Title: Modeling A Presidential Prediction Market

Abstract: Prediction markets now cover many important political events. The 2004 presidential election featured an active prediction market at Intrade.com where securities addressing many different election-related outcomes were traded. Using the 2004 data from this market, we examined three alternative models for these security prices with special focus on the electoral college rules that govern US presidential elections to see which models are more (or less) consistent with the data. The data reveal dependencies in market-anticipated voter sentiment across states. We show that a simple diffusion model provides a good description of the overall probability distribution of electoral college votes, while an even simpler ranking model provides excellent predictions of the probability of winning the presidency. Ignoring the correlations in voter sentiment across states leads to considerable underestimation of the variance of the number of electoral college votes received by a candidate, which in turn leads to overconfidence in predicting whether or not that candidate wins the election. Overall, the security prices in the Intrade presidential election prediction market appear jointly consistent with the rules of the electoral college, and jointly predictive of the underlying contracted events.

(Presented by Ed Kaplan; joint work with Keith Chen and Jon Ingersoll, all of Yale University School of Management)