Genetic Algorithms for Foreign Exchange Trading

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Due to the dynamic and variable nature of the stock market, trading strategies do have strong and weak periods. That requires periodic changes in the strategy, which involves finding the best one for the latest period of time by the technical analyzers. The aim of the project is the development of an effective computer-based approach to determination of a sufficiently good strategy for foreign exchange trading in given timeframe and currency pair. For the realization of the aim of the project methods from the classical technical analysis (indicators and trading strategies) are used, as well as computer science methods such as genetic algorithms. The created algorithm is tested on historical data for the exchange rates of EUR/USD, USD/GBP and UAH/USD (ukrainian hryvnia) in the timeframe from 2006 to 2014. The analysis of the results shows that the algorithm behaves properly both in periods of economic stability and crisis. The results of the real-time tests on the platform Meta Trader conducted from the beggining of July 2014 until now show 7.9% increase of the assets in the account. Keywords: genetic algorithm, stock market, foreign exchange, technical analysis, algorithmic trading

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