



Economist.com

PRINT EDITION

FINANCE AND ECONOMICS

Economics focus

Guessing games

Nov 18th 2004

From The Economist print edition

Economists and policymakers are just beginning to understand the use of information markets

TALK is cheap, but money speaks the truth. That might be the credo behind the recent, rapid rise in the use of novel markets to forecast everything from political events to business successes and failures. During America's recent presidential election, bets on the Iowa Electronic Market, based at the University of Iowa, and on online exchanges such as www.tradesports.com and www.betfair.com were watched almost as keenly as opinion polls. These and other markets have in recent years been used to forecast almost everything from the fate of Saddam Hussein to the outcome of celebrity trials and the box-office takings of films on their opening weekends.



Markets like these, which are intended to elicit punters' best collective guess about the outcome of some future event, are known as information, prediction or decision markets. Take the presidential election: people could bet on George Bush by buying a contract that paid a dollar if he won and nothing if he lost. Anyone certain of a Bush victory should have been willing to pay up to a dollar for the contract. Anyone confident that Mr Bush would lose could have sold such a contract, expecting to pay nothing when the result came. With many participants buying and selling in this way, the market discovered a price for the contract—in effect, its best guess of the probability of a Bush win.

The theory is that the aggregated hunches of many people with money at stake are likely to be more accurate than the opinion of disinterested experts or of whoever happens to be at home when a pollster calls. Indeed, it is easier to put your money where your mouth is in information markets than in many "proper" markets. Because you can "sell" without first "buying", short-selling, which is limited in many financial markets, is essentially unconstrained. And because the bets are smaller than in financial markets, participants are unlikely to be prevented from backing their opinions by restrictions on borrowing.

Most anecdotal evidence seems to bear this theory out. A recent paper* surveying the academic literature, by Justin Wolfers and Eric Zitzewitz, both of Stanford University's Graduate School of Business, reaches a similar conclusion. For instance, one study found that the Iowa Electronic Market, which started life in the late 1980s, predicted the vote shares of candidates in several elections between 1988 and 2001 with an average margin of error of 1.5 percentage points, compared with the polls' average error of 2.1 percentage points. This year the Iowa market and other exchanges predicted a narrow win for Mr Bush.

Businesses have also made good use of information markets. Siemens, a German conglomerate, used an internal market to forecast (correctly) that the firm would fail to deliver a software project

on time, even though internal planning methods purportedly showed that the deadline could be met. At Hewlett-Packard, a market did a better job than traditional methods in forecasting printer sales. A joint-venture by Goldman Sachs and Deutsche Bank that uses markets to predict economic indicators has been at least as accurate as economists' median forecasts.

This is reassuring, but information markets are also prone to imperfections. One is that they can exaggerate traders' misperceptions of risks. Punters tend to put too much weight on the most likely events and on very unlikely ones, and too little on those of intermediate probability. According to the authors, one contract recently traded on Tradesports' exchange showed that gamblers were assigning much more optimistic odds to extreme stockmarket outcomes than were traders on Chicago's derivatives exchanges, where liquidity is much higher.

Participants in information markets also get swept away by their personal tastes: in much the same way that some people bet on their favourite team regardless of the odds, people are likelier to back the political party they belong to. This should matter less in more liquid markets, because cooler participants will spot that partisanship has pushed prices out of line with probabilities, buy or sell to take advantage, and shift prices back. But smaller, illiquid markets might not be corrected in this way.

Better informed policies

There have been some efforts to use prediction markets to improve public policy. Last year, an American government body, the Defence Advanced Research Projects Agency, tried to create an exchange to trade contracts on the likelihood of a terrorist attack. (The Economist Intelligence Unit, a sister company of *The Economist*, provided data for this venture.) After protest—someone pointed out, among other things, that terrorists might profit from insider trading before striking—the project was shelved. Cheekily, one betting exchange created a contract on whether the project's boss, John Poindexter, would still be in his job on a certain date. It predicted, accurately, that he would not be.

Despite this debacle, Robert Hahn, director of the American Enterprise Institute-Brookings Joint Centre for Regulatory Studies, argues in a new paper[†] that information markets could be of great help in forming policy, especially when combined with performance-related contracts. Suppose that a foundation is thinking of paying \$5 for every child vaccinated against a certain disease. Information markets can be used to estimate the number of children who will suffer from the disease both with and without the bounty. That gives a market-based estimate of the benefit to be had from paying the bounty. The foundation might then auction the rights to the bounty to ensure that the vaccinations are performed at the lowest cost. That sounds far-fetched now, but such schemes may one day be common, given the ability of well-designed, liquid markets to reveal information.

* "[Prediction Markets](#)". *Journal of Economic Perspectives*, Spring 2004

† "[Using Information Markets to Improve Policy](#)". AEI-Brookings Joint Centre working paper 04-18