollars should almost never be given away 750,000 vs. 1,000,000 you'll be offered about 875,000 (or a bit less, maybe 849,000 to keep the suspense to the last minute.)

What happens when the higher numbers are all replaced with million dollar amounts?

I hope it is difficult for them to be able to give away 1,000,000 dollars!