

Attitudes and Behaviour in Everyday Finance: Evidence from Chandigarh

Pooja*

Key Words:

1. Attitudes and Behaviour
2. Rationality
3. Segmentatio,

Abstract

In an increasingly competitive marketplace, financial institutions need to emphasize customer relationships and the retention of existing customers that require an in-depth understanding of their attitudes and behaviours (Harrison and Ansell, 2002). Market segmentation relies, in the financial industry, largely on socio-demographic information to define segments for specific services (Harrison, 2000). Therefore this study highlights the selected aspects of financial affairs to gain insights towards significant investor's behavioural patterns. For this samples of 184 respondents from Chandigarh have been analyzed using factor and cluster analysis. The factor analysis highlight four major factors i.e. Interest in Financial Issues, Free Spending, Financial decisions and Annoyance feeling if unexpected outcome happens, and Rationality & Anxiousness. The results clearly segment the sample among three clusters that are conservative, moderate and aggressive spenders.

INTRODUCTION

Everyone has to manage his or her personal finance in one way or another. Some tend to save a lot, some like to collect information before each purchase. Private investors are heterogeneous group but rather individuals with various financial practices combined with different levels of experience, anxiety and interest in financial matters (Gunnarsson and Wahlund, 1997).

The objective of present paper is to examine the extent to which a broad range of private investors can be classified into a small number of clusters in order to learn about group-specific needs in financial affairs. The main theoretical contribution of the present paper is that the investors are segmented on the basis of the revealed dimensions in attitudes (e.g., level of anxiety), together with the self-stated finance-related behavioural pattern (e.g., spending tendency).

LITERATURE REVIEW

Individuals show considerable deviation from the expectation of rational behaviour implied by financial models (Barberis, 2003). Behavioural finance broadens the view by combining knowledge from psychology and economics (Camerer and Loewenstein, 2004). Most of the studies focus on particular anomalies and biases that individuals depict, such as overconfidence and

postponement (Biais et al., 2005; O'Donoghue and Rabin, 1998). Various studies catering to behavioural finance have been categorized and reviewed in succeeding paras.

Market Segmentation

In the financial services industry, market segmentation is a common method to understand better and serve the diverse customer base with its wide-ranging needs and various behaviours (Speed and Smith, 1992). Competitive pressures from deregulation of the financial services market increase the requirement for market orientation and a more intimate knowledge of the market and its segments (Gunnarsson and Wahlund, 1997). Previous researches have shown that there are various benefits from taking a segmented approach to the marketplace: a better serving of customer requirements; a tailoring of offerings; and higher customer satisfaction (Harrison and Ansell, 2002). It can increase customer retention and create loyalty and long-term relationships that positively affect performance (Martenson, 2008).

Market segmentation aims to recognise patterns of financial behaviour, identified by studied segment predictors to group individuals into segments according to their product needs (Harrison, 2000). Yet, marketing in the financial services industry today is still predominantly based on socio-demographic features like gender and age which are easy to identify and easy to apply in the composition of groups (Machauer and Morgner, 2001). A prediction of needs from socio-demographic characteristics cannot be assumed; therefore these widely used a priori

* Assistant Professor, Govt College for Girls, Sector-14, Panchkula and can be reached at pooja18284@gmail.com



segmentations are under review (Speed and Smith, 1992). In contrast, post hoc methods entail the grouping of respondents according to their responses to particular variables, focusing on customer motivations (i.e. needs/behaviour) that are more likely to result in a service based on individual need (Durkin, 2005). In research, behavioural segmentation is increasingly found (Elliott and Glynn, 1998; Soper, 2002), although researchers continue to concentrate on the financial behaviour of specific groups and selective variables (Warneryd, 2001).

Individual Investors

The literature on individual economic behaviour often focuses narrowly on specific areas such as risk attitudes (Warneryd, 1999; Wood and Zaichkowsky, 2004) or saving (Normann and Langer, 2002; Thaler and Benartzi, 2004). Other fields of research target investment in securities (Barber and Odean, 2001; Brennan, 1995; Keller and Siegrist, 2006) or focus on specific segments such as occupational groups (e.g., dentists and managers) (Jorg, 2005)).

Rather an interest in finances or having certain habits related to managing one's financial means may indeed be a moderating factor to learn about behaviours and needs (Loix et al., 2005). The subject is not covered by the extensive research on individual's attitudes and habits towards money, as such studies focus on the meaning of money (Lim and Teo, 1997) or basic values concerning money in general as an abstract concept (Raich, 2008), and not on an individuals' ways of dealing with his or her personal finance. Previous studies of private investors have used mainly behaviour-based criteria or attitudes and do not combine both aspects (Keller and Siegrist, 2006).

Attitudes and Behaviours

A frequently discussed question in research is to what extent attitudes predict behaviour. A direct relationship between attitudes and behaviour has often been found to be weak, but difficulties in finding a strong relationship is because of differences in definition and measurement of attitude and behaviour (Warneryd, 1999). The more specific the attitude is the better are the chances of finding a substantial correlation with behaviour if behaviour is also defined as a specific act (Ajzen and Fishbein, 1980). Therefore, defined questions or attitudes can have predictive power and a higher correlation of attitude towards behaviour has been confirmed in studies (in a comprehensive meta-analysis: Glasman and Albarracín, 2006; Tesser and Shaffer, 1990). A further question is the benefit of knowledge concerning behaviour. As behaviour changes over time, there is a popular assertion that "past

behaviour is the best predictor of future behaviour" (Ajzen, 1991, p. 202).

Financial Needs Segmentation

Several typologies concerning the financial affairs of private investors can be found in the previous literature, but with more specific approaches: segmentations are based on financial maturity and knowledge (Harrison, 1994), provision for retirement (Gough and Sozou, 2005) or savings strategies (Gunnarsson and Wahlund, 1997). Loix et al. (2005) come closest to the focus of this study with the question of orientation towards finances but their goal is to develop a measurement scale for individual's financial management.

To conclude, most of the studies are based on specific situations. However, specific financial issues or situations are not indicative of an individual's behavioural and attitudinal disposition toward finance. The attitudes and behaviours toward finances regarded in this study focus on individual financial management behaviour. It is a topic with important implications that has not been sufficiently examined in financial and economic behavioural studies

OBJECTIVES OF THE STUDY

The aim of the present study is to obtain a better understanding of people's needs in financial matters to provide adequate services and products. This study demonstrates that, by segmenting respondents on the basis of a broader range of financial attitudes and behaviour, a yield of clearly interpretable profiles can be realized and is helpful to identify those people in most need of professional financial advice. This study tries to identify whether customer's financial profiles may be useful in predicting their response to new products as well as persuading them to use existing services for the specific benefits they value.

NEED AND SCOPE OF THE STUDY

This study examines the self-stated financial attitudes and behaviour of individual investors. This study focuses on the general population, giving a more realistic view of personal financial management activities and taking attitudes and behaviour into account. The study aims to find out the behavioural pattern of general investor. The information has been gathered from a structured questionnaire taken from a study by Brigitte Funfgeld and Mei Wang.

The sample consists of 184 respondents. The respondents were recruited from various sources. Although not every member of the population is equally likely to be selected, the sample is composed of a wide variety of backgrounds of Chandigarh.



The diversity came from such groups as participants from different sources such as a group of university students, a group of teachers, company employees, a group of self-employed people and various other groups.

Participants were first asked to give their self-assessment by answering 17 questions on their financial behavioural practice or attitude towards financial affairs. The response format is a five-point-Likert-type scale with "absolutely" and "not at all" at the two ends of the question. Subsequently, the questionnaire contains questions concerning socio-demographic variables also such as age, gender and education.

RESEARCH METHODOLOGY

The response from the questionnaire has been used to identify factors affecting attitudes and behaviour. As the first step an exploratory factor analysis using principal component analysis method was employed. The technique was employed in order to determine the underlying dimensions of the financial attitudes and behavioural tendencies. Principal components were constructed using the varimax rotation technique. Kaiser's criterion was selected as technical criteria to determine the number of factors. The Kaiser's criterion (eigenvalue greater than 1) was chosen here as the minimum requirement. The results of the factor analysis (principal component analysis) were

used to construct the variables. An overall score for each component was calculated by adding the scores for each included item and dividing this by the number of items in the component; in this way the participants can be segmented based on their factor scores. As all the factors have therefore the same scale, no further standardization was needed.

In the second step, cluster analysis has been applied to identify groups of private investors in order to obtain insight into the specific behaviour. Cluster analysis was used as a means of representing the potential structure of data to identify groups of people who share certain common characteristics in attitudes and financial behaviour. The aim is to obtain clusters whose members are as similar in the cluster and, at the same time, as distinct to the other clusters as possible.

RESULTS

The sample has first been analyzed on the basis of demographic features i.e. Age, Education and Gender.

Table 1: Descriptive Statistics

Dimensions	Mean	Standard Deviation
Age	2.35	0.986
Education	3.30	0.741
Gender	0.54	0.500

Table 2: Results of KMO and Bartlett's test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.681
Bartlett's Test of Sphericity	Approx. Chi-Square	486.501
	df	136
	Sig.	.000

Table 3: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.037	17.867	17.867	3.037	17.867	17.867
2	2.115	12.444	30.311	2.115	12.444	30.311
3	1.352	7.951	38.262	1.352	7.951	38.262
4	1.274	7.491	45.753	1.274	7.491	45.753
5	1.087	6.395	52.148	1.087	6.395	52.148
6	1.029	6.051	58.199	1.029	6.051	58.199

The results show that on an average maximum number of respondents fall in the age group of 25-40. The respondents are having an educational qualification of Graduation on an average and the sample is equally distributed as far as gender is concerned.

As the first step an exploratory factor analysis using principal component analysis method was employed. Data was being tested using Kaiser-Meyer-Olkin Measure of Sampling Adequacy and Bartlett's Test of Sphericity. The results of these tests as shown in table 2 meets the minimum requirements of applicability of factor analysis.

The chosen solution with six principal components was constructed using the varimax rotation technique and can explain 58.20 per cent of the total variance. Table 3 gives an overview of the six factors and their items. The ranking of factor 1 to 6 reflects the declining eigenvalues. Factor analyses gave six underlying dimensions but factor second and sixth were clubbed as sixth factor was related to second factor. Also, factor fourth and fifth were combined because of relatedness in nature. The final four factors extracted from the study are: Interest in Financial Issues, Free Spending, Financial decisions and Annoyance feeling if unexpected outcome happens, and Rationality & Anxiousness.

The four components from the factor analysis are described as follows:

Factor 1 Interest in Financial Issues

This factor deals with the individual's interest in financial topics and exposure to financial information (enjoying conversations about financial matters, reading business news, enjoying reading about results of product testing, comparing and calculating risks ,caring for the future, anxiety about financial and money affairs and importance of strategic planning). A person with a high score in this area is interested in financial matters and is more likely to have some financial knowledge .Factor 1 showed a high score on this dimension and explained 17.86% of variance.

Factor 2 Free-Spending

This factor combines variables like large purchase spontaneously, spending money when unhappy, spending more than saving and attraction of special offers .This factor captures the attitudes and behavioural tendency of spending. For example, spending money for some people is a result of being discontent and such people are easily attracted by special offers (Cryder et al., 2008). A person with a high score perceives money as having an additional self-contained value: there is a temptation to spend money because the act of spending in itself has a value and not just the purchased objects. A common term is a "living today"

Table 4: Table at glance showing various factors with respective loadings of variables.

Factors	Factor loadings
Factor I: Interest in Financial Issues I read the business section of the newspaper attentively I am am anxious about financial and money affairs To care for the future is essential for me I compare and calculate risks I enjoy reading about results f product testing I find strategic planning very important for unforeseen future I like to join conversations about financial matters	.545 .718 .635 .598 .580 .517 .547
Factor II: Free Spending Even on large, I tend to spend spontaneously I enjoy spending money more purchases than saving I spend money when I am unhappy or frustrated Special offers can attract me into buying.	.538 .758 .665 .494
Factor III: Financial decisions and annoyance feeling if unexpected outcome happens. At the end of the day, I decide intuitively in financial affairs I feel annoyed when things do not go my way- I tend to postpone financial decisions I get unsure by the language of financial experts.	.414 .529 .671 .510
Factor IV: Rationality and Anxiousnes I do not complain very often, even if I have a reason to do so. After making a decision, I am anxious whether I was right or wrong.	-.490 -.656

person (OECD, 2005) compared with a "living tomorrow" person, who enjoys saving money. A "living today" type is easily enticed into buying, and it is more likely that preferences are inconsistent across time or context (Laibson, 1997). This implies, as an example, that even if a person states a strong need for saving for retirement, this preference might be superseded when the opportunity for short-term enjoyment presents itself through the act of spending. This factor explained for nearly 18.45% of variance with the highest factor loadings of respective variables. This factor results indicates that people in Chandigarh are more inclined towards free spending and are "living today" type.

Factor 3 Financial decisions and annoyance feeling if unexpected outcome happens

This dimension combines variables like intuition based decisions, postponement of decisions, unsure of experts language and feeling of annoyance when things do not go right. Further, it measures whether the person tends to decide spontaneously as against deliberately, intuitively as against analytically. More intuitive individuals, scoring highly on "Intuitive decisions", make intuitive and spontaneous decisions, and are less interested in factual information and analytical processes. They tend to trust inspiration and prefer to be general and figurative (Pompian and Longo, 2005). The more analytical decision makers score lower on "Intuitive decisions". They prefer to collect more objective information, calculate risks, apply impersonal analysis to problems, and value logic. They trust what is certain and concrete, value realism and common sense. The structure of the process and the need to understand appear to be crucial for them (Sjoberg, 2003). The results of this factor showed that sample have tendency of postponing decisions and their decisions are usually based on factual information and analytical processes. Also they do feel annoyed when things do not go the way they wanted or expected.

Factor 4 Rationality and Anxiousness

A person who scores high on "Anxiety" feels unsure and is worried and anxious about money matters. Unsure here does not refer to uncertainty with respect to the level of information available (Warneryd, 1999), but to a subjective feeling of doubt and insecurity. Furthermore, it is highly correlated with the statement that they delay financial decisions, which equate to postponement, an important source of poor performance in retirement saving (O'Donoghue and Rabin, 1998). "Anxiety" is also linked to feelings of regret after having or not having done something. Problems in financial matters can occur because people who score high on "Anxiety" are prone to withdrawing from actions they have taken. The results of factor loading show that people were not unsure after making a decision that whether they were right or wrong. So, little anxiousness was depicted in the attitudes of

respondents. Possible reason could be that they do compare and calculate results before taking decision. This depicts their decision making though to a small extent based on intuitions but still they are rational and if they find something wrong they do complain also.

In the second step, cluster analysis has been applied to identify groups of private investors in order to obtain insight into the specific behaviour. Cluster analysis was used as a means of representing the potential structure of data to identify groups of people who share certain common characteristics in attitudes and financial behaviour. The aim is to obtain clusters whose members are as similar in the cluster and, at the same time, as distinct to the other clusters as possible.

Table 5: Number of Cases in each Cluster

Cluster	1	69.000
	2	65.000
	3	49.000
Valid		183.000
Missing		1.000

Cluster I Conservative Spenders

69 respondents represent cluster 1. These respondents are constantly anxious about financial and money affairs. To care for the future is essential for them at all times. They neither enjoy spending more than saving nor spend when they are unhappy or frustrated. This goes hand in hand with a clear rating for saving as spending is not seen as a means of becoming happier for them. They prefer an analytical way of decision making, and do not like spontaneous spending even if there are any special offers. They are calculated risk takers and find strategic planning very important for unforeseen future. They decide intuitively for their financial affairs and frequently read about results of product testing.

However, people in this cluster have lower tendency to feel uncertain about financial terminology and postpone financial decisions. The respondents in the cluster sometimes read the business section of the newspaper attentively. At times, they complain if they have a reason to do so. After making a decision, they are less anxious and do not feel annoyed when things do not go their way.

Cluster II Moderate Spenders:

Cluster 2 consists of 65 respondents. Respondents in Cluster 1 sometimes complain even if they have a reason to do so. They compare and calculate risks occasionally. At times, they decide intuitively for their financial affairs and



postpone their decisions. They sometimes even spend money when they are unhappy or frustrated. The cluster members feel absolutely or mostly insecure about financial matters, and declare virtually no interest in financial topics as they sometimes read the business section and results of product testing. Once in a while, they join conversations about financial matters. Also, they do not understand the language of financial experts.

Often they are anxious about their financial and money affairs as caring for the future is essential for them. Furthermore, they do strategic planning regularly for unforeseen future and feel annoyed when things do not go their way. They are frequently anxious about the outcome of their decision. They make decisions intuitively and spontaneously, even on large purchases as special offers can attract them into buying and they view spending as a remedy against frustration.

Table 6: Final Cluster Centers

	Cluster		
	1	2	3
Ques1	3	3	2
Ques2	5	4	3
Ques3	5	4	3
Ques4	3	3	2
Ques5	4	3	3
Ques6	3	4	2
Ques7	3	4	3
Ques8	4	3	2
Ques9	4	3	2
Ques10	1	4	2
Ques11	3	4	3
Ques12	4	4	3
Ques13	3	3	3
Ques14	3	3	2
Ques15	3	3	3
Ques16	3	4	2
Ques17	1	3	2

Cluster III Aggressive Spenders

Cluster 3 has 49 respondents who rarely read the business section of the newspaper attentively. They hardly ever complain, even if having a reason to do so. The distinctive characteristic of this cluster is the intuitive decision style. In addition, people in this cluster are not interested in financial matters, but this does not make them feel insecure or

anxious. They do not think that money is just a means of becoming happier so they do not recognise the need for precautionary saving. They seldom read product testing results or join financial conversations. Once in a blue moon special offers attract them into buying and they do not spend spontaneously on large purchases. At times, caring for the future is essential for them. They do not compare and calculate risks and occasionally feel annoyed when things do not go their way. Strategic planning is not very important for them and they tend to postpone financial decisions.

CONCLUSION

In reference to the study by MacFarland et al. (2003), the current study is informative as it reflects some of their defined dimensions, such as uncertainty, a "living today" mentality, and enjoying dealing with finances. This study demonstrates that by segmenting private investors on the basis of their self-stated financial attitudes and behaviour, a yield of clearly interpretable profiles can be realized. Cluster analyses indicate that private investors can be divided into three clusters with specific characteristics in their financial day-to-day behaviour. From cluster I to III, the need to improve the handling of financial matters increases. The results of this paper have implications for private investors and financial service providers. A better understanding of the determinants of differences in financial attitudes and behaviour allows the financial service to be more effective.

The findings show that private individuals differ in their day-to-day financial behaviour and this has an influence on the choice of instruments used to modify behaviour. Sound advice, from the managerial perspective, must be directed by an in-depth understanding of the clients' needs, in comparison with their actual behaviour pattern (Kahneman and Riepe, 1998). Based on these findings, financial services can address specific segments and serve these needs and, thereby, attract clients by offering a more professional approach. A segmented approach can increase customer satisfaction and reduce costs by responding specifically to the different segments. Instead of providing standard products to individual investors, investment programmes can be designed and tailored to specific groups, e.g. "aggressive spenders". The refinement of existing customer segmentation, and its consequential implementation in specific products and services, becomes increasingly important for the bank and other financial institutions because of the need to meet clients' requirements. The results of the study cannot be generalized as sample was selected from people living in Chandigarh. For the sake of simplicity, convenience sampling has been used that has its own limitations. More

research needs to be undertaken to investigate the relationships between actual behaviour with the self-stated behaviour and the change in attitudes and behaviour over one's life cycle.

REFERENCES

- Ajzen, I. (1991), "The Theory of Planned Behavior", *Organizational Behavior and Human Decision Processes*, Vol. 50 No. 2, pp. 179-211.
- Ajzen, I. and Fishbein, M. (1980), "Understanding Attitudes and Predicting Social Behavior", Prentice-Hall, Englewood Cliffs, NJ.
- Backhaus, K., Erichson, B., Plinke, W. and Weiber, R. (2006), "Multivariate Analysemethoden", 11th ed., Springer, Berlin.
- Barber, B.M. and Odean, T. (2001), "Boys will be boys: Gender, Overconfidence, And Common Stock Investment", *The Quarterly Journal of Economics*, Vol. 116 No. 1, pp. 261-92.
- Barberis, N. (2003), "A Survey Of Behavioral Finance", in Constantinides, G.M., Harris, M. and Stulz, R. (Eds), *Handbook of the Economics of Finance*, Elsevier Science BV, Amsterdam, pp. 1051-121.
- Biais, B., Hilton, D., Mazurier, K. and Pouget, S. (2005), "Judgemental Overconfidence, Self-Monitoring, and Trading Performance in an experimental financial market", *Review of Economic Studies*, Vol. 72 No. 251, pp. 287-312.
- Brennan, M.J. (1995), "The Individual Investor", *The Journal of Financial Research*, Vol. XVIII No. 1, pp. 59-74.
- Bryman, A. and Cramer, D. (2005), "Quantitative Data Analysis with SPSS 12 and 13", Routledge, London.
- Camerer, C.F. and Loewenstein, G. (2004), "Behavioral economics: Past, Present, Future", in Camerer, C.F., Loewenstein, G. and Rabin, M. (Eds), *Advances in Behavioral Economics*, Russell Sage Foundation, New York, NY, pp. 3-51.
- Clark-Murphy, M. and Soutar, G. (2005), "Individual Investor Preferences: A Segmentation analysis", *The Journal of Behavioral Finance*, Vol. 6 No. 1, Pp. 6-14.
- Cohen, J. (1988), "Statistical Power Analysis for the Behavioral Sciences", 2nd ed., Lawrence Erlbaum Associates, Hillsdale, NJ.
- Cryder, C.E., Lerner, J.S., Gross, J.J. and Dahl, R.E. (2008), "Misery is not miserly – Sad And Self-Focused Individuals Spend More", *Psychological Science*, Vol. 19 No. 6, pp. 525-30.
- Durkin, M. (2005), "In search of the Internet-Banking Customer – Exploring the Use of Decision Styles", *International Journal of Bank Marketing*, Vol. 22 No. 7, pp. 484-503.
- Elliott, G. and Glynn, W. (1998), "Segmenting Financial Services Markets For Customer Relationships: A Portfolio-Based Approach", *The Service Industries Journal*, Vol. 18 No. 3, pp. 38-55.
- Employee Benefit Research Institute (EBRI) (2002), "The 2002 Retirement Confidence Survey: Summary of Findings", EBRI, Washington DC, available at: www.ebri.org/pdf/surveys/rcs/2002/02rcssof.pdf (accessed 15 May 2008).
- Funfgeld, B. And Wang, M. (2009), "Attitudes and Behaviour in Everyday Finance: Evidence from Switzerland", *International Journal of Bank Marketing*, Vol.27 No.2,pp.108-128
- Gardner, R. (2001), "Psychological Statistics Using SPSS for Windows", Prentice-Hall, Upper Saddle
- River, NJ. Glasman, L.R. and Albarracin, D. (2006), "Forming Attitudes That Predict Future Behavior: A Meta-Analysis of the Attitude-Behavior relation", *Psychological Bulletin*, Vol. 132 No. 5, pp. 778-822.
- Gough, O. and Sozou, P.D. (2005), "Pensions and Retirement Savings: Cluster Analysis of Consumer Behaviour and Attitudes", *International Journal of Bank Marketing*, Vol. 23 No. 7, pp. 558-70.
- Gunnarsson, J. and Wahlund, R. (1997), "Household Financial Strategies in Sweden: An Exploratory Study", *Journal of Economic Psychology*, Vol. 18 No.s 2-3, pp. 201-33.
- Harrison, T.S. (1994), "Mapping Customer Segments For Personal Financial Services", *International Journal of Bank Marketing*, Vol. 12 No. 8, pp. 17-25.
- Harrison, T. (2000), "Financial Services Marketing", FT Prentice Hall-Financial Times, Harlow.
- Harrison, T. and Ansell, J. (2002), "Propensity and Retention Modelling Of Financial Services Consumers Over The Lifecycle", paper presented at Ageing Population Conference, Institute of Actuaries, Edinburgh, 20-22 January.
- Jenkins, M. and McDonald, M. (1997), "Market Segmentation: Organizational Archetypes and Research Agendas", *European Journal of Marketing*, Vol. 31 No. 1, pp. 17-32.
- Kahneman, D. and Riepe, M.W. (1998), "Aspects of Investor Psychology", *Journal of Portfolio Management*, Vol. 24 No. 4, pp. 52-66.
- Keller, C. and Siegrist, M. (2004), "Money Attitudes, Demographics, And Money Behaviors: Development of a New Money Attitude scale", working paper, University of Zurich, Zurich.
- Keller, C. and Siegrist, M. (2006), "Money Attitude Typology and Stock Investment", *The Journal of Behavioral Finance*, Vol. 7 No. 2, pp. 88-96.
- Laibson, D. (1997), "Golden Eggs and Hyperbolic Discounting", *The Quarterly Journal of Economics*, Vol. 112 No. 2, pp. 443-77.
- Lim, V.K.G. and Teo, T.S.H. (1997), "Sex, Money and Financial Hardship: An Empirical Study of Attitudes towards Money Among Undergraduates in Singapore", *Journal of Economic Psychology*, Vol. 18 No. 4, pp. 369-86.
- Loix, E., Pepermans, R., Mentens, C., Goedee, M. and Jegers, M. (2005), "Orientation toward Finances: Development of A Measurement Scale", *The Journal of Behavioral Finance*, Vol. 6 No. 4, pp. 192-201.
- MacFarland, D.M., Marconi, D. and Utkus, S.P. (2003), "Money Attitudes And Retirement Plan Design: One Size Does Not Fit All", Pension Research Council Working Paper, PRC WP 2003-11, The Wharton School, University of Pennsylvania, Philadelphia, PA.
- Machauer, A. and Morgner, S. (2001), "Segmentation of Bank Customers by Expected Benefits and Attitudes", *International*

Journal of Bank Marketing, Vol. 19 No. 1, pp. 6-17.

Martenson, R. (2008), "How Financial Advisors Affect Behavioral Loyalty", *International Journal of Bank Marketing*, Vol. 26 No. 2, pp. 119-47.

T. and Rabin, M. (1998), "Procrastination in Preparing For Retirement", in Aaron, H. (Ed.), *Behavioral Dimensions of Retirement Economics*, The Brookings Institution and Russell Sage Foundation, Washington, DC, pp. 125-56.

Organization for Economic Co-operation and Development (OECD) (2005), "Improving Financial Literacy – Analysis of Issues and Policies", OECD Publishing, Paris.

Pompian, M. and Longo, J. (2005), "Incorporating Behavioral Finance Into Your Practice", *Journal of Financial Planning*, Vol. 18 No. 3, pp. 58-63.

Punj, G. and Stewart, D. (1983), "Cluster Analysis in Marketing Research: Review and Suggestions for Application", *Journal of Marketing Research*, Vol. 20 No. 2, pp. 134-48.

Raich, M. (2008), "Basic Values and Objectives Regarding Money", *International Journal of Bank Marketing*, Vol. 26 No. 1, pp. 25-41.

Ricciardi, V. (2008), *The Financial Psychology of Worry and Women*, *Social Science Research*, available at: <http://ssrn.com/abstract¼1093351> (accessed 26 May 2008).

Robinson, J.P., Shaver, P.R. and Wrightsman, L.S. (1991), "Criteria For Scale Selections and Evaluation", in Robinson, J.P., Shaver, P.R. and Wrightsman, L.S. (Eds), *Measures of Personality and Social Psychological Attitudes*, Academic Press, San Diego, CA, pp. 1-16.

Sjoberg, L. (2003), "Intuitive vs. Analytical Decision Making:

Which is Preferred?", *Scandinavian Journal of Management*, Vol. 19 No. 1, pp. 17-29.

Soper, S. (2002), "The Evolution of Segmentation Methods In Financial Services: Where Next?", *Journal of Financial Services Marketing*, Vol. 7 No. 1, pp. 67-75.

Speed, R. and Smith, G. (1992), "Retail Financial Services Segmentation", *The Service Industries Journal*, Vol. 12 No. 3, pp. 368-83.

Tesser, A. and Shaffer, D. (1990), "Attitudes and Attitude Change", *Annual Review of Psychology*, Vol. 41 No. 1, pp. 479-523.

Thaler, R.H. (1994), "Psychology and Savings Policies", *AEA Papers and Proceedings*, Vol. 84 No. 2, pp. 186-92.

Thaler, R.H. and Benartzi, S. (2004), "Save More Tomorrow: Using Behavioral Economics To Increase Employee Saving", *Journal of Political Economy*, Vol. 112 No. 1, pp. S164-87.

Vogt, W.P. (2005), "Dictionary of Statistics & Methodology – A Nontechnical Guide for the Social Science", 3rd ed., Sage Publications, Thousand Oaks, CA and London.

Wood, R. and Zaichkowsky, J.L. (2004), "Attitudes and Trading Behavior of Stock Market Investors: A Segmentation Approach", *The Journal of Behavioral Finance*, Vol. 5 No. 3, pp. 170-9.

Warneryd, K.E. (1999), "The Psychology of Saving", Edward Elgar, Cheltenham.

Warneryd, K.E. (2001), "Stock-market Psychology: How People Value and Trade Stocks", Edward Elgar, Cheltenham.