

ABSTRAK

Budiman Eli Parulian Silitonga, NIM: 7203250024. “Optimisasi Trading Forex dengan Expert Advisor: Strategi RSI Dan Bollinger Bands pada Pasangan GBP/JPY Menggunakan Platform Metatrader 5”

Penelitian ini bertujuan untuk mengembangkan dan mengevaluasi kinerja *Expert Advisor* (EA) dalam *trading forex* menggunakan indikator *Relative Strength Index* dan *Bollinger Bands* pada pasangan mata uang *Great British Pound/Japanese Yen* (GBP/JPY). Dua skenario pengujian diterapkan, yaitu *backtesting* selama tiga tahun dan *real-time testing* selama satu bulan pada platform *MetaTrader 5*. Metode penelitian yang digunakan adalah *research and development* (R&D) dengan pendekatan *Waterfall*. Analisis data meliputi statistik deskriptif dan uji t untuk mengukur perbedaan antara hasil *backtesting* dan *real-time testing*. Hasil menunjukkan bahwa pada skenario pertama dengan *time frame* H1, tidak terdapat perbedaan signifikan antara kedua metode pada variabel *profit*, *balance*, dan *total deal trade*. Sementara pada skenario kedua dengan *time frame* H4, terdapat perbedaan signifikan pada variabel *balance* dan *total deal trade*, namun tidak pada variabel *profit*. Kedua skenario menghasilkan keuntungan yang konsisten dengan *profit factor* yang baik, baik dalam *backtesting* maupun *real-time testing*. Khususnya pada *real-time testing*, skenario pertama menunjukkan performa yang sangat baik tanpa mengalami kerugian. Penelitian ini menyimpulkan bahwa kombinasi indikator *Relative Strength Index* dan *Bollinger Bands* efektif dalam mengoptimalkan keuntungan pada pasangan GBP/JPY. *Expert Advisor* yang dikembangkan memiliki potensi untuk diimplementasikan secara komprehensif dalam *trading forex*, dengan rekomendasi untuk pengembangan lebih lanjut guna meningkatkan kinerja dan profitabilitas.

Kata Kunci: Strategi Trading Otomatis, Expert Advisor, Relative Strength Index, Bollinger Bands, GBP/JPY, MetaTrader 5

ABSTRACT

Budiman Eli Parulian Silitonga, NIM: 7203250024. "Optimization of Forex Trading Using Expert Advisor: RSI and Bollinger Bands Strategy on GBP/JPY Pair Using MetaTrader 5 Platform"

This research aims to develop and evaluate the performance of an Expert Advisor (EA) in forex trading using the Relative Strength Index and Bollinger Bands indicators on the Great British Pound/Japanese Yen (GBP/JPY) currency pair. Two testing scenarios were implemented: backtesting over a three-year period and real-time testing for one month on the MetaTrader 5 platform. The research methodology employed is research and development (R&D) with a Waterfall approach. Data analysis includes descriptive statistics and t-tests to measure differences between backtesting and real-time testing results. The findings indicate that in the first scenario with an H1 timeframe, there were no significant differences between the two methods in terms of profit, balance, and total deal trade variables. However, in the second scenario with an H4 timeframe, significant differences were observed in balance and total deal trade variables, but not in the profit variable. Both scenarios consistently generated profits with favorable profit factors in both backtesting and real-time testing. Notably, in real-time testing, the first scenario demonstrated exceptional performance without incurring losses. This study concludes that the combination of the Relative Strength Index and Bollinger Bands indicators is effective in optimizing profits for the GBP/JPY pair. The developed Expert Advisor shows potential for comprehensive implementation in forex trading, with recommendations for further development to enhance performance and profitability.

Keywords: Automated Trading Strategy, Expert Advisor, Relative Strength Index, Bollinger Bands, GBP/JPY, MetaTrader 5