

- Arieh, Ben Naim. 2010. *Discover Entropy and The Second Law of Thermodynamics*. USA: World Scientific
- Athreya, K.B. and Lahiri, S.N., 2006. *Measure theory and probability theory*. Springer Science and Business Media.
- Basyaib, F., 2007, *Manajemen Risiko*, Grasindo, Jakarta. Cai, W., 2011, Introduction to Statistical Mechanics, <http://micro.stanford.edu>, diakses 05 Agustus 2021.
- Capasso, V. dan Bakstein, D., 2005, *An Introduction to Continuous-Time Stochastic Processes: Theory, Models, and Applications to Finance, Biology, and Medicine*. Birkhauser, Boston.
- Castaneda, L.B., Arunachalam, V., Dharmaraja, D., 2012, *Introduction to Probability and Stochastic processes with Applications*, Wiley, Canada.
- Chakrabarti B.K., 2005, *Econophysics-Kolkata: A Short Story*, Chatterjee A., Yarlagadda S., Chakrabarti B.K. (eds), *Econophysics of Wealth Distributions*. New Economic Windows, Springer, Milano.
- Chakrabarti, C.G., dan De, K., 2000, Boltzmann-Gibbs entropy: Axiomatic characterization and application, *International Journal of Mathematics and Mathematical Sciences*, 23(4), pp. 243-251.
- Chakrabarti, C.G. dan Charkabarty, I., 2006, Boltzmann-Shannon Entropy: Generalization and Application. *Modern Physics Letters B*, 20(23), pp. 1471-1479.
- Cheng-Few, L., John, C. L., dan Alice C. L., 2013, *Statistics for Business and Financial Economics*, edisi ke-3, Springer, New York.
- Clausius, R., 1867. *The mechanical theory of heat: with its applications to the steam-engine and to the physical properties of bodies*. London : J. van Voorst.
- Coleman, R., 1974, *Stochastic Processes*, Springer, Dordrecht.
- Copur, Z., 2015, *Handbook of Research on Behavioral Finance and Investment Strategies: Decision Making in the Financial Industry*, IGI Global, Hershey.
- De Liso, N. dan Filatrella, G., 2002, *Econophysics: The emergence of a new field*. *Economia politica*, 19(2), pp.297-332.
- Djafari, A. M., 2015, *Information Theory, Information Geometry and Bayesian Inference in Data, Signal and Image Processing and Inverse Problems*, *Entropy*, 17(6), pp. 3989-4027.
- Durusu-ciftci, D., Ispir, M. S. dan Kok, D., 2019, *Do stock markets follow a random walk. New evidence for an old question*, *International Review of Economics and Finance*, 64(C), pp. 165–175.
- Efromovich, S., 1999, *Nonparametric Curve Estimation*, Springer, New York.
- Efstathios, 2008, Entropy, order and disorder, *Open Thermodynamics Journal*, 2(1), pp.7-11.
- Fama, E.F. dan Malkiel, B.G., 1970, *Efficient capital markets: A review of theory and empirical work*. *The journal of Finance*, 25(2), pp.383-417.
- Farmer, J. D. et al., 2012, *A complex systems approach to constructing better models for managing financial markets and the economy*. *Eur. Phys. J. Special Topics*, v. 214, p.295–324.
- Francis W. Sears, Gehard L. Salinger. 1982. *Thermodynamics, Kinetic Theory of Gasses and Statistical Mechanics 3rd Edition*. Philippines: Addison Wesle.
- Heath, D dan Platen, E., 2006, *A Benchmark Approach to Quantitative Finance*, Springer, Berlin Heidelberg.



- Ibe, O.C., 2015, *Markov Processes for Stochastic Modeling*, edisi kedua, Elsevier, London.
- Jakimowicz, A., 2020, *The Role of Entropy in the Development of Economics*, *Entropy*, 22(4), pp.452.
- Jones, J. F., 1999, *Manuals Combined: Classical Physics; Electrical science, Thermodynamics; Heat Transfer and Fluid Fundamentals; instrumentation and Control; Mathematic, Chemistry; Engineering Symbiology; Material Science; Mechanical Science, and Nuclear Physics and Reactor Theory*, Department of Energy U.S.A, Washington D.C.
- Kallianpur, G. dan Sundar, P., 2014, *Stochastic Analysis and Diffusion Processes*, Oxford University Press, Oxford.Meeni
- Kannan, D., 1979, *An Introduction to Stochastic Process*, Elsevier, North Holland.
- Katz, D. M., 2016, *Physics for Scientists and Engineers: Foundations and Connections, Extended Version with Modern*, Cengage Learning, Boston.
- Kondratenko, A., 2005, *Physical Modeling of Economic Systems: Classical and Quantum Economies*, <https://mpira.ub.uni-muenchen.de/10452/>, diakses 01 Februari 2020.
- Korbel, B. J., 2011, *Applications of Multifractals in Financial Markets*, *Research work*, Faculty of Nuclear Sciences and Physical Engineering CTU, Prague.
- Kuo, H. (2006) *Introduction to Stochastic Integration*.
- Láng, G.G., 2016 *Some remarks concerning the thermodynamics of the simple ideal gas and related mathematical background*. *ChemTexts* 2, 10.://doi.org/10.1007/s40828-016-0028-2
- Madura, J., 2012, *Financial Institutions & Markets*, Nelson Education, Canada.
- Mantegna, R.N. and Stanley, H.E., 1995. *Scaling behaviour in the dynamics of an economic index*. *Nature*, 376(6535), p.46.
- Mantegna, R.N. and Stanley, H.E., 1999. *Introduction to econophysics: correlations and complexity in finance*. Cambridge university press.
- Marinescu, D.C. dan Marinescu, G.M., 2012, *Classical and Quantum Information*, Elsevier, Oxford.
- Mckay, C., 2019, *Probability and Statistics*. Scientific e-Resources, Waltham Abbey.
- Meir Hemmo, Orly R. Shenker. 2012. *The Road To Maxwell's Demon*. USA: Cambridge University Press
- Mishkin, F. S., 2008, *The Economic of Money, Banking, and Financial Makets*, 8th edition, Penerbit Salemba, Jakarta.
- Mohammad-djafari, A. and Sud, U. M. R. C. P. (2015) *Entropy, Information Theory, Information Geometry and Bayesian Inference in Data, Signal and Image Processing and Inverse Problems* †. doi: 10.3390/e17063989.
- Müller, I. 2007. *A history of thermodynamics: the doctrine of energy and entropy*. Springer Science and Business Media.
- Resmiyanto, R. 2014. *Nalar Fisika di Pasar Saham : Pengantar Ekonofisika*. Yogyakarta : GRE Publishing
- Rosyid, Muhammad Farchani. *Mekanika Kuantum*. Yogyakarta : Jurusan Fisika FMIPA UGM
- Ruppert, D., 2014, *Statistics and Finance: An Introduction*, Springer, New York.
- S, Alam, 2007, *Ekonomi untuk SMA dan MA Kelas XI*, Jilid 2, Jakarta.
- Satriawan, Mirza. 2016. *Mekanika Statistik*. Yogyakarta : UGM Press
- Savoiau, G dan Siman, I.I., 2013, *Econophysics: Background and Applications in Economics, Finance, and Sociophysics*, Academic Press, Oxford.
- Schwartz, M., 2019, *Statistical Mechanics*, <http://scholar.harvard.edu> , diakses tanggal 22 Januari 2020.
- Shannon, C.E., 1948. *A mathematical theory of communication*. Bell system technical journal, 27(3), pp.379-423.



ANALISIS FLUKTUASI HARGA SAHAM HARIAN MENGGUNAKAN PENDEKATAN ENTROPI BOLTZMANN-GIBBS SELAMA KRISIS KEUANGAN GLOBAL : STUDI KASUS PADA SAHAM PERUSAHAAN YANG TERGABUNG DALAM INDEKS BISNIS-27

UNIVERSITAS
GADJAH MADA

SASA TIAN DHANI, 1. Dr. Dwi Satya Palupi, S.Si, M.Si

Stosic, D., 2016. *Applications of entropy on financial markets* (Master's thesis, Universidade Federal de Pernambuco).

Stosic, D., Stosic, D., Ludermir, T., de Oliveira, W. and Stosic, T. 2016. *Foreign exchange rate entropy evolution during financial crises. Physica A: Statistical Mechanics and its Applications*, 449, pp.233-239.

Shiryaev, A.N., 1999, *Essentials of Stochastic Finance: Facts, Models, Theory, Vol 3*, World Scientific, Singapore.

Steele, J. M., 2001, *Stochastic Calculus and Financial Applications*, Springer, New York.

Stirzaker, D., 1999, *Probability and Random Variables: A Beginner's Guide*, Cambridge University Press, Cambridge.

Tenny, K.M. dan Cooper, J.S., *Ideal Gas Behavior*, <https://www.ncbi.nlm.nih.gov/books/NBK441936/>, diakses 25 April 2021.

Tong, David Dr. 2011. *Statistical Physics*. Cambridge : University of Cambridge Department of Applied Mathematics and Theoretical Physics

Tsallis, C. *et al.* (2003). *Introduction to Nonextensive Statistical Mechanics and Thermodynamics*.

Villanueva, C.S. dan Niguidula, J.DC., 2017, The Effect of Financial Crises on The Entropy Evolution of Foreign Exchange Rates, *International Journal on Information Theory*, 6(1/2), pp. 6201.

Welkete, E. (2001). *Ernst Welteke : Cross effects between monetary policy and financial markets*. (June), pp. 1–4.

Yakovenko, V. M., dan Rosser, J.B., 2009, Colloquium: *Statistical mechanics of money, wealth and income*, Review of Modern Physics, 81(4), pp.1703-1725.

Zemansky, M.W. dan Dittman, R.H., 1937, *Heat and Thermodynamics*. McGraw-Hill Book Company, Boston.

Zulfikar, 2016, *Pengantar Pasar Modal dengan Pendekatan Statistika*, Depublish, Yogyakarta.