

**ANALISIS PERBANDINGAN MODEL GARCH SIMETRI DAN
ASIMETRI DALAM PEMODELAN INDEKS HARGA SAHAM
GABUNGAN (IHSG)**

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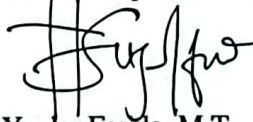
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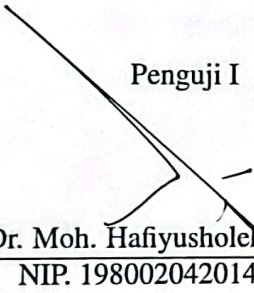
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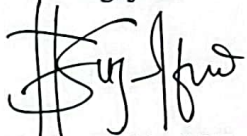
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ABSTRAK

ANALISIS PERBANDINGAN MODEL GARCH SIMETRI DAN ASIMETRI DALAM PEMODELAN INDEKS HARGA SAHAM GABUNGAN (IHSG)

Pandemi Covid-19 telah meningkatkan volatilitas keuangan dan menyebabkan kerugian finansial yang signifikan bagi masyarakat global. Volatilitas data keuangan sering kali dimodelkan dengan model ekonometrika ARCH-GARCH. Model tersebut mengasumsikan adanya respon yang sama terhadap guncangan positif (*good news*) dan guncangan negatif (*bad news*) pada volatilitas. Namun kenyataannya, guncangan negatif lebih berdampak pada volatilitas dibandingkan guncangan positif. Hal tersebut menyebabkan asumsi simetris pada model ARCH-GARCH tidak terpenuhi. Oleh sebab itu, digunakan model GARCH asimetri yaitu model TGARCH dan EGARCH. Penelitian ini bertujuan untuk membandingkan GARCH simetri dan GARCH asimetri dalam memodelkan Indeks Harga Saham Gabungan (IHSG). Data *closing price* IHSG pada periode 10 Juni 2019 hingga 30 Desember 2020 digunakan untuk menggambarkan volatilitas IHSG pada periode "pra pandemi Covid-19" dan "pandemi Covid-19". Hasil empiris penelitian ini menunjukkan bahwa performa model GARCH asimetri mengungguli GARCH simetri di masa krisis (pandemi Covid-19). Sedangkan untuk masa normal (pra pandemi Covid-19), model GARCH simetri mengungguli model GARCH asimetri.

Kata kunci: GARCH Simetri, GARCH Asimetri, Pemodelan IHSG, Peramalan IHSG

ABSTRACT

COMPARATIVE ANALYSIS OF SYMMETRY AND ASYMMETRY GARCH MODELS IN MODELING IDX COMPOSITE

The Covid-19 pandemic has increased financial volatility and caused significant financial losses for global society. Financial data volatility is often modeled with ARCH-GARCH econometric models. The model assumes the same response to positive shocks (good news) and negative shocks (bad news) on volatility. However, in reality, negative shocks have more impact on volatility than positive shocks. This causes the symmetry assumption in the ARCH-GARCH model to not be fulfilled. Therefore, asymmetric GARCH models are used, namely the TGARCH and EGARCH models. This research aims to compare symmetric GARCH and asymmetric GARCH in modeling the Composite Stock Price Index (IDX Composite). *closing price* data for the period 10 June 2019 to 30 December 2020 is used to describe the volatility of the IDX Composite in the "pre Covid-19 pandemic" and "Covid-19 pandemic" periods. The empirical results of this research show that the performance of the asymmetric GARCH model outperforms the symmetric GARCH during crisis (Covid-19 pandemic). Meanwhile, for normal period (pre Covid-19 pandemic), the symmetric GARCH model outperforms the asymmetric GARCH model.

Keywords: Symmetric GARCH, Asymmetric GARCH, IDX Composite Modeling, IDX Composite Forecasting

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