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Mechanical Analysis of Dollar Index Trend

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In this paper is presented a mechanical analysis of dollar index trend, as one of the possibilities of a new review of data obtained on the stock market exchange. The close values of the dollar index on every first day of the month from January 1, 1971 to January 1, 2021 has been considered as coordinates of unit mass particle. Dollar index close values time series were transformed to the time dependent force parameters using Newton's second law. According to the force parameters values obtained after solving nonlinear differential equations, the behavior of the system can be roughly predicted.

References:

1. J. P. Bouchaud and M. Potters, Theory of Financial Risks: From Statistical Physics to risk management, Cambridge University Press (2000)
2. Zoran Rajilic et al., J. Phys.: Conf. Ser. 1814 012004 (2021)

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