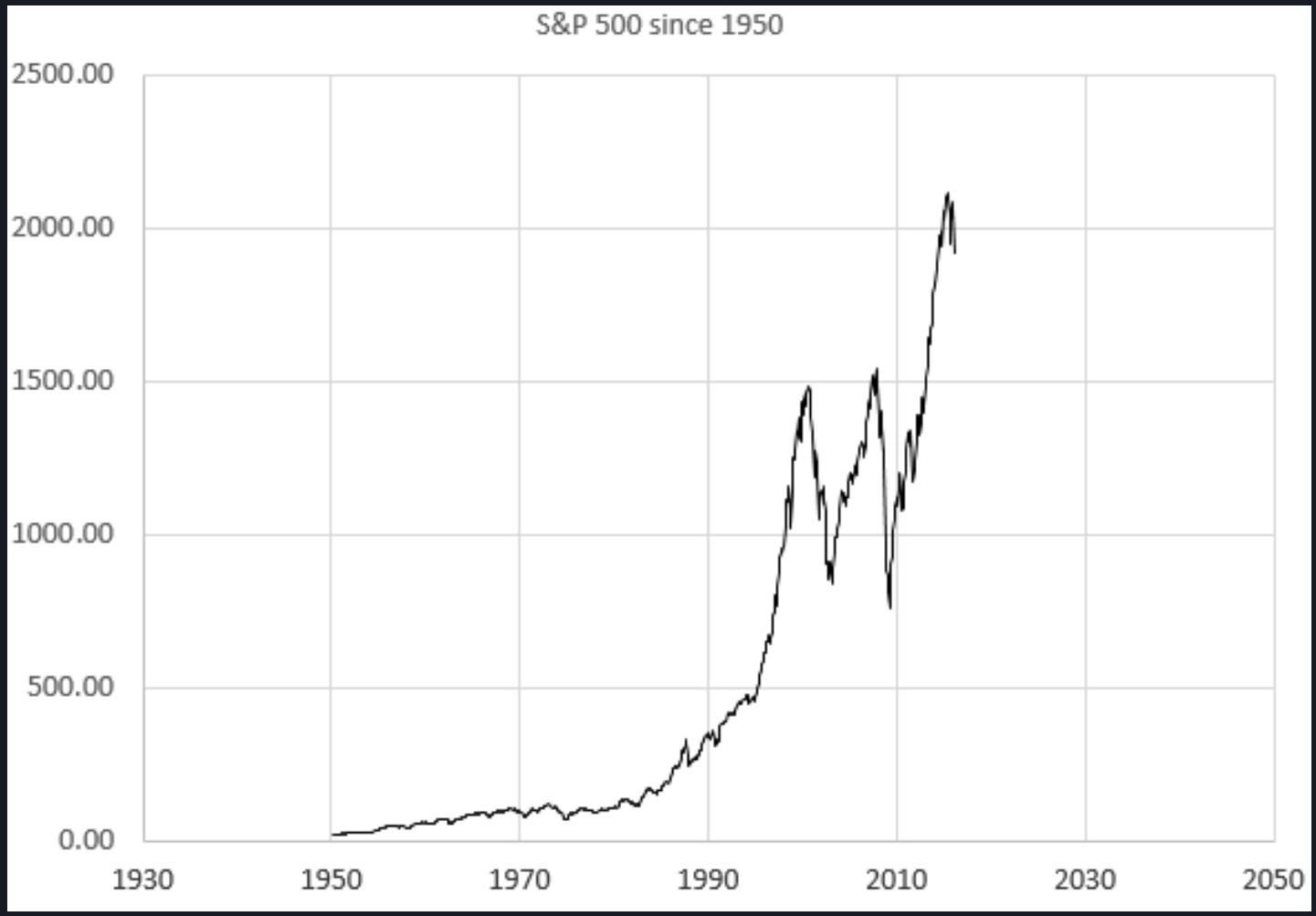
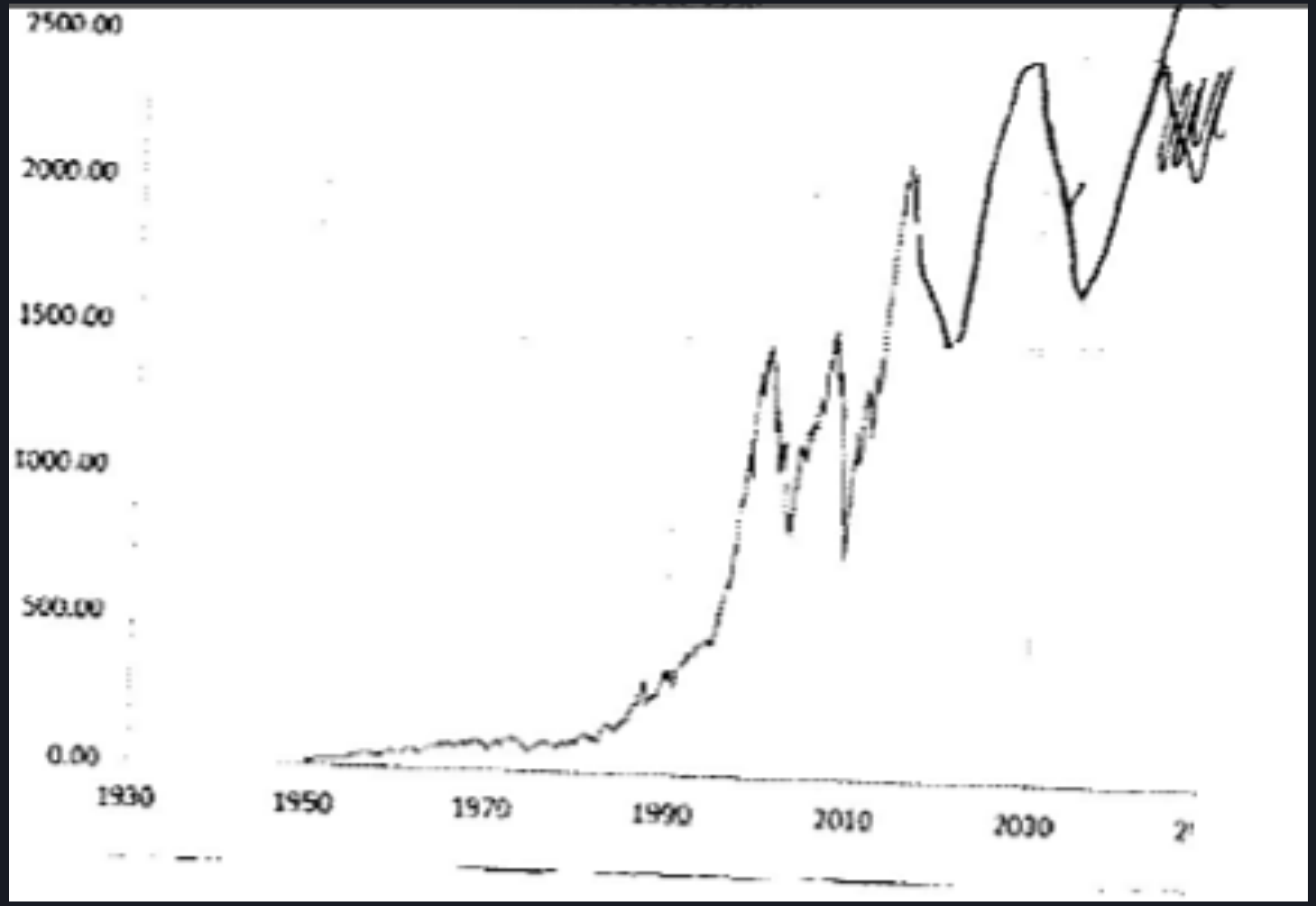
The Efficient Markets Hypothesis

- History of the Hypothesis
- Reasons to think markets are efficient
- Reasons to doubt markets are efficient
- Technical analysis
- Empirical evidence in literature
- Homework assignment and regressions

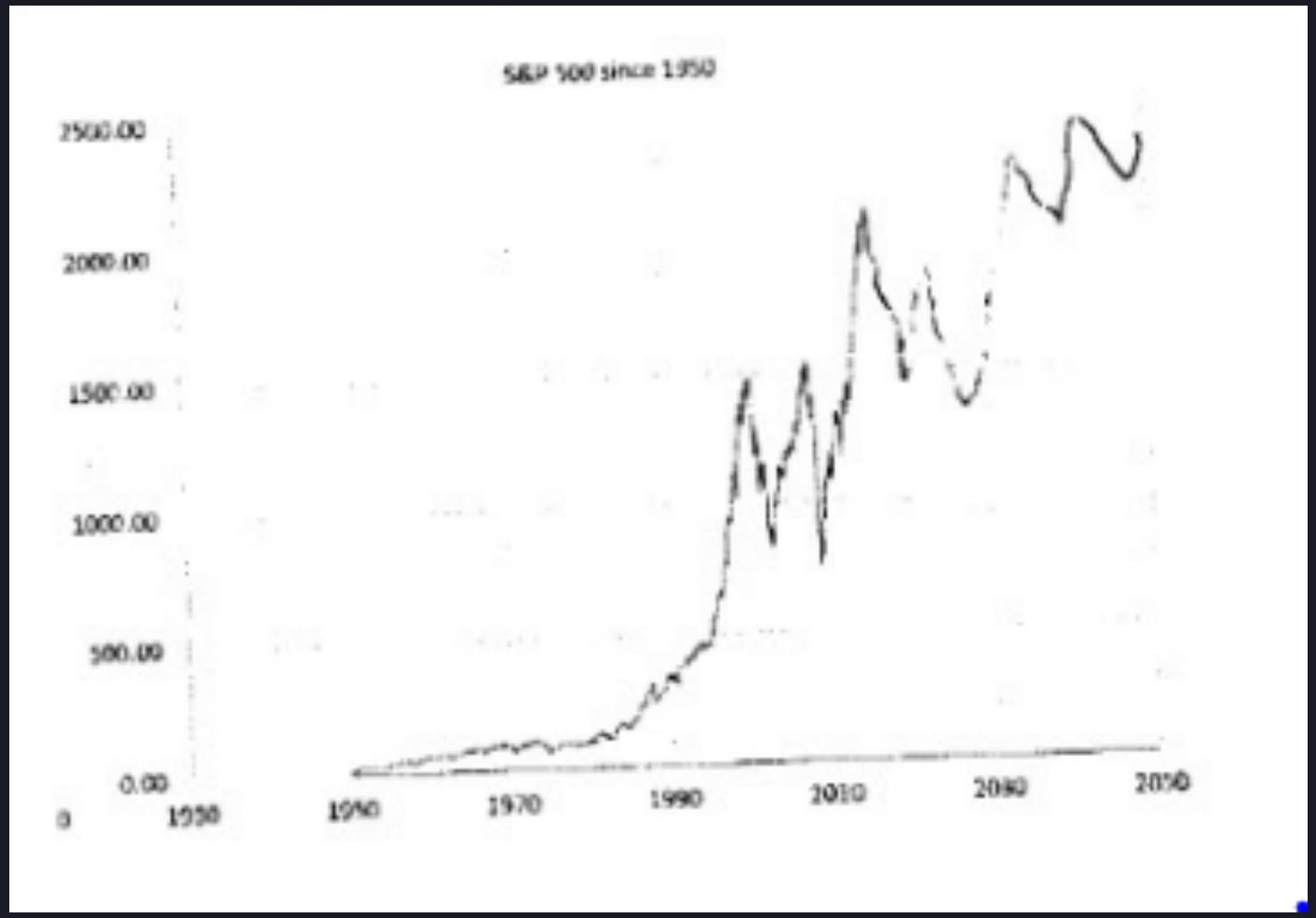
Dinner Experiment Friday



Student Forecast Example 1



Student Forecast Example 2



Random Walk Hypothesis

- Karl Pearson, *Nature*, 72:294, July 27, 1905. Aug 10, 1905, walk of drunk
- Burton Malkiel, *A Random Walk Down Wall Street*, 1973.

Random Walk & AR-1 Models

- Random Walk: $x_t = x_{t-1} + \varepsilon_t$
- First-order autoregressive (AR-1) Model: $x_t = 100 + \rho\,(x_{t-1} - 100) + \varepsilon_t$ Mean reverting (to 100), $-1 < \rho < 1$
- Random walk as approximate implication of unpredictability of returns
- Similarity of both random walk and AR-1 to actual stock prices

Comparison of AR-1 (mean 1, rho=.9 per year) with Random Walk