

Seeds of Thought

Cognitive Science Meets Investment Management

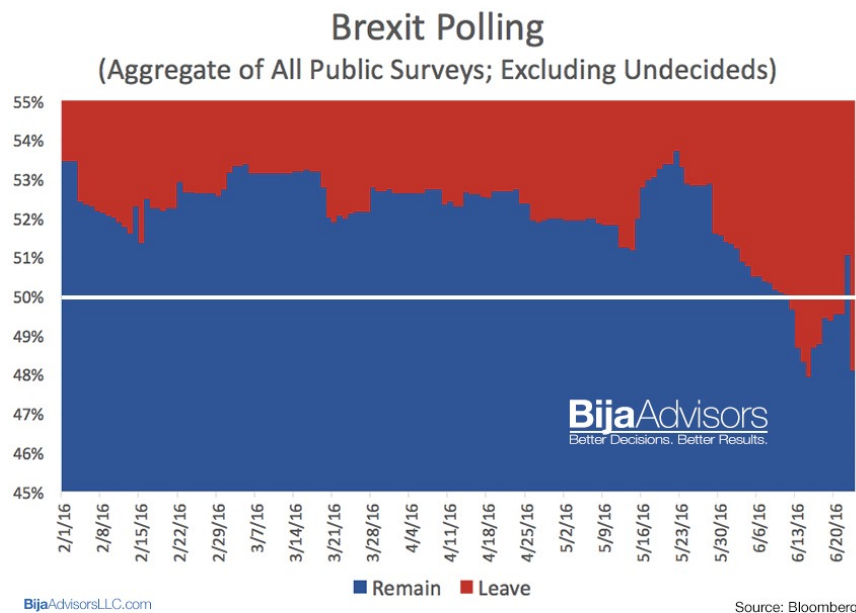
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What the Brexit Vote Taught Us

In numerous conversations last week, while discussing the potential outcome of the US presidential election, I heard something akin to the following two written comments. “We cannot exclude a Trump win (as Brexit was underestimated)” and “One should have learned from the Brexit vote: do not trust any opinion polls!”

One of the fundamental tenets of my approach is shifting from a belief-based system to an evidence-based one. The reason is that it reduces the potential for bias to creep in and mistakes to be made. The Brexit vote did deliver useful bits of information from a macro perspective, but evidence undermining the value of polling was not among them, but don’t take my word for it. Instead, consider the evidence.

Let’s take a look at an aggregation of all public surveys from the time the vote was officially announced (February 1) through to the day before the vote itself. The first graph excludes the undecideds, so only Remain and Leave supporters are counted. Since this is how the actual vote happens, it produces a useful image. Although the Remain camp held a solid lead for months, it began to erode steadily and consistently over the final three weeks. In fact, for much of the final 10 days, the polls were predicting precisely what the actual vote delivered.



Maybe you’re thinking, you can’t just ignore the undecideds. Fine, let’s take a look at what we could have learned from the undecideds themselves. There wasn’t an option for “Undecided” on the ballot. In the end, voters had to make a choice or not participate. Given that those who had an opinion were basically evenly split, especially when you factored in the margin of error, the undecideds could be expected to be quite influential, especially given how many of them there were. Could we have gleaned anything about their leanings ahead of time? The answer is, yes.

It turns out the correlation between Leave and Undecideds was -0.92 versus -0.54 between Remain and Undecideds. In other words, as more and more undecideds were coming off the fence, far more often,

they were ending up in the Leave camp (see graph). That's what the polls were telling us, and that's what happened.

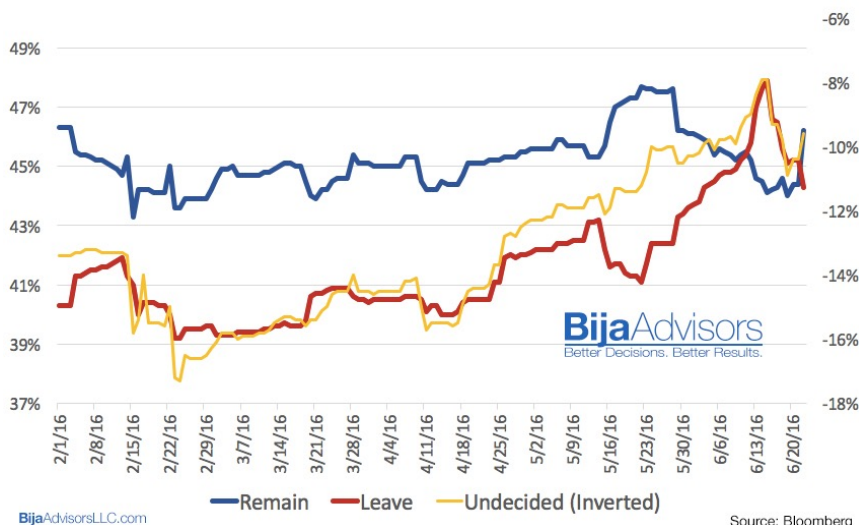
I'm not saying that the result was obvious. Clearly, it wasn't, but that isn't what is in question. There seems to be a popular opinion that polls should be ignored "in light of the Brexit vote," and that is what I'm arguing against.

Truth is, it wasn't the carefully sourced data that misled many investors, it was flow info in the form of bookmaker odds. The night of the vote, betting sites had Remain as an overwhelming favorite (90% vs 10% for Leave). The reason for the imbalance was that a few big bettors, most of whom live in London, had placed large bets on Britain remaining in the EU. (When this happens in markets, we often refer to it as the actions of "smart money".) Interestingly, while the size of the bets were primarily London-based and favored Remain, the majority of bets were placed from outside London and favored the Leave camp.

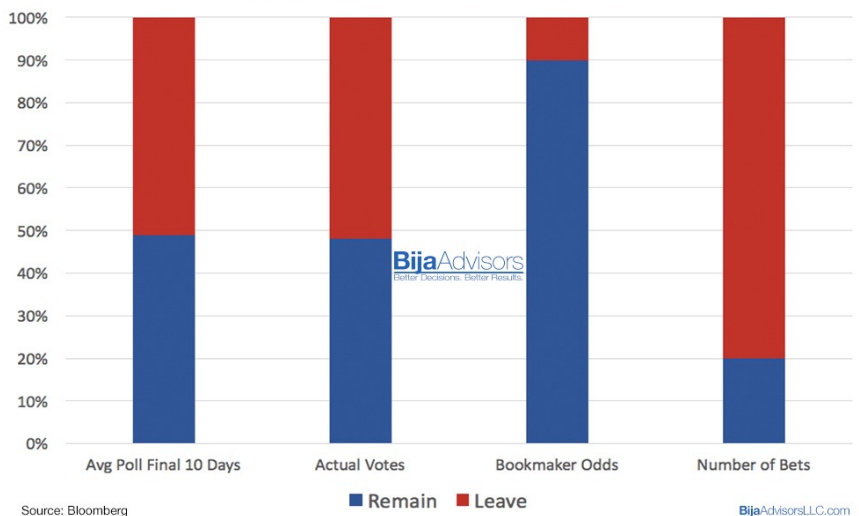
Bookmakers are like any other market maker. They adjust their prices based on the size of flows, ie supply and demand. Although the size of the flow matters for price action, it doesn't affect the actual outcome of a vote. All that matters when it comes to the vote itself, is how many votes are cast for each side.

There is much we can learn from this whole episode, but again, the value of polling voters about an upcoming vote is not one of them. Instead, let's think about the value of price action (bookmaker's odds in this case), especially when driven by a few large players, in predicting outcomes (votes, economic activity, inflation, future monetary policy decisions, etc), and how quick we are to allow the price action to take on greater significance than the data that offers real predictive value (voter polls).

Leave-Leaning Undecideds (Aggregate of All Public Surveys)



Brexit: Expectations vs Results



How we gather and process information is one of the most important aspects of proper decision making. A great many mistakes are very commonly made during this phase of the decision making process. Dismissing valuable data, because it was misinterpreted is a mistake. One way to avoid these kinds of mistakes is to do a post-mortem, much like what I've done above.



About the Author

For nearly thirty years, Stephen Duneier has applied cognitive science to investment and business management. The result has been the turnaround of numerous institutional trading businesses, career best returns for experienced portfolio managers who have adopted his methods, the development of a \$1.25 billion dollar hedge fund and 20.3% average annualized returns as a global macro portfolio manager.

Mr. Duneier teaches graduate courses on Behavioral Investing and Decision Analysis in the College of Engineering at the University of California.

Through Bija Advisors' [coaching](#), [workshops](#) and [publications](#), he helps the world's most successful and experienced investment managers improve performance by applying proven, proprietary decision-making methods to their own processes.

As a speaker, Stephen has delivered informative and inspirational talks to audiences around the world for more than 20 years on topics including global macro economic themes, how cognitive science can improve performance and the keys to living a more deliberate life. Each is delivered via highly entertaining stories that inevitably lead to further conversation, and ultimately, better results.

Stephen Duneier was formerly Global Head of Currency Option Trading at Bank of America, Managing Director in charge of Emerging Markets at AIG International and founding partner of award winning hedge funds, Grant Capital Partners and Bija Capital Management.

His [artwork](#) has been featured in international publications and on television programs around the world, is represented by the renowned gallery, Sullivan Goss and earned him more than 50,000 followers across social media. As Commissioner of the [League of Professional Educators](#), Duneier is using cognitive science to alter the landscape of American K-12 education. He received his master's degree in finance and economics from New York University's Stern School of Business.

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