

Hand-Flop Interaction Analysis

There are a couple key aspects of combinatoric analysis yet to be covered. The previous sections of Chapter 3 described suitedness and rank interaction without regard to specific hands or relative hand value. That is, it counted the number of combinations of pairs given a certain hand-type and board-type, but didn't count separate frequencies of top pair, middle pair, and bottom pair for specific starting hands or the frequencies of different strength flushes and flush draws. There was also no coverage of the third aspect that defines both starting hand character and flop texture: connectedness. Chapter 2 introduced a notation to describe the connectedness characteristics of a hand-flop combination. The following section builds on this information to complete an analysis of flopping frequencies.

Methodology

For each of the 16,432 starting hands, there are 17,296 possible flops, and the project begins with a database that classifies each of these hand-flop interactions with respect to suitedness, rank, and connectedness. As shown in the example data in Table 3.9, each distinct hand-flop interaction possibility is described by six main pieces of data; starting hand (e.g. KT98 (aabc)), flop (e.g. 873 (aab)), pairedness character (top pair), suitedness character (FD (2)), for second nut flush draw), connectedness character (8/0/0), and the number of unique combinations. This data can then be filtered, sorted, and compiled in useful ways.

Table 3.9 Hand-Flop Interaction Database Sample

Hand	Handsuit	Flop	Flopsuit	Pairedness	Connectedness	Suitedness	Combos
J987	abac	AKQ	aba	No Pair	0/0/0/4	FD (2)	3
J987	abac	985	aba	Top Two Pair	0/8/0	FD (4)	3
J987	abac	KT9	aba	Bottom Pair	0/14/0/3	FD (3)	3
J987	abac	542	aba	No Pair	4/0/0	FD (4)	3
J987	abac	AQT	aba	No Pair	0/6/0/7	FD (3)	3
J987	abac	A54	aba	No Pair	4/0/0	FD (3)	3
J987	abac	986	aba	Top Two Pair	0/8/0	FD (4)	3
J987	abac	965	aba	Top Pair	NS (31/6/0)	FD (4)	3
J987	abac	976	aba	Top Two Pair	4/4/0	FD (4)	2
J987	abac	987	aba	Three Pair	0/4/0	FD (4)	3
J987	abac	AKT	aba	No Pair	0/0/0/4	FD (3)	3
J987	abac	763	aba	Top Pair	8/0/0	FD (4)	3
J987	abac	A32	aba	No Pair	0	FD (3)	3
J987	abac	642	aba	No Pair	4/0/0	FD (4)	3
J987	abac	T86	aba	Middle Pair	NS+8 (31/6/0)	FD (4)	3
J987	abac	764	aba	Top Pair	8/0/0	FD (4)	3
J987	abac	743	aba	Top Pair	0	FD (4)	3
J987	abac	754	aba	Top Pair	4/0/0	FD (4)	3
J987	abac	T96	aba	Middle Pair	NS+8 (26/8/3)	FD (4)	2
J987	abac	765	aba	Top Pair	NS (31/6/0)	FD (4)	3
J987	abac	QT9	aba	Bottom Pair	2NS(0/34/0/3)	FD (3)	3
J987	abac	975	aba	Top Two Pair	4/4/0	FD (4)	2
J987	abac	653	aba	No Pair	13/0/0	FD (4)	3

Presentation

The main limitation is space. The full database is much too large to present here, as would be most comprehensive summaries. The next several charts thus sacrifice some detail but are the most efficient arrangement of useful information. Charts 3.12a-3.14c provide component-specific details, each breaking down flopping frequencies for each starting hand with respect to one of the three components (connectedness, suitedness, and rank). Conveniently, ignoring the other components introduces redundancy that allows a shorter list of starting hands. For both connectedness (3.12a-3.12e) and rank (3.13a-3.13c), we need only to consider a list of 1820 unique rank possibilities and can ignore the suitedness variations. Of those 1820 we will ignore an additional 169, the trips and quads hands which are