

**Barron, Andrew R.; Cover, Thomas M.**

**A bound on the financial value of information.** (English) Zbl 0662.90023  
IEEE Trans. Inf. Theory 34, No. 5, Part I, 1097-1100 (1988).

It will be shown that each bit of information at most doubles the resulting wealth in the general stock market setup. This information bound on the growth of wealth is actually attained for certain probability distributions on the market investigated by *J. Kelly* [Bell Syst. Tech. J. 35, 917-926 (1956)]. The bound will be shown to be a special case of the result that the increase in exponential growth of wealth achieved with true knowledge of the stock market distribution  $F$  over that achieved with incorrect knowledge  $G$  is bounded above by  $D(F\|G)$ , the entropy of  $F$  relative to  $G$ .

**MSC:**

[91B99](#) Mathematical economics  
[94A17](#) Measures of information, entropy

Cited in **1** Review  
Cited in **10** Documents

**Keywords:**

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