ABSTRACT. This is a set of research notes on a question raised by Suhov and Voice arising from quantum information theory and quantum computing. An element of a partition of $\{1,\ldots,n\}$ is said to be block-stable for $\pi \in \mathfrak{S}_n$ if it is not moved to another block under the action of π. The problem concerns the determination of the generating series $S_{k_1,\ldots,k_r}(u)$ for elements of $\mathfrak{S}_n$ with respect to number of block-stable elements of a canonical partition of a finite n-set, with block sizes $k_1,\ldots,k_r$, in terms of the moment (power) sums $p_q(k_1,\ldots,k_r)$. We also consider the limit $\lim_{n,r\to\infty}(-1)^n S_{k_1,\ldots,k_r}(1-r)/r^n$ subject to the condition that $\lim_{n,r\to\infty} p_q(k_1,\ldots,k_r)/r$ exist for $q = 1,2,\ldots$.