

**FINANCIAL REVIEW****Pollsters at odds with simple probabilities**

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With the federal election almost upon us, the most important number in Australian politics today must surely be the probability that Prime Minister John Howard is re-elected. So is this the number that the polls report?

Unfortunately not. Instead of calculating the simple probability of victory for each candidate, pollsters report to us just what we tell them: the proportion who say they plan to vote for each candidate.

It is left to the rest of us to work out what to make of a 3per cent lead in a poll with a 2per cent margin of sampling error.

Yet by using simple statistics, pollsters should be able to take the results of their poll and the margin of error, and tell us how confident they are that each candidate will win.

Suppose two polls each find that 52per cent of their respondents plan to vote for Howard, and 48per cent plan to vote for Opposition Leader Mark Latham, but one has a sample size of 500, while the other has a sample size of 2000.

Obviously, the pollster with the larger sample is more confident that Howard will win. But by how much?

According to standard statistical tables, the smaller poll would make one 81per cent sure that Howard would win, while the larger poll suggests confidence in the forecast as high as 96per cent.

Combining the two polls would make one even more certain - giving a 98per cent likelihood that Howard would be re-elected.

Turning polls into probabilities is akin to what meteorologists do every day. Rather than tell us about what their instruments are recording, and how accurate they think they are, weather forecasters produce a single number - the percentage chance that it will rain on any given day.

What do the latest polls tell us? ACNielsen says Labor is a 7per cent chance, Galaxy rates Labor a 10per cent chance, Morgan indicates that Labor is an 83per cent chance and Newspoll gives Labor a 34per cent chance. Weighting the four polls by their sample sizes, they together suggest Labor has only a 12per cent chance of winning.

Of course, this requires us to believe that the polls are as precise as the pollsters say; if not, Labor is probably a better chance than 12per cent (indeed, Centrebet rates it a 23per cent chance).

While these numbers take the pollster's estimates of their errors at face value, there are other types of polling error that go beyond random statistical error. Poll samples may be skewed towards a particular kind of voter. "Don't knows" may not be representative of all other respondents.

And, as Kim Beazley can testify from 1998, our electoral system makes it possible to win 51per cent of the two-party vote but lose the election.

Yet even with these other problems, existing poll results can still be better presented. It's time for the pollsters to follow the meteorologists, and start talking probabilities.

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