Risk Tolerance, Risk Profiling and the Financial Planning Process

FinaMetrica Pty Limited

Geoff Davey, co-founder
Paul Resnik, co-founder

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www.riskprofiling.com

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Advisers generally accept their professional, ethical and legal obligation to form a view of their clients' risk tolerance and to take that view into account when giving advice. However there is no general agreement as to what risk tolerance is, how it should be assessed and how that assessment should be applied in the planning process.

Most advisers today use some form of risk tolerance questionnaires. In many cases a relatively simple questionnaire is used – likely provided in their planning software, by a product supplier or as a required element from a compliance department – The client completes it quickly, often with the adviser's 'assistance'. Then one of two things occur, either the adviser moves on to the 'real' portfolio design process or worst still, the risk tolerance questionnaire itself is used to select an investment portfolio directly. In this case the client's entire net worth is invested on the basis of a few flimsy questions and an entirely arbitrary algorithm generated by an untrained and unknown 'expert'.

It is hardly surprising then to find that most advisers place little stock in today's risk tolerance questionnaires. Some are sceptical about whether the questionnaire is capable of measuring much; others seem to doubt whether risk tolerance is something that even can be measured in the first place and others believe that risk tolerance is so unstable that there is no point in trying to measure it. Of course, many advisers have witnessed cyclic client behaviour pattern – clients are risk seeking in bull markets, and risk avoiding in bear markets. For some its all too easy to use this as an excuse to enquire no further. What's really necessary is to explore in greater depth exactly what risk tolerance is, how to measure it and how it fits into the financial planning process.

What We Know about Risk Tolerance

Psychologists have been concerned with risk tolerance for more than 50 years. A large body of knowledge based on studies that have been independently refereed and replicated has been accumulated[i]. Unfortunately very little of this knowledge has made its way into the financial services industry. When financial services businesses seek academic/researcher input it is almost invariably from finance and economics. The silos in academia are such that the psychologists' knowledge has largely stayed with them.

Psychology's view is that risk tolerance is a trait, i.e. a relatively enduring way one individual differs from another.

An individual's risk tolerance addresses that individual's risk-taking behaviour. An individual is exposed to risk in any situation where there is more than one possible outcome. The ISO 22222 Personal Financial Planning Standard defines risk tolerance as "the extent to which a consumer is willing to risk experiencing a less favourable financial outcome in the pursuit of a more favourable financial outcome."

There are four types: physical, social ethical and financial. Individuals behave consistently within type but not across types, i.e. a mountain climber is more likely to be a hang-glider than the man or woman in the street, but may or may not be a financial risk taker. In financial services, the existence of the four types was not known and questionnaires often included questions about other types of risk. (In this article references to "risk tolerance" should be read as "financial risk tolerance".) Factor analysis reveals a single significant factor which means that there aren't multiple types of risk tolerance, e.g. investment risk tolerance, insurance risk tolerance, borrowing risk tolerance, etc. but one single type that applies across all financial dimensions. We know several other things about risk tolerance:

- ❖ Risk tolerance is normally distributed so that the standard statistical formulae and techniques can be applied to risk tolerance observations.
- ❖ Males are more risk tolerant than females by about a standard deviation.
- ❖ Risk tolerance decreases with age[ii].
- ❖ Risk tolerance correlates positively with income wealth and education, and negatively with marriage and number of dependants. However, the correlations aren't strong and some researchers came up with different results.
- ❖ Test/re-test studies over periods of ~30 to ~120 days produced correlations of 0.8 and higher between the first and second tests. Strong evidence of the stability of risk tolerance.
- ❖ Financial advisers are more risk tolerant than their clients by slightly less than a standard deviation.

FinaMetrica Based Research Findings

FinaMetrica has always had a policy of supporting educators and researchers through providing free use of our risk profiling tool, our other IP, our expertise and our database (now approaching 250,000 risk profiles completed since the business was founded in 1997).

Studies made using our tool and/or our data[iii] include:

- ❖ A study confirming that risk tolerance was a trait, i.e. stable and not a state, i.e. variable.

- ❖ Two large demographic studies which again confirmed the gender and aging correlations and largely supported the others mentioned above plus, for example, definitively confirming that the self employed are more risk tolerant.

- ❖ A by-country differences study that found there were statistically significant differences between countries but so small as to have no practical impact.

Mean Risk Tolerance (n=58,182)

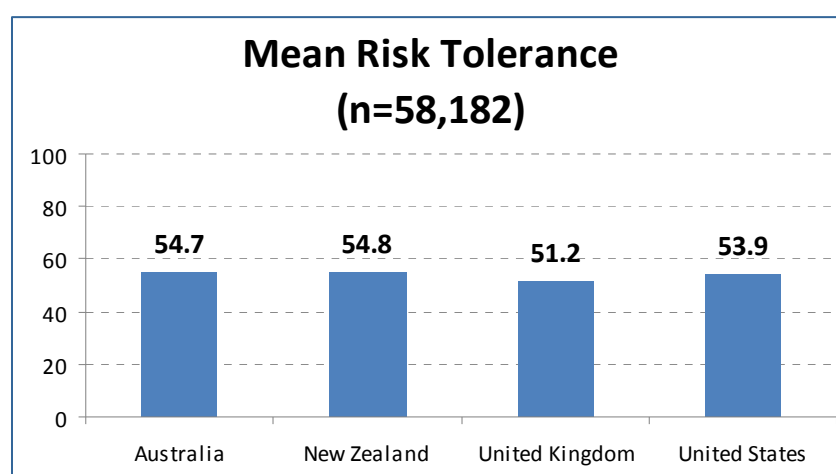| Australia	New Zealand	United Kingdom	United States
54.7	54.8	51.2	53.9

Chart 1

- ❖ A study of the stability of risk tolerance over time and it's susceptibility to market and economic influences. The raw FinaMetrica Australian data for the period May 1999 to June 2008, summarised by quarter, is as follows.
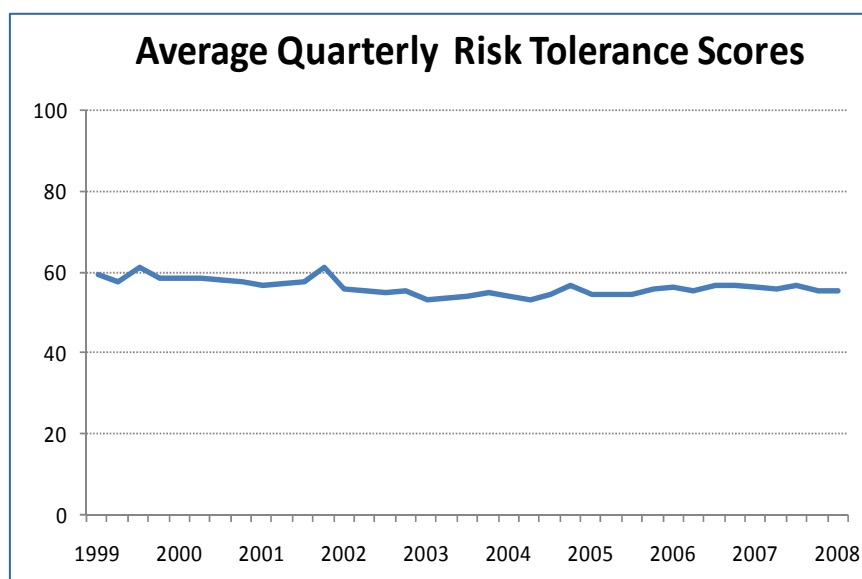
Average Quarterly Risk Tolerance Scores

Chart 2

Only our Australian data was used because it goes back further. Over this period the pattern of performance of the Australian stock market was similar to the UK market but no such pattern was evident in the

risk tolerance scores. However a researcher at the University of Southern Queensland went a significant step further by looking for correlations between scores and a benchmark index of consumer confidence and the benchmark Australian market index. In both cases no correlations were found. The graphical figures in the report are complicated but the one below shows the pattern of scores for Optimistic months and Pessimistic months, as determined by the consumer index. As can be seen, they are virtually identical, i.e. whether people are feeling optimistic or pessimistic does not affect their risk tolerance.
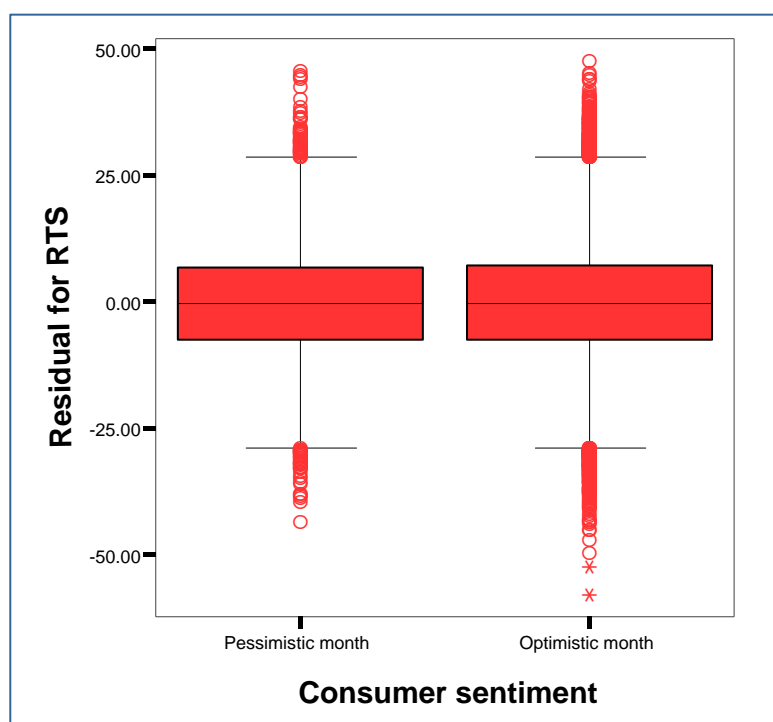

Chart 3

❖ A study linking the psychological construct risk tolerance with the financial construct risk aversion. Participants who had completed the FinaMetrica risk profile completed a series of gambling choice experiments involving $20,000 of real money. Their psychological risk tolerance predicted, inversely, their financial risk aversion.

This was an important study because it was the first to link the two constructs. It also provides strong evidence of the predictive ability of the FinaMetrica risk tolerance test.

Significant studies[iv] conducted without any involvement from FinaMetrica include the following:

❖ A study of advisers' estimates of their clients risk tolerance showed strong evidence of gender stereotyping, i.e. males risk tolerance was over-estimated and females risk tolerance was under-estimated, and this held true for female advisers as well as male advisers. Further, advisers estimates of the clients' risk tolerance were found to be significantly less accurate than the clients own estimates. And, interestingly, clients' self estimates were more accurate than advisers' self-estimates.

❖ A study of the effects of (financial) education on its members by UniSuper, the Australian superannuation fund for university staff, academic and non-academic, showed no change in risk tolerance. This study mirrored a US study conducted by TIAA-CREFF, the huge investment and insurance operation for members of academic, medical, cultural and research organisations.

This is an important study because it casts serious doubt on the common belief that if a client's risk tolerance is 'too low' it can be 'fixed' or 'improved' by adviser education. In many cases it would seem that clients simply feed back to the adviser what they think the adviser wants to hear.

As has been seen above, the stability of risk tolerance is beyond question. However, there's also no doubt that client behaviour with regard to investments differs from booms to busts. If it's not risk tolerance changing, what could it be?

Behaviour is a function of a number of parameters: goals, perceived alternatives, perceived risks, risk tolerance, etc. It seems likely that what is changing from boom to bust is perceived risk. In boom times, there can appear to be little risk as year after year there are bumper returns. Then the bust arrives and almost everything seems to be producing losses. No wonder one sees a change in client behaviour with the degree of change depending on how well the adviser has forewarned the client by properly explaining potential losses.

Good and Bad Risk Profiling Options

Two types of risk profiling are common: portfolio pickers and psychometric tests.

❖ Portfolio pickers combine questions about risk tolerance with questions about goals, experience, risk capacity etc. to select one of, usually, five or six investor 'styles' for each of which there is a model portfolios. There is no output from the process other than this investment recommendation. The adviser usually works through the questionnaire with the client thus, intentionally or unintentionally, biasing the result to the adviser's views. Portfolio pickers are usually the product of limited effort by compliance and/or marketing departments.

❖ Psychometric tests will confine their questions to risk tolerance. Questions will have been selected after a rigorous process of usability and norming trials. In usability trials questions are tested for understandability (how easy the question is to understand) and answerability (how easy the question is to answer). Usability trials ensure that questions are in plain English and can be understood without explanation by the adviser. Only those with high usability are retained for the norming trials which test the statistical qualities of each question and of the scoring algorithm[v]. A psychometric test will provide an accurate score with a small known error margin on a known scale and a meaningful verbal report. There should also be a technical manual which provides details of the trials and the results.

Portfolio pickers have been shown to be a flawed methodology in several research studies. Their shortcomings together with an introduction to the principles of good measurement can be found in "Insights on Measuring Risk Tolerance from Psychology and Psychometrics", a paper co-written by Geoff Davey and two US academics and published in the April 2005 edition of The Journal of Financial Planning, www.fpajournal.org.

In simple terms, portfolio pickers ask too few 'good' questions and too many 'bad' questions. Whether a particular question is 'good' or 'bad' can only be determined by a complete analysis. However, it is possible to use a simple sight check to do an initial culling of question that are off the topic or will require explanation by an adviser.

Questions about time horizons, cash flow requirements, investment experience and the like, while all of interest to the adviser, should not be included with risk tolerance questions as the they will only distort the result to the point where there is no valid or reliable outcome.

The Australian court case Paige v FPI showed what little patience the courts have with the opaque and poorly explained shortcut that was the FPI portfolio picker. Neither the adviser nor the client understood the logic or the rationale behind the portfolio recommendation. (FPI was a pioneer Australian financial planning group and was one of Australia's first institutionally owned planning businesses.)

Risk Tolerance in the Financial Planning Process

There is a value in knowing a client's financial risk tolerance in its own right that goes beyond just the legal obligation.

In the world of uncertainty and ambiguity that is the clients' present circumstances and future expectations, a psychometric risk tolerance assessment is a firm foundation, once accepted as correct by the client, to explore the planning options.

The financial planning process almost invariably involves a series of trade-off decisions which can only be made meaningfully when the elements involved in the trade-off are known with reliable accuracy.

For example, more often than not consumers need to take more risk than they would prefer to achieve their initial goals. They simply do not have sufficient present or prospective savings to fund their lives as they would wish to live them.

Risk tolerance is one of the three key risk-related inputs to a portfolio recommendation - the other two being the risk an individual needs to take to achieve their goals (risk required) and the crystallised risk an individual could accept without changing their life goals (risk capacity). A simple example illustrates the three-way trade-off that can arise.

In deciding on what portfolio best suits his needs and to which he can make a properly informed commitment Bob, with his adviser's assistance needs to take into account and resolve conflicts between the three competing risk-related parameters: his risk required, his risk capacity and his risk tolerance.

Bob's adviser shows him that he needs a very aggressive portfolio to achieve his life ambitions. However by questioning and analysis he discovers that Bob could afford to lose no more than 10% of his investment assets without having his life ambitions markedly changed, which means a conservative portfolio. By assessment he discovers that Bob has a lowish risk tolerance which, all else being equal, would lead him to a moderate portfolio.

Clearly there are three different asset allocations leading to three distinctly different lifestyle outcomes competing here:

- ❖ Is any one of them right for Bob?
- ❖ Which allocation causes Bob the greatest and the least anxiety?
- ❖ Are there alternatives?
- ❖ What is the right way to proceed, recognising the substantial differences in long term outcomes?
- ❖ How should Bob make those decisions?

In the end Bob must make the decision because he is ultimately the one who has to live with the consequences. He must give his properly informed commitment to the asset allocation which is to be implemented.

Exploring the trade-offs is usually a powerful educational experience about risk and return[vi].

The adviser's role in this process is to suggest alternatives, to illustrate outcomes, to recommend but not to decide. This process is commonly called Gap Analysis and is usually resolved by a combination of:

- ❖ Increasing the resources being applied through earning more and/or spending less, and converting personal use assets to investment assets.
- ❖ Easing the goals through delaying, reducing and/or discarding.
- ❖ Taking somewhat more risk than would be their preference (but not to the stage that in a downturn they might panic and sell.)

This process outlined for Bob is at odds with much of standard industry practice where portfolio pickers automatically make trade-offs opaquely (based on the value system of the portfolio picker's creator rather than on Bob's.) This 'pragmatic' short cut runs a high risk that there will be a poor match between the needs of investors and the portfolios recommended. At the least this is just plain wrong, at worst it results in heightened risk of client unhappiness, higher levels of product churn and greater likelihood of both informal and formal dissatisfaction and complaints.

No investor is happy when they lose money ... but it is very important to distinguish between those who are unhappy with the investment returns but not the advice and those who are unhappy with both returns and advice. The former will have given their properly informed commitment to a plan that included proper consideration of risk tolerance and, while losses are never pleasant, they should not be outside the investors' expectations. Those who are unhappy with both advice and returns may also seek to recover losses on the grounds that the adviser did not have their properly informed commitment (usually because there was no appropriate risk tolerance assessment upon which to base that commitment.)

Summary

Risk tolerance is now a well understood construct. Its nature (a psychological trait) and its expression (males greater than females, decreasing with age, etc) are well documented in psychological (and finance) journals, text books and research.

Psychometric assessment of risk tolerance has been a fact of life for the last ten years. Psychometrics itself goes back more than 100 years.

A psychometric assessment of risk tolerance provides a firm, plain-English foundation for exploring planning options with the client. It underwrites a transparent process that leads to the optimal (based on the client's values) strategies for the client. It is an essential ingredient in a financial planning process that leads to the client's properly informed commitment to both the plan and the portfolio.

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[i] See Technical References under Resources at www.riskprofiling.com.

[ii] Strictly, today's older people are less risk tolerant than today's younger people. Whether, today's young people become less risk tolerant as they age is unknown. A longitudinal study is required. In 2009 FinaMetrica will have some ten year old data and, in the absence of a researcher wanting to analyse it, will commission a study.

[iii] See Resources at www.riskprofiling.com.

[iv] Ditto.

[v] For FinaMetrica's 25 question questionnaire more than 150 questions were tested during four iterations of the testing loop.

[vi] FinaMetrica provides our users with a unique educational tool in its Risk and Return Guide and Charts, but these are also freely available to advisers generally at www.riskprofiling.com under Resources.