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CONSISTENCY IN THE US CONGRESSIONAL POPULAR OPINION POLLS AND PREDICTION MARKETS

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ABSTRACT

Prediction and betting markets have evolved with contracts based on electoral outcomes and the traded prices provide a measure of speculators' views on electoral outcomes. Conversely, popular opinion polls yield data which provide statistics on the public's declared voting intentions. This article formulates a model to describe the stochastic evolution of opinion polls, and the resultant probability distribution of seats won in the US House of Congress. Based on standard methods from financial option pricing theory, we can then determine the theoretical value of observed contracts in the prediction markets. Our results show that qualitative predictions are obeyed, but there exist significant deviations between the actual prices traded in the Iowa Electronic Market (IEM) and our theoretical valuation under real-world expectations. Some explanations are provided, which are consistent with conclusions drawn by other authors who have studied electoral prediction markets.

INTRODUCTION

The House of Representatives in the US Congress is decided by electoral ballots every two years. The house consists of 435 seats where regional representatives are elected by their constituents in their respective districts. Historically, Democrat and Republican parties have dominated the membership of the House. A party is said to have control of the House when it holds the greater proportion of seats in the House.

In the period leading into an election, there are various published indicators which contribute to forecasting the likelihood of either party winning the House. One channel is the publication of opinion polls which quote the results of surveys assessing the declared voting intentions of a