

## Analisis model prediksi harga saham pada bursa efek indonesia dengan model statistik maxwell-boltzmann = utilizing maxwell-boltzmann statistic to predict dynamic trend lines and percentage of price changes in Indonesian stock exchanges Idx market

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### Abstrak

Dalam disertasi ini telah dilakukan penelitian tentang keterlibatan volume pada harga penutupan dihari transaksi. Hal ini dilakukan dalam upaya untuk mendapatkan indikator harga saham yang lebih baik. Hukum distribusi dan probabilitas statistik Maxwell-Boltzmann digunakan untuk menganalisis harga saham beserta perubahan persentasi harga pada pasar modal Bursa Efek Indonesia. Besaran volume dan harga digunakan sebagai variabelvariabelnya. Banyak trader tidak menghiraukan akan nilai besaran volume ini, namun sebenarnya disanalah banyak terkandung sejumlah informasi penting. Oleh karena analisis ini dapat digunakan untuk memprediksi harga dinamik saham di Bursa Efek Indonesia, baik dalam keadaan harga saham bullish atau bearish, naik maupun turun, juga persentasi perubahan harganya, maka diperoleh 1. Bahwa perbandingan antara indikator Statistik MaxwellBoltzmann terhadap indikator Stokastik Osilator George Lane dan lain-lainnya, diperoleh Maxwell-Boltzmann 69 benar, Stockastic Ocsillator 40.55 benar, 10 Simple dan 10 Exponential Moving Average 10 SMA- 10 EMA 43.55 yang benar, Relative Strengt Index RSI 46,67 , R William 45 benar, MACD 40,33 dan OBV 41,44 . 2. Pada sisi lain, dengan menggunakan rumus probabilitas Maxwell-Boltzmann, untuk memperkirakan perubahan harga, diperoleh minimum perubahan harga 0 to 3.59 persen deviasi minimum , and deviasi maksimumnya berada diantara 0 to 4,67 persen.

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In this disertaion, we rsquo;ve investigated the involvement of closing volumes on closing prices as additional variables in order to achieve the better trend lines indicator. The MaxwellBoltzmann distribution physical statistic law and its probabilistic formula were utilized to analyze the dynamic trend lines and deviation percentage of price changes, where prices and volumes were used as variables indeed. Many traders ignore volumes; however, there is a huge number of information in it, particularly in volume of closing prices. This Maxwell-Boltzmann distribution law could be manipulated to predict shares dynamic trend lines in Indonesian Stock Exchange Idx market. Since these analysis could be utilized to predict the dynamic trend lines on bullish or bearish market, and percentage of price changes, than; 1. We are going to have the comparison of the dynamic trend line changes uptrend or down trend by utilizing MaxwellBoltzmann distribution law, and compare them to the George Lane stochastic oscillator formula. The result of the comparison percentage was Maxwell-Boltzmann for 69 right, Stochastic Oscillator 40.55 , 10 Simple and 10 Exponential Moving Average 10 SMA- 10 EMA for 43.55 , Relative Strength Index rsquo;s RSI 46,67 , R William for 45 right, MACD 40.33 right and OBV 41.44 2. On the other hand, the development of the MB probability formula, in term for predicting percentage of price changes, data rsquo;s given that minimum price changes around 0 to 3.59 percent minimum deviation , and maximum deviation around 0 to 4,67 percent in Indonesian Stock Exchanges Idx market.