The market behavior and performance of different strategy evaluation schemes YONGJOO BAEK, SANG HOON LEE, HAWOONG JEONG, Department of Physics, Korea Advanced Institute of Science and Technology — We observe the performances of three strategy evaluation schemes, which are the history-dependent wealth game, the trend-opposing minority game, and the trend-following majority game in a stock market where the price is exogenously determined. The price is either directly adopted from the real stock market indices or generated with the Markov chain of order ≤ 2. Each scheme's success is quantified by average wealth accumulated by the traders equipped with the scheme. The wealth game, as it learns from the history, generally shows good performance unless the market is highly unpredictable. The majority game is relatively successful in a trendy market dominated by long periods of sustained price increasing or decreasing. On the other hand, the minority game is suitable for a market with persistent zig-zag price patterns. These observations agree with our intuition and support the viability of the wealth game as a strategy evaluation scheme in typical markets.

Yongjoo Baek
Dept of Physics, Korea Advanced Institute of Science and Technology