

## Risk Tolerance Revisited

April 2009

Markets are down and so is risk tolerance ... or is it? It's conventional wisdom that risk tolerance collapses in bad times but the evidence contradicts this. There's no argument that behaviour changes, however there is a better explanation than that it is caused by changes in risk tolerance.

But I am getting ahead of myself.

First let's look at the risk tolerance picture up to the end of 2007, i.e. before the current financial crisis. In fig 1, we have plotted monthly average risk tolerance scores (mean 50, SD 10) from May 1999 to December 2007.

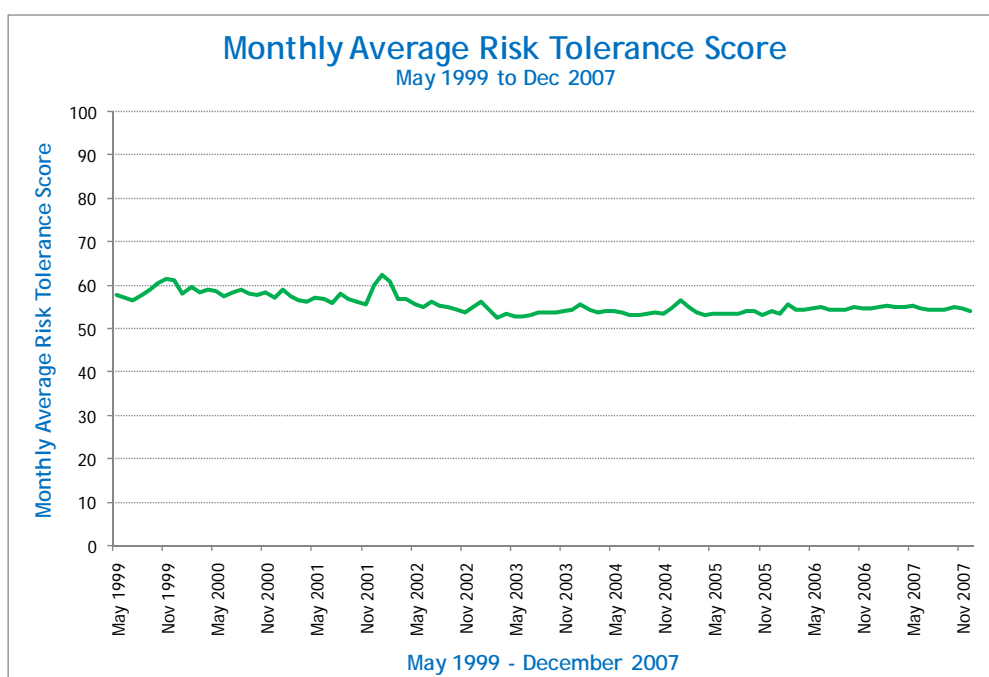


Fig 1

This data can be thought of as a monthly sampling of the same population. There is some noise in the data and what appears to be a slight downward trend. However, the data is actually collected from 4 populations - Australia, New Zealand, the US and the UK. The average risk tolerance scores for these countries are as in Fig 2.

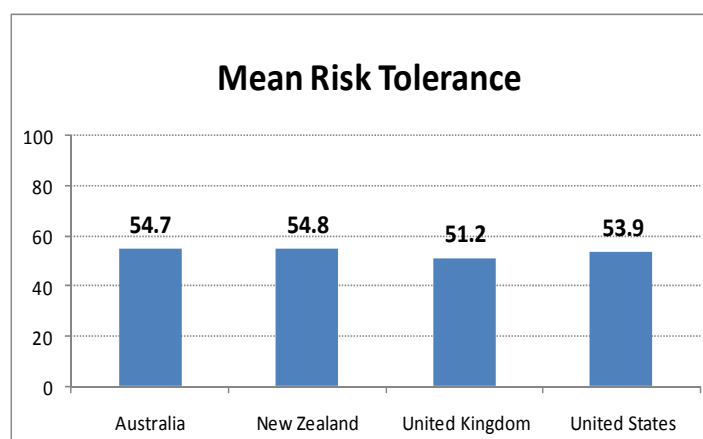


Fig 2

Starting in May 1999 the data in Fig 1 comes initially from Australia and New Zealand, and then the US is added to the mix in June 2002 and the UK in April 2004 (plus there are small numbers from other countries.) This changing composition would be expected to show up in a slight downward trend such as is evident in Fig 1.

Obviously, though, there is no indication in the risk tolerance data of fluctuations related to market moves, as illustrated in Fig 3.

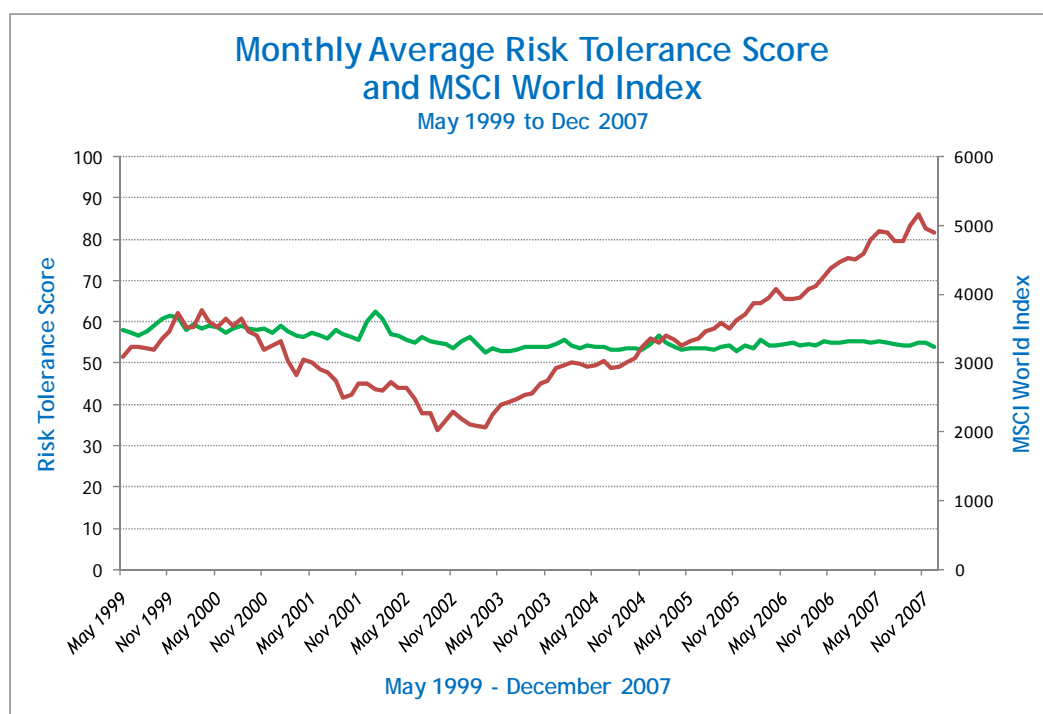


Fig 3

A more sophisticated demonstration of the insensitivity of risk tolerance scores can be found in “Effect of general economic conditions on investor risk tolerance - implications for financial planning”; Santacruz, Lujer; The FINSIA Journal of Applied Finance, Issue 1 2009, pp 33 - 40. The study involved FinaMetrica’s Australian risk tolerance data and the Westpac Melbourne Institute Monthly Consumer Sentiment Index from May 1999 to May 2007.

- ❖ The risk tolerance scores were adjusted for demographic factors.
- ❖ Each month was classified as Optimistic or Pessimistic.
- ❖ The risk tolerance scores were categorised as being from Optimistic or Pessimistic months.
- ❖ The two subsets were compared statistically.

The conclusion was “... the risk tolerance of Australian investors ... does not appear to be affected by the general economic mood ...”.

A further investigation was carried out with regard to risk tolerance scores in months when the share market was rising and in months when the share market was falling; the finding was that “... the means of the two groups are not significantly different, indicating the absence of any relationship between risk tolerance scores and share market performance.”

But we know client behaviour changed at various times over the period in question. When markets were going up clients were risk-seeking and when markets are going down they were risk-avoiding ... or were they? Isn’t it more correct to say that in good times clients were keen to pursue a particular course of action (invest in the share market) and in bad times were keen to avoid the same course of action? Clearly some change has driven the changed behaviour. If it is not a change in risk tolerance, what might it be?

Behaviour is a function of multiple parameters: goals, perceived alternatives, perceived risk in those alternatives,

risk tolerance and so on. If behaviour has changed and risk tolerance hasn't, the most likely culprit appears to be perceived risk. There could be little argument that in 2007 clients perceived share market investing to be low risk and that today they perceive it as high risk (though the opposite is probably true.)

So, the changed behaviour is not due to changed risk tolerance but might well be due to changes in perceived risk.<sup>1</sup>

However, we have been talking about the situation pre 2008. The crisis is so severe that the 'old rules' may no longer hold true. It is well established that personality traits can be changed by life events, good or bad. For some the current crisis might be a life event if, for example, their retirement savings had been wiped out.

What does the data tell us? The anecdotal evidence from FinaMetrica users is that they have seen no significant changes in clients that have been retested. But that is anecdotal. Harder data, average monthly risk tolerance scores from January 2007 to December 2008 is shown in Fig 4 below.

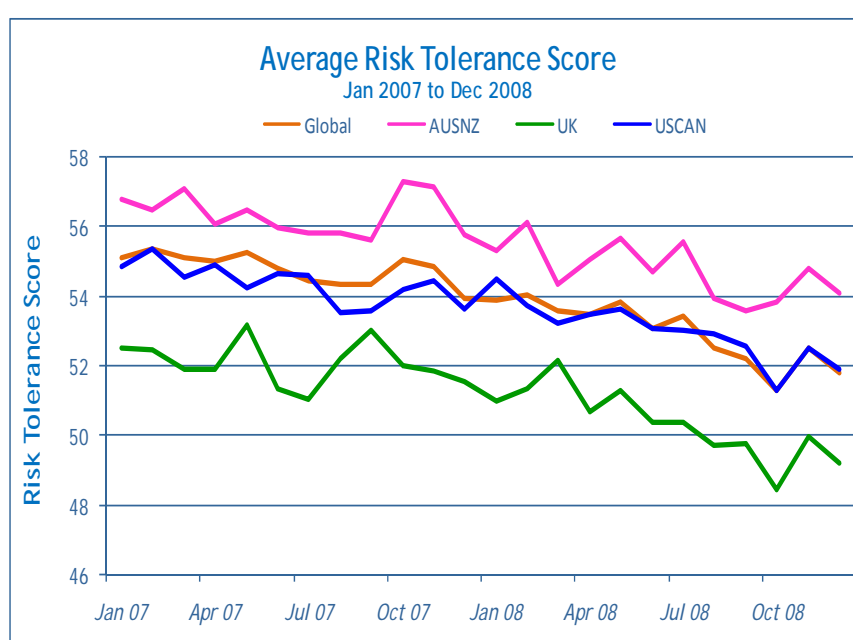


Fig 4

There is clearly a general pattern of falls but only of about three points, i.e. less than a third of a standard deviation. A fall of this magnitude would not have any material effect on advice in practice. Still there is a fall. What might have caused it?

For some clients the crisis might have been a catastrophic life event and their scores might have decreased dramatically, bringing the average down. Also, there might have effectively been a change in some of the questions asked in the questionnaire. The perceived riskiness of the answer options given for questions involving share market investment is likely to have increased with the result that the client would now choose a lower option leading to a lower score. Or, there might be something else.

We have underway a major research project that includes retesting clients so that scores obtained in the crisis can be compared to scores obtained before the crisis. We will also be able to compare answers on a by-question basis and to additional concurrent survey data relating to the impact of the crisis on the client's financial position and financial attitudes.

Question 4 in the survey is,

<sup>1</sup> We are thinking about how we could run a longitudinal study of risk perception to see how it changes as we come out this crisis.

To what extent has the current share market decline affected your view of share market risk?

- ❖ No impact.
- ❖ I now believe that the share market is somewhat more risky than I had thought.
- ❖ I now believe that the share market is considerably more risky than I had thought.
- ❖ I now believe that the share market is enormously more risky than I had thought.

The interim results (n=268) for this question are as shown in Figure 5 below.

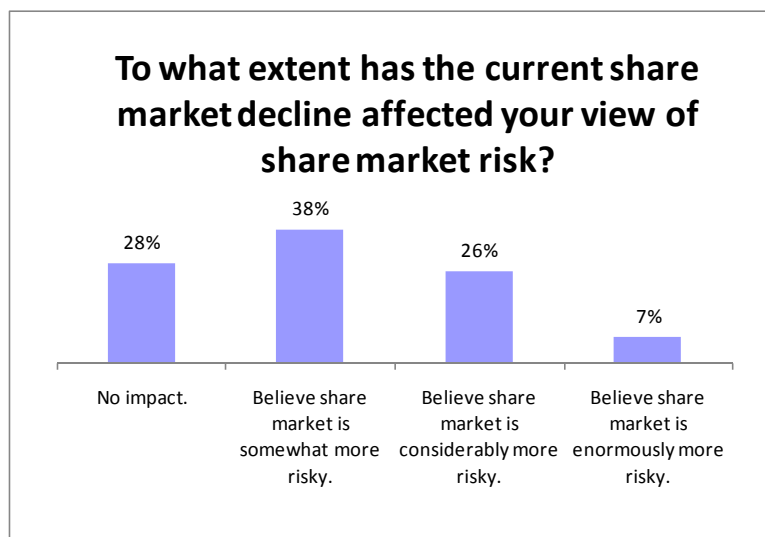


Fig 5

Thirty three percent (33%) of clients now see the market as at least considerably more risky and a further thirty eight percent (38%) see it as somewhat more risky. The risk perceived has increased for two out of three clients.

Of course, a client's investment losses are likely to have reduced risk capacity, i.e., the amount a client could lose before putting financial goals at risk. So reduced risk capacity may also be a factor in behavioural change.

In summary, risk tolerance appears stable and so significant changes in behaviour cannot be attributed to changes in risk tolerance. Rather behavioural changes appear to arise from changes in risk perception and, perhaps, risk capacity. A more detailed picture will emerge as we process research data currently being collected.

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