

# **Pengelompokan Saham dengan Singular Value Decomposition untuk Optimasi Portofolio Global Minimum Variance**

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## **ABSTRACT**

Stock investment analysis is very important for investors before investing in shares. Selection of shares and preparation of a share portfolio can maximize profit expectations and minimize investment risk. Grouping stocks using the Singular Value Decomposition (SVD) method based on the company's financial ratios can help investors in selecting and diversifying stocks. Financial ratios explain the company's ability to generate profits as well as the company's ability to meet short-term and long-term obligations in the future. A numerical illustration of stock selection with SVD and construction of Global Minimum Variance (GMV) portfolio of IDX30 stocks is given. Backtesting test results show that the portfolio provides a greater expected return, namely 0.0003329272, and a smaller risk of 0.0143677 compared to the portfolio prepared using the K-Mean method.

*Kata Kunci: Portfolio, Singular Value Decomposition, Clustering, Global Minimum Variance*