

## Is It Representative?

*AFR Smart Investor January 2007*

Suppose you were told that Tony was tall, well-groomed and frequently heard whistling classical music. If you were asked whether he was more likely to be a public servant or a concert pianist, which would you pick? It is surprising how many people would select concert pianist. They do this because they rely in the little information they were given. That is availability bias. However, they have also fallen into the trap known as representative bias. Statistically, there are far more public servants than concert pianists. If you are forced to make a choice, it is better to always go with the probabilities and in this case choose public servant. If you follow that procedure across a large number of choice situations, you would be bound to be wrong occasionally, but right in the overwhelming majority of cases. The lesson from representation bias is to try to avoid being biased in your view by what may be incidental information that is not representative. Try to focus on what is most likely overall. A good way to deal with this is to ask what you would have picked as Tony's job if you had ignored the misleading information about whistling classical music?

Representation bias can be important in choosing investments. Suppose you wanted to choose between two managed funds, which had the same 20-year track record of 12% return. In trying to pick between them, you look at the last two year's performance. Over that period fund A has a return of 16%pa and fund B has a return of 13%pa. Based on this very small sample of only two years' results, most investors would choose fund A. They would have made two mistakes here, both part of representation bias. First, they are relying on a small sample of only two years out of 20, which is clearly not representative of the funds' long term performance record. Second, they have ignored the tendency for managed fund returns to revert to the mean. We know the mean in this case is about 12%. Results tend to fluctuate either side of the mean and two years above the mean suggests it is more likely the next two will be closer to the mean. Suppose I tossed a fair coin five times and it came down heads each time. For the next toss, what is the likelihood it will be another head?

Colin Nicholson [www.bwts.com.au](http://www.bwts.com.au)