

# The Analysis of Economic Time-Series - Part I: Prices (M.G. Kendall, 1953)

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- Kendall (1953) is one of the first to discover from an empirical analysis that stock prices (actually indexes of stocks in the same industry) tend to follow a random walk
- « *The series looks like a “wandering” one, almost as if once a week the Demon of Chance drew a random number from a symmetrical population of fixed dispersion and added it to the current price to determine the next week’s price* »
- He was the first to note the time dependence of the empirical variance (nonstationarity)

# Key Features

- In series of prices observed at fairly close intervals the random changes from one term to the next are so large that it is impossible to reveal any systematic effect.
- The data behave almost like wandering series.
- An analysis of stock-exchange movements revealed little serial correlation within series and little lag between series.

# Discussion on the article

- It is disputable that the more systematic behavior of aggregative index numbers, intercorrelations of lag 1, positive sign and so high average of nearly all the numbers in 0&1 of table 5 are merely due to chance.
- Short annual series of data are usually not good enough to test any model, but M. Kendall appears to show that with more frequent data, many different models fit the data very well.
- All these time-series were analyzed without a theoretical model in the background

# A Statistical Analysis of Common Stock Prices of New York Stock Market (Moore, 1962)

Moore has shown that there are insignificant negative serial-correlation of some stocks yield, but little positive autocorrelation of stock index yield.

# Spectral analysis of New York Stock Market

(Granger&Morgenstern, 1963)

In 1963 Granger&Morgenstern stated that Stock Prices Random Walk theory is true only in the short run. In the long run stock prices are significantly autocorrelated.

# Why does stock market volatility change over time? (W. Schwert, 1989)

W. Schwert and some other economists showed that supposition that financial assets' changes are equally distributed in the long period is not very reasonable, because of all the economic, political, technological and institutional changes

# References

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