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Comment Text:

My name is Ryan Oprea. I am the Maxwell C. and Mary Pellish Chair of Economics and the Director of the Laboratory for the Integration of Theory and Experiments at the University of California, Santa Barbara. I have published research on prediction markets and, in particular, on the manipulation of prediction markets. In my view, election prediction markets fundamentally serve the public interest by facilitating price discovery, improving social and economic decision-making and providing a rich source of important data to scientists. I am confident that they should be legalized in the United States and, indeed, encouraged.

MANIPULATION

In question 15, the CFTC asks about the risk of manipulation. They write,

"Do the contracts present any special considerations with respect to susceptibility to manipulation or surveillance requirements? For example, could candidate campaign committees or political action committees manipulate the contracts by trading on internal, non-public polling data?"

I have published several pieces of research on the manipulation of prediction markets and so I may be able to help provide some useful perspective. It is first worth distinguishing between roughly three different kinds of market manipulation: (i) misinformation-price manipulation, (ii) momentum-price manipulation, and (iii) pure outcome manipulation.

In "misinformation-price manipulation," a trader first buys a position in the market, artificially raises the price through unethical means, and then exits that position for a profit. For instance, a manipulator might publish a fake Georgia Senate poll to raise the odds that the Democrats win the Senate, before exiting the market.

In my view, the likelihood of this kind of manipulation occurring is extremely remote. First, it is extremely difficult to reliably manipulate public opinion: the

market is already flooded with polls, statistical models, consultant reports and other coverage of elections and it is unlikely that a trader could shift public opinion enough to make a meaningful difference in a prediction market price. Traders in these markets have strong incentives to respond only to high quality information because they have money on the line. The quantity of existing high-quality information makes it extremely unlikely that a manipulator would be successful at convincing traders that an unvetted poll or piece of data is credible enough to trade on.

What's more, this concern is in no way special to prediction markets. The same strategy could be easily executed in any other already existing futures market (e.g. publishing an erroneous report about crop yields) and is equally unlikely to succeed for the same reasons. And if a manipulator wanted to manipulate specifically public opinions about an election outcome, they could make far more money trading on in traditional markets: bonds, currencies, commodities, and the stock market all respond to beliefs about election outcomes too. The manipulator would make far greater returns trading in such traditional markets than on a prediction market (like this one) with position limits of only \$25,000. On this basis, I conclude that this election market almost certainly produces no additional manipulation risk relative to those produced by already existing markets.

The second form of manipulation is "momentum-price manipulation" in which a trader takes a large position in the market to increase the price of a candidate, hoping to induce other traders to join them and move the price higher still. By exiting this cascade before it breaks, the manipulator can earn money on the momentum (a variation on a "pump and dump" scheme). If this price is publicized it may generate positive press for that candidate, influencing opinions. The latter concern is not possible for a Congressional control market like the one proposed, where the market is not on individual candidates. But nevertheless, it is useful to examine whether or not this kind of manipulation is likely to be effective even when possible. Many economists and political scientists have studied this question. As I wrote in a paper ("A Manipulator Can Aid Prediction Market Accuracy," *Economica*, 2009) that I co-authored with George Mason's Robin Hanson,

"Many others, however, have reported failed attempts to manipulate prices with trades, historically (Strumpf and Rhode 2004), in the field (Camerer 1998) and in the laboratory (Hanson et al. 2006; Oprea et al. 2007). A recent review article concludes that, 'none of these attempts at manipulation had much of a

discernible effect on prices, except during a short transition phase' (Wolfers and Zitzewitz 2004)."

In our own paper, we sought to understand why this kind of manipulation is so difficult. We argued that such attempted manipulation is likely to increase price accuracy, by increasing returns to being an informed trader. In particular, we show that a momentum manipulator functions as a kind of "noise trader" whom a smart, informed trader can profit by trading heavily against. As a result, even if such manipulation were to be attempted, it would likely incentivize sophisticated traders to enter the market and incentivize other traders to become more informed. As we write, "[B]y inducing more traders to become better informed, an increase in noise trading indirectly improves the accuracy of market prices (Kyle 1989; Spiegel and Subrahmanyam 1992). If the presence of manipulative traders similarly induced more effort by informed traders, this could help explain the typical failure of manipulation attempts." In additional joint work with Robin Hanson and David Porter ("Information Aggregation and Manipulation in an Experimental Market," *Journal of Economic Behavior and Organization*, 2006) we directly show that even when we pay participants directly to attempt to manipulate prediction markets, they are unsuccessful at doing so. The reason? Other traders get wind of the attempts and trade in such a way as to counteract the manipulation efforts. There are thus good theoretical and empirical reasons to believe this type of manipulation would be ineffective.

The third form of manipulation is pure outcome manipulation. In this scenario, a bad faith actor attempts to directly sway the election itself in order to make a profit off of the prediction market. There are many reasons to believe this fear is outlandish and should not be treated as a serious objection to the market being listed. First, billions of dollars are spent every cycle on elections (2020 saw over \$14 billion spent). Influencing and changing someone's vote is an incredibly expensive affair. Many donors individually spend more than nine figures each to even try to move the odds of their preferred party winning by a percentage point or two. The notion that anyone would attempt to manipulate the election in order to earn less than \$25,000 (the limit on this market), let alone do so successfully, strikes me as extremely far-fetched. Second, people already have large financial stakes in elections, sometimes many orders of magnitude more than the \$25,000 limits. These markets do not uniquely give people an economic stake in elections – the stake they give is in fact quite small. Third, if someone truly wanted to manipulate our elections for financial gain, they could (again) easily make far more money using traditional commodity, equity and bond markets.

In conclusion, the CFTC should not use fears about manipulation as a reason to prohibit this market from being listed. These markets simply do not create significant new incentives or means to manipulate election outcomes or the markets predicting them.

This response also answers two other questions that the CFTC posed, specifically questions 13 and 14. As far as I can tell, there is no way these kinds of markets can be used to sidestep campaign finance laws and I am deeply confused about where this concern comes from. Prediction markets provide no means by which traders can communicate with a candidate. The money from a position taken for a candidate does not go to the candidate him or herself. The proposed market also relates to overall Congressional control, not to individual candidates making these objections completely irrelevant. This also answers the question regarding the integrity or perceived integrity of the election. It is worth remembering that Britain has had markets on elections for decades without any resulting questions about election integrity.

PRICING

The CFTC asks in question 11 the following question:

"Do the contracts serve a price-basing function? For example, could they form the basis of pricing a commercial transaction in a physical commodity, financial asset, or service?"

The weight of the academic literature suggests the answer to this question is yes, and it is not difficult to see why. Suppose someone is attempting to price the stock of a solar power company on January 2, 2021, the day before the Georgia runoff elections would decide the partisan composition of the Senate. If the Democrats win, the odds of a major green energy bill are certainly higher than the counterfactual where one Republican wins (giving the Republicans 51 votes). Suppose the stock is worth \$10 if both Democrats win, and \$9 otherwise. The actual price you are willing to pay for the stock is thus $\$9 + \text{the probability that both Democrats win office}$. If Democrats have a 50% chance of sweeping, then the fair price you would be willing to pay is \$9.50. If the probability is 25%, that fair price is \$9.25. This simple example illustrates the key intuition: insofar as the government has clear impacts on specific firms through its policy choices, the fair price for equities of those firms should depend on the probability of one party or another gaining control.

The price on the prediction market/event contract becomes a means by which one can price those financial assets accurately. It is not sufficient to use polls alone, as those are slow to react to major developments and have been shown to be less accurate than prediction market prices in many studies. Adding a prediction market would thus facilitate more accurate price discovery, and represents a clear public interest that the CFTC should be eager to promote.

PUBLIC INTEREST

The CFTC asks whether or not these markets promote the public interest. I think the clear answer is “yes.” Let me highlight three clear public interest benefits.

First, I would argue that the improvements in pricing (just discussed) directly promote the public interest. Making market prices more accurate has wide-ranging benefits to the public at large, preventing resources from being wasted and channeled to wasted use and producing more accurate information on the economy to its participants.

Second, and more generally, these types of predictions markets are likely to improve decision-making across society. Prediction markets produce valuable, public information that is highly relevant to the choices people make both in the economy and beyond. A company trying to decide whether or not to build a new factory, for instance, benefits by knowing whether the tax breaks they are relying on to build that factory will persist into the future. And since there are clear partisan differences on many important policy issues, knowing who will control Congress in the next two years is extremely valuable in forming these kinds of forecasts and making good decisions in the face of them. This illustrates one of the key benefits of markets: the information their prices produce do not benefit only those who trade in them. Every person in America whose decisions depend in part on who controls government can use these probabilities to make better decisions in advance.

Third, the prices from prediction markets are extremely valuable for researchers trying to understand how public beliefs evolve, what they respond to and how those beliefs influence major decisions. In the last decade or so, important research has demonstrated how useful prediction markets can be as a way of measuring these beliefs in a fine-grained way. Markets on political outcomes are especially valuable for this kind of academic research. To give one example, my colleague at UCSB, Kyle Meng used prediction market prices (from Intrade) for on the likelihood of a major piece of climate legislation passing to answer some

fundamental questions about the abatement costs of climate change policy. This important and influential research (“Using a Free Permit Rule to Forecast the Marginal Abatement Cost of Proposed Climate Policy,” American Economic Review, 2017) used these prediction market prices to infer market beliefs and thereby to back out accurate measurements of abatement costs. This kind of important research – with direct relevance to climate policy -- would have been impossible without a then-running political prediction market. Other research has followed similar strategies but their continuation depend crucially on the CFTC allowing these kinds of markets to operate. I view this as a major public interest benefit of these types of markets.

CONCLUSION

These markets serve the public interest by promoting accurate price discovery, improving decision-making and providing valuable data to academic researchers on important policy topics. Concerns about manipulation—either of the market, or of the election— are poorly founded and do not form a reasonable basis for rejection. In my view, the Commission should clearly allow these prediction markets to legally operate in the United States.