Capacity of retail investors to understand complex products:

Studies of financial literacy, numeracy and financial product knowledge of the general adult population in Australia show rates of competence at similar levels to other developed economies such as the Netherlands, Germany and the United States (Agnew et al. 2013a). However this does not ensure that retail investors are able to understand complex financial products. Fewer than 45% of Australian adults can answer three questions on simple interest, inflation and diversification correctly. Women, the unemployed, the less educated and younger individuals are the most vulnerable groups. Also, the probabilistic knowledge that is required to understand many financial risks are even rarer. For example, average individuals in Germany or the US can answer only 2/3 of nine simple questions about risk and probability (eg, about 30% could not tell if 1 in 10, 1 in 100 or 1 in 1000 is the largest risk; Galesic and Garcia-Retamero 2010).

This variation in competence poses serious challenges for risk communication to the general public. For example, the standard risk measure used in Australia to communicate with superannuation fund members is associated with a higher percentage of fundamental investment mistakes than other communication techniques, and these mistakes are more likely among people who have low numeracy (Bateman et al. 2014).

Knowledge of specific products and features of financial institutions are also important to efficient decision making. Such knowledge can be very low among retail investors, even when information is readily available. For example, Agnew et al. (2013b) report that only 40% of surveyed adults knew that a balanced investment option in a superannuation funds was not exclusively invested in safe assets, indicating that more than half of the population was unaware that such an investment could decline in value. Limited knowledge of products and poor understanding of rules, prudential regulations and responsibilities of distributors of products drive a wedge between revealed preferences and true underlying preferences of retail investors so that market data are not always a good guide for policy.

Complexity and retail investors:

Studies of decision making suggest that consumers tend to decrease the effort applied to decisions when confronted with complexity of many sorts, including financial decisions, and this tendency is more marked among people with low financial literacy (Agnew and Szykman 2005). Financial products that involve decision making under uncertainty or distant consequences are hard for consumers, such as many of the complex products outlined in this report. Complexity is related to poorly formed preferences in consumers, in fact, rationality is likely to be partly the result of repeated participation in markets. Unfamiliarity and complexity are likely to amplify tendencies to irrational choices and the use of heuristics and defaults (Brown et al. 2013). Since many of the complex products discussed in the report are new to the market and/or new to individual investors, and some involve long term investments, opportunities for repeated participation and preference formation are very limited.

This leaves open the issue of how consumers can acquire the knowledge and experience needed to overcome complexity and form preferences. For some products, interactive interfaces, calculators and simulators may be able to partly supply the necessary experience (Kaufman et al. 2013). It is more likely that the products will be distributed via the advice chain, where the education and experience of an advisor should fill the gap. There is a need for adequate professional training, and regulation of advisor certification, at a high enough level for the advice to benefit retail investors. Existing work by ASIC and recent experimental work by Agnew et al (2014) shows that the trust of clients is easily won, so the training and regulation of advice services is critical.

- Agnew, J R, Bateman, H, Eckert, C, Ishkahov, F, Louviere, J, and Thorp, S (2014) 'Individual Judgment and Trust Formation: An Experimental Investigation of Online Financial Advice' Working Paper, Mason School of Business, College of William and Mary, VA.
- Agnew J R, Bateman H, Thorp S (2013a), 'Financial Literacy and Retirement Planning in Australia', *Numeracy*, Volume 6(2), Art. 7: 1-25.
- Agnew J R, Bateman H, Thorp S (2013b), 'Superannuation Knowledge and Plan Behaviour', *JASSA*, vol. 2013, no. 1, 45-50.
- Agnew J R, and Szykman, L (2005), 'Asset allocation and information overload: The influence of information display, asset choice and investor experience', *Journal of Behavioral Finance*, 6(2):57-70.
- Bateman, H, Ebling, C, Geweke, J, Louviere, J, Satchell, S, and Thorp, S (2014) 'Risk presentation and retirement portfolio choice', *Review of Finance*, in press.
- Brown, J, Kapteyn, A, Luttmer, E F P, Mitchell, O S (2013) 'Decision complexity as a barrier to annuitization', NBER Working Paper no. 19168.
- Galesic M, Garcia-Retamero R (2010), 'Statistical numeracy for health: A cross-cultural comparison with probabilistic national samples', *Archives of Internal Medicine*, 170.5: 462-468.
- Kaufmann C, Haisley E, Weber M (2013), 'How much risk can I handle? The role of experience sampling and graphical displays on one's investment risk appetite', *Management Science*, 59: 323-340.