

The Search to Improve Status Quo Rationale for Stock Market Investments in Order to Help Middle-income Households

Ishan Gaur

Palos Verdes Peninsula High School, Rancho Palos Verdes, CA

Teacher

Mr. Peter Starodub

Many lost decades of wealth during the last economic recession. Furthermore, divestment made them unable to recover their losses. Financial advisors also overestimated clients' financial stability, resulting in unsustainable investments. This paper develops a new investment strategy to address these issues. The CAPE ratio was used to do statistically based downside management for an aggressive, moderate, and fluid portfolio. These portfolios were dynamically allocated and targeted different risk tolerances. Machine learning was used to make one-year forecasts of the market using economic data from the Federal Reserve Economic Dataset. The aggressive and moderate portfolios avoided losses during economic downturns. The aggressive portfolio beat the market by 1% annually, the moderate portfolio did not beat the market but beat the original strategy by 0.4% annually, and the fluid portfolio did not beat the market or the original. Nu Support Vector Regression predicted normalized NYSE closing prices one year in advance with 80.7% accuracy and with an R^2 value of 0.594. It was a better predictor of long-term trends than middle term trends, as it predicted movement about an average, but not the absolute magnitude of the prices themselves. Nonetheless, this demonstrates some correlation between economic trends and changes in markets.