

# Current Politics and Economics of the United States, Canada, and Mexico

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## **Current Politics and Economics of the United States, Canada, and Mexico**

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## FAIR VALUATION OF PREDICATION MARKET CONTRACTS ON THE US SENATE

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### ABSTRACT

The makeup of the US Senate is decided by electoral ballots each two years. The Senate consists of 100 seats being two representatives per state elected by popular ballot. The Iowa Electronic Markets (IEM) houses various financial contracts based on election outcomes with payoffs based on US Presidential and Congressional election outcomes. This article provides a model for establishing the fair value of observed contracts written on the US Senate elections. The state variables are opinion poll data on voting intentions of the public sampled in the states which have candidates due for reelection in the 2010 midterm elections. We develop a stochastic model for voting intentions and apply techniques honed in financial derivative pricing for establishing the theoretical fair value of a contract. We compare the actual traded contract prices with the fair valuation yielded by our model. This paper calibrates the model, quantifies the degree of consistency and explains why there may be deviations. The model becomes valuable for a party to develop election strategies to allocate campaign resources in order to optimize their likelihood of gaining control of the Senate.