

ABSTRAK

Skripsi dengan judul "Penerapan Model GARCH Dalam Peramalan Volatilitas *Return* Indeks Saham Asia Tahun 2004-2024" ini ditulis oleh Candra Rahmat Hadi, NIM. 1860406222079, dengan pembimbing Mega Tunjung Hapsari, M.AP.

Kata Kunci: GARCH, Pasar Saham Asia, *Return*, TGARCH, Volatilitas

Penelitian ini dilatarbelakangi oleh kondisi pasar saham di kawasan Asia yang memiliki volatilitas dinamis akibat pengaruh ekonomi global, integrasi pasar keuangan, serta faktor makroekonomi dan geopolitik. Perubahan volatilitas *return* mencerminkan tingkat risiko yang dihadapi investor serta berpengaruh terhadap efisiensi pasar dan kinerja portofolio. Oleh karena itu, analisis karakteristik volatilitas menjadi penting dalam mendukung pengelolaan risiko investasi secara optimal.

Tujuan penelitian ini adalah untuk (1) Memodelkan karakteristik volatilitas *return* pasar saham di kawasan Asia dan (2) Meramalkan volatilitas *return* di masa mendatang menggunakan pendekatan GARCH.

Penelitian ini menggunakan pendekatan kuantitatif dengan data *time series* bulanan indeks saham dari 11 negara Asia periode 2004 sampai 2024. Melalui pengujian *heteroskedastisitas*, diperoleh tujuh indeks saham sebagai sampel, yaitu Hangseng, JKSE, Nifty50, Nikkei225, SET, TAIEX, dan VNI. Analisis dilakukan menggunakan uji stasioneritas, model GARCH simetris, TGARCH asimetris, serta peramalan volatilitas *return* untuk periode 2024–2029.

Hasil penelitian menunjukkan bahwa (1) Seluruh indeks saham yang dianalisis memiliki karakteristik *volatility clustering* dengan tingkat persistensi yang berbeda antar pasar, di mana pasar Jepang, Thailand, dan Taiwan menunjukkan volatilitas yang lebih cepat kembali ke kondisi normal, sedangkan pasar Hong Kong, India, Indonesia, dan Vietnam memiliki persistensi volatilitas yang lebih tinggi, serta berdasarkan pengujian TGARCH tidak ditemukan adanya *leverage effect* pada pasar Indonesia, Taiwan, dan Vietnam, (2) Sementara hasil peramalan periode 2024 sampai 2029 mengindikasikan bahwa pasar Jepang diproyeksikan memiliki volatilitas paling stabil, diikuti Taiwan dan Thailand, sementara pasar Indonesia dan Vietnam diperkirakan menghadapi volatilitas yang relatif tinggi, dengan pasar Vietnam menunjukkan volatilitas persisten tanpa peningkatan *return* yang sepadan.

ABSTRACT

The thesis entitled “Application of the GARCH Models in Forecasting the Volatility of Asian Stock Index Returns for the Period 2004–2024,” written by Candra Rahmat Hadi, Student Identification Number 1860406222079, from the Sharia Financial Management Study Program, Department of Business and Management, Faculty of Islamic Economics and Business, State Islamic University Sayyid Ali Rahmatullah Tulungagung, under the supervision of Mega Tunjung Hapsari, M.AP.

Keywords: Asian stock market, GARCH, , TGARCH, Volatility

This research is motivated by the dynamic volatility of stock markets in the Asian region, which is influenced by global economic conditions, financial market integration, as well as macroeconomic and geopolitical factors. Changes in return volatility reflect the level of risk faced by investors and affect market efficiency and portfolio performance. Therefore, analyzing the characteristics of volatility is essential to support optimal investment risk management.

The objective of this research is to (1) model the characteristics of stock market return volatility in the Asian region and (2) forecast future volatility using the GARCH approach.

This research employs a quantitative approach using monthly time series data of stock market indices from 11 Asian countries during the period 2004 to 2024. Through heteroskedasticity testing, seven stock indices were selected as the research sample, namely Hangseng, JKSE, Nifty50, Nikkei225, SET, TAIEX, and VNI. The analysis was conducted using stationarity tests, symmetric GARCH models, asymmetric TGARCH models, and volatility forecasting for the period 2024 to 2029.

The results indicate that (1) all analyzed stock indices exhibit volatility clustering characteristics with different levels of persistence across markets, where the Japanese, Thai, and Taiwanese markets show faster reversion to normal volatility conditions, while the Hong Kong, Indian, Indonesian, and Vietnamese markets demonstrate higher volatility persistence. In addition, TGARCH testing reveals no evidence of leverage effects in the Indonesian, Taiwanese, and Vietnamese markets. (2) The forecasting results for the period 2024 to 2029 suggest that the Japanese market is projected to have the most stable volatility, followed by Taiwan and Thailand, while the Indonesian and Vietnamese markets are expected to experience relatively high volatility, with the Vietnamese market showing persistent volatility without corresponding increases in returns.