# Internet Appendix A124: Financial Risk Tolerance

## A124.1 Illustrative Reverse Engineered Pitch Template Example

<table>
<thead>
<tr>
<th>Pitcher's Name</th>
<th>Ya Li (UQ Winter Scholar)</th>
</tr>
</thead>
</table>

| **(B) Basic Research Question** | Does financial risk tolerance fluctuate from period to period in association with investment market movements or changes in individual characteristics |


| **(D) Motivation/Puzzle** | How FRT might vary across personal characteristics and circumstances is a worthwhile research endeavour and although the literature reflects such interests, much remains to be clarified, which includes the three puzzles following:  
  (1) the temporal stability of individual FRT  
  (2) the extent to which FRT levels or movements are associated with financial events  
  (3) the relationship, if any between FRT movements and changes in each individual’s demographic/socio-economic characteristics |

**THREE**  
Three core aspects of any empirical research project i.e. the "ID(o)Ts" guide

| **(E) Idea?** | Models are constructed specifically to solve the three primary puzzles mentioned. We exploit global financial crisis started in 2007 as an example of financial market movements to study their possible effect on FRT.  
For the first method,  
Key dependent variables: the level of the FRT and PFRT (Perceived FRT);  
Key independent variables: categorical dummy variables denoting if during/post GFC, i.e. the GFC’s influence. Dummy variables are also created to country/region of the respondent.  
Control variables: individual’s demographic/socio-economic characteristic factors  
For the second method, changes of FRT and PFRT, instead of their level, are dependent variables. Changes of demographic factors are also explanatory variables in this method |

| **(F) Data?** | (1) Source and size: A psychometrically-validated psychological trait scale and demographic/socio-economic survey response data from a total sample of 4,741 individuals drawn from US, Australia and the UK. A sub-sample of 3,368 investors is used to explore the possible effect of temporal changes in control variables.  
(2) Sample period: FRT surveys are conducted between January 2001 and July 2009 and where at least two surveys are available for a given client.  
(3) Cleansing: data with incomplete background information across both surveys are excluded and after applying validity checks on date of birth, education and gender, 3,368 individuals with two complete sets of background information in the test and retest procedure remained |

| **(G) Tools?** | (1) Survey instrument design: A psychological trait scale is used to proxy FRT. We analyse the responses to the FinaMetrica Financial Risk Tolerance Scale, derived from a 25-item instrument developed by FinaMetrica in the 1990s. In addition, we use responses to the survey’s final question which asks respondents for their own perception of their financial risk tolerance. Additionally, the instrument collects a rich set of demographic/socio-economic background information.  
(2) Two Regression Models are used:  
a. The first model utilises the whole sample of 4,741 respondents, focuses on the tolerance(FRT) and perceived tolerance(PFRT) levels from the most recent survey of any given individual and seeks to examine the time variation in these levels, as the GFC unfolded.  
b. The second method of analysis examines longitudinally the test-retest time variation in FRT and PFRT, thereby focusing upon the temporal change in risk tolerance of each individual. |

## Two key questions

<table>
<thead>
<tr>
<th>(H) What’s New?</th>
<th>An intersection of financial risk tolerance, global financial crisis and individual’s characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>(I) So What?</td>
<td>From a financial adviser’s point of view, an awareness of drives of FRT may (1) allow a better matching of investment advice and portfolio asset allocation (2) and serve to satisfy regulatory requirements pertaining to the quality of investment services.</td>
</tr>
</tbody>
</table>

## One bottom line

| (J) Contribution? | Contribute to the FRT literature in that  
(1) the temporal stability of FRT is analysed using a ‘pure’ longitudinal, intra-person ‘test-retest’ approach in addition to temporal, cross-sectional analysis of FRT levels;  
(2) the GFC provides a unique opportunity to consider the temporal stability of FRT across a period of financial turmoil and thus provides scope for stronger conclusion concerning the relationship between market event and individual FRT;  
(3) the level, and changes in, pertinent demographic/socio-economic background variables are controlled in turn, including possible cross-border effects;  
(4) Samples are large and subjects are actual individual investors dealing with real-world events, which makes the study have strong external validity;  
(5) FRT is measured using an independently validated, psychometric instrument, which makes the study have strong internal validity. |

## Three Key Findings

| (K) 3 Key Findings |  
(1) In terms of the cross-sectional variation in the level of FRT scores observed over time, the test scores observed during the GFC were significantly lower in the statistical sense than those recorded prior to the GFC. However, the magnitude of this difference is small. A significant PFRT variation is not observed.  
(2) When examining the change observed in individual FRT and PFRT across time, measures are stable, with mean individual change in tolerance not statistically significant.  
(3) Change in risk tolerance observed in test-retest surveys is relatively larger for those with lower risk tolerance levels conducted during GFC. |