

Financial Literacy and Personal Financial Planning in Klang Valley, Malaysia

TAN HUI BOON*, HOE SIEW YEE AND HUNG WOAN TING

University of Nottingham Malaysia

ABSTRACT

This paper suggests that most individuals who have yet ensued personal financial planning were held back by their financial literacy level. In this paper, we link the financial literacy level of individuals with their engagement in personal financial planning. Primary data was collected within Klang Valley via self-administered questionnaire survey, and the relationship was examined using the cross tabulation method. The findings suggest that in contrast to their non-financially literate counterparts, the readiness of the financially literate individuals is reflected in their involvement in the multiple aspects of personal financial planning. However, further exploration into public's perceptions revealed that even though many see the significance of setting financial goals and objectives in life, there remains a knowledge gap at an individual's level that hinders one from effectively managing the financial affairs. Interestingly though, the public appeared to be hesitant in relying on the professionals in financial practices to realize their goals. There remain rooms for greater efforts from the various stakeholders to improve the current state of play and to ensure that the embedded benefits of personal financial planning are far-reaching.

Keywords: Personal financial planning, financial literacy, education level

INTRODUCTION

As healthy financial well-being and better lifestyle is gaining priority amongst individuals, and increasingly globalized capital market offering variety of financial products and investment funds are found to be significant avenue in achieving such personal objectives, the personal financial planning is increasingly becoming a good practice if not already a necessity. In fact, a sound personal financial plan allows individual to be mindful of ways in which they deal with financial matters. It is a means to guide an individual's financial decisions and highlight the consequences

* Corresponding Author: E-mail: Hui-boon.tan@nottingham.edu.my

Any remaining errors or omissions rest solely with the author(s) of this paper.

of such decisions on other areas of one’s finances (The Malaysia Financial Planning Council, 2004). Whilst being well-to-do in the long run may provide individuals with a sense of security and fulfillment, in the short run the desired lifestyle and the financial commitments may potentially draw away substantial resources from individuals and pose a considerable threat to their financial comfort in the later part of their lives. In this regard, individuals have to be prudent in strategizing what needs to be addressed and establish a realistic timeline as and when their financial goals and objectives are to be achieved. Such effort would inevitably provide individuals with a great sense of security and an ultimate financial freedom (Cheah, *et al.* 1998).

A typical approach to personal financial planning involves effective utilization of savings to accumulate wealth, followed by careful preservation of such wealth against value depreciation and losses, and finally distribution of wealth at a later stage of one’s life (Malaysia Financial Planning Council, 2004). Such planning reflects an individuals’ current state of play and how individuals plan to progressively develop and build their capacity in managing financial needs with respect to credit and cash management, tax planning, insurance and risk management, investment, as well retirement and estate planning (Malaysia Financial Planning Council, 2004).

In gaining capacity for the desired financial well-being and lifestyle, it is essential that individuals constantly review the current impact of their financial affairs on the financial status as well gauge the resources necessary to support the desired status in future. Figure 1 suggests the review process that is useful in helping individuals establish a baseline for future financial management and set objectives and targets constituting the directions of the financial plan (Lee & Ong, 2001).

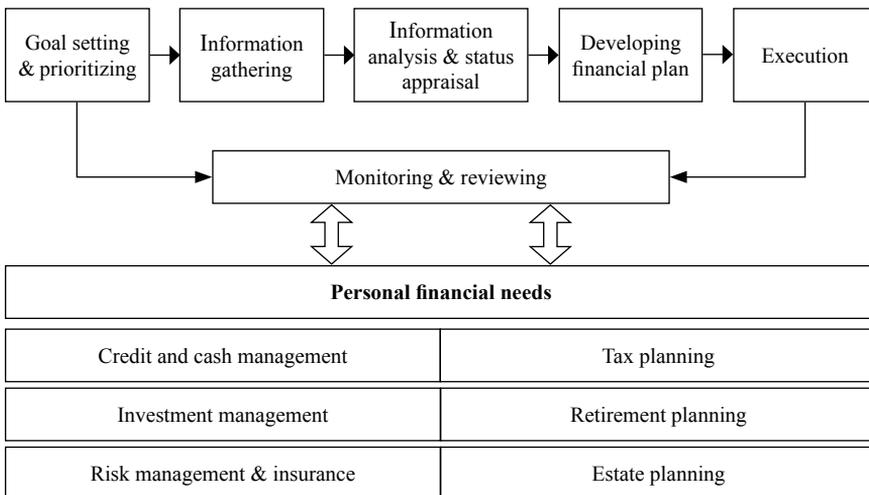


Figure 1 Framework for the engineering of individual financial health

The review process requires individuals to be equipped with not only cognitive ability but perhaps more importantly financial literacy. Specifically, they require the ability to read, analyze, manage and discuss their personal financial conditions and issues that affect the overall financial well-being (Vitt, 2001). Additionally, they must be capable of identifying economic problems and appreciate the consequences and conducting cost-benefit analysis of a range of alternatives available to them (Manning, 2008). In fact, extant research has found that concepts such as time value of money, compound interest, inflation rate, and risk diversification are cornerstone to the various aspects of financial planning; and the knowledge of interest compounding and the ability to perform simple calculations would matter the most for effective financial planning (Lusardi & Mitchell, 2005). Such wider range of financial knowledge must not only be acquired at a fast pace but also be applied skillfully in managing their financial portfolio and yielding desired level of returns amidst challenges from the uncertain economies, complex financial products and changes in tax laws.

Nonetheless, the lack of financial literacy has been found to be a widespread phenomenon at a global level and is also clearly evident in developed economies such as the United States (Lusardi & Mitchell, 2005), United Kingdom (Smith, 2005) as well in Japan and Australia (Smith, 2005). This means that many individuals who lack financial literacy have been deterred from embracing innovative financial products, making sound financial planning decisions (Hilgert, *et al*, 2003; Agnew & Szykman, 2005; Alessie, *et. al.*, 2007; Agarwal, *et al* 2007; Lusardi & Mitchell, 2005; 2007; Lusardi, 2008a; 2008b; Cory & Pickard, 2008), as well giving serious consideration and commitment to their financial plans. This paper examines the financial literacy of individuals and how that reflects the individuals' readiness in pursuing personal financial planning. Specifically, this study aims to (1) examine the relationship of personal financial literacy and financial planning; and (2) on the basis of the existing financial literacy level, to explore public perceptions on the major aspects of personal financial planning in Malaysia. The study is useful in many folds. First, it creates awareness among existing and potential financial consumers of ways to achieve better lifestyle. Second, it provides useful insights to industry professionals in gauging effective ways to convey financial knowledge and product information to their clients so as to deliver better financial services to them. Third, it highlights existing gaps to policy makers and enables them to make informed judgment and decisions on actions necessary to improve the existing practice in the personal financial planning industry.

PERSONAL FINANCIAL PLANNING IN MALAYSIA

The economy in Malaysia has recorded an impressive growth rate over the past few decades. There have been various initiatives from the government to increase the wealth of the nation and its citizens. With the country now enjoying among the highest savings rate in the world, the government is putting in tremendous efforts

in promoting and encouraging mobilization of these savings by introducing new and innovative products in the already vibrant capital market (Nik Mahmood, 2006). Consequently, retail investors now have extensive opportunities to tap into various forms of financial products and investment funds in not just local and regional market but also the global arena. Nonetheless, as these financial products tend to be complex and the risk levels associated with them may vary significantly, individuals wishing to seize the opportunities to optimize their savings and wealth will not only need to be informed of the potential risks and expected returns, but also be cautious with their financial decisions and the resulting impact on their financial portfolio. Against this backdrop, individuals ought to engage themselves in comprehensive and thorough financial planning either via self-management or by appointing a qualified practitioner in financial planning holding such designation as the Certified Financial Planner (CFP) from the Financial Planning Association of Malaysia (FPAM) or the Registered Financial Planner (RFP) from the Malaysian Financial Planning Council (MFPC). Following this, it is widely anticipated that given the rapid growth of the capital market in this country, the personal financial planning industry would grow in tandem.

Nevertheless, personal financial planning is found to be very much still at its infant stage in Malaysia (Gan, 2008). Malaysians are generally found not taking ownership of their own financial affairs (Citi, 2008). Though they are aware of the importance of personal financial planning, many remain lacking in thorough understanding of the significance of personal financial planning and of the numerous benefits that may be derived from such planning (Citi, 2008). One possible contributor to such phenomenon is the lack of information and knowledge of the financial literacy level of individuals in the country, and how that reflects the individuals' readiness in pursuing personal financial planning. This is somewhat surprising since sound understanding of individuals' financial literacy level is vital and must be given serious consideration in the development of the financial planning industry. This study examines how consumers' financial literacy level and their perception towards the major aspects of personal financial planning may be influencing the current practice; and how they shape future development of the personal financial planning industry.

METHODOLOGY

As the required data and information is hardly ready for secondary data collection, we collected primary data by employing the survey method to achieve the research objectives. Self-administered questionnaires were used to survey information on an individual's financial literacy in the context of personal financial planning. We designed our questionnaires using a close-ended structure. This approach allowed anonymity of respondents when they revealed their financial literacy level. This is deemed useful in encouraging more unbiased responses. It also required less

sophisticated interviewing skills and was easily manageable by respondents, which amounted to shorter response time (Saunders, *et al.* 2003).

To achieve the first aim of our study, we started by ascertaining the financial literacy level of an individual who participated in our survey. A set of 13 questions were used (see Appendix 1). Specifically, we asked 5 questions to gauge the basic financial literacy level of individuals. The questions involved fundamental financial and economic concepts such as numeracy, time value of money, compound interest and inflation. We adapted the work of Lusardi (2008a) and Lusardi & Mitchell (2005) to design questions that were useful to reflect individuals' understanding of such concepts that formed the basis of their daily financial transactions and decisions. We then asked 8 other questions to determine the individuals' financial literacy at an advanced level. The questions were adapted from the work of Lusardi & Mitchell (2007) and touched upon the function of stock market, knowledge of mutual funds, relationship between interest rates and bond prices, risk diversifications, risk levels, long-term return, fluctuation in asset. The separation into basic and advanced level of financial literacy provided us with a good platform to gain better insights as to the individuals' performance in financial literacy. Consequently, we were able to identify whether an individual possesses "high financial literacy", "medium financial literacy" or "low financial literacy" at the basic level and advanced level as explained earlier.

Following this, we studied the extent to which the individuals appreciate and responses to the various key components of personal financial planning which individuals would normally be expected to deal with at some stage in their daily lives. We developed the components using the framework shown in Figure 1 as the components were found to be comprehensive enough to meet our research objectives. Specifically, these include steps in financial planning, managing taxes, liabilities, insurance, investment, retirement, and estate planning. Details on questions asked pertaining to each of these areas are outlined in Appendix 2. Individuals were required to assess themselves against these components using a 5-point Likert scale where "1" denotes "strongly agree" and "5" denotes "strongly disagree".

To study the relationship between personal financial planning and financial literacy level, we identified one question from each of the financial planning components. The questions were selected to provide the best representation of the respective financial planning components that individuals would be expected to deal with in their daily lives. We then used the cross tabulation method to uncover such relationship. We further differentiated such relationships in the respective performance groups ("high", "medium" and "low") at both the basic and advanced level of financial literacy. Additionally, we explored whether the level of an individual's financial literacy is dependent upon the education level attained. We subjected such relationships to Pearson Chi-Square test with significant level of less than or equal to 0.05.

In meeting the second aim of our study, we gauged the public perceptions on the major aspects of personal financial planning. We reviewed individuals' self-assessments on the seven components of personal financial planning (e.g., "6-step financial planning"; "managing taxes; "managing liabilities") that were scored on a 5-point Likert scale. We then scrutinized the mean scores of the questions as a reference point to gauge the individuals' perception on personal financial planning.

Our sampling population was drawn from individuals in a commercial area in Malaysia, called Klang Valley. Klang Valley encompasses Kuala Lumpur (the capital city) and four other town centres in the State of Selangor, namely Petaling Jaya, Subang, Shah Alam and Klang. This area was chosen for its renowned development within which the largest pools of knowledge workers are found and a vast majority of institutions for higher education are concentrated in. A non-random sampling method was employed in order to solicit higher response rate. Among the 200 survey questionnaires distributed over a five-day period in major shopping malls with high patronage, 160 (80%) questionnaires were found to be duly completed and thus usable for data analysis. Basic demographic details of the respondents (e.g. "education level", "gender"; "income range") were gathered in the questionnaire for profiling.

ANALYSIS AND RESULTS

An analysis of the demographic profile indicated that our sample comprised of individuals with varied educational background, where some have attained highest education at the secondary level (5%), certificate or diploma education level (50%), degree level or professional qualifications (34.4%), masters level (9.4%) and doctorate level (1.2%). Other useful demographic details are shown in Table 1.

Table 1 Demographic detail of survey respondents

Frequency			Frequency		
Gender: Male	86	Marital status: Married		36	
Female	74	Single		124	
Age: <20	40	Monthly income: <RM1500		82	
21-24	40	RM 1501- RM 2500		18	
25-29	43	RM 2501- RM 3500		21	
30-34	16	RM 3501- RM 4500		12	
35-39	14	RM 4501- RM 5500		11	
40-44	0	>= RM5501		16	
45-49	7	Race: Chinese		131	
50-54	0	Malay		23	
55-59	0	Indian and other		6	
>=60	0				

Through the close-ended questionnaire structure, we ascertained that a good majority of the respondents were able to answer the designated questions on basic financial literacy correctly, with each question getting the right answer between 81.25% and 91.25% of respondents. The only exception was with the question on “compound interest” where only 66.25% of respondents managed to provide the correct answer (see Figure 2). The results were impressive and consistent with the general perception that Klang Valley is an area that enjoyed prominent pools of knowledge workers and thus served to confirm our decision for data collection to be conducted in this area.

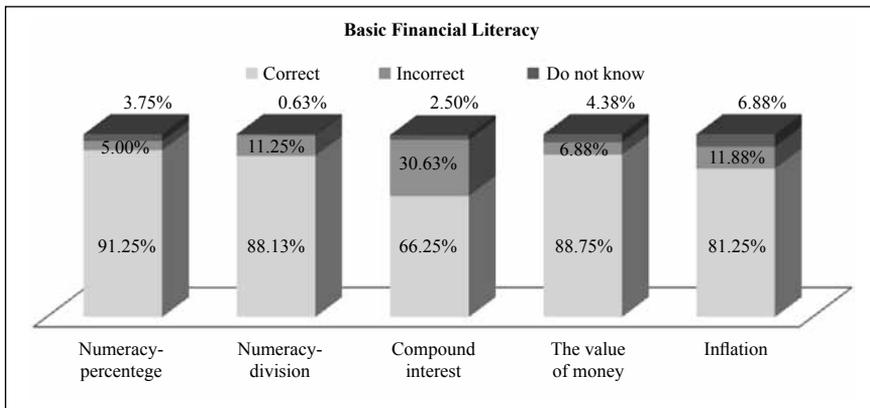


Figure 2 Basic financial literacy – Spread of responses (by question)

While noting that majority of individuals in Klang Valley is highly financially literacy at the basic level, our analysis of the financial literacy at an advanced level, however, has provided a somewhat different view. The results suggested that though more than half of the respondents answered most of the questions correctly, the correct answers to each question only ranged from 55.63% to 73.13%. Particularly low correct responses were noted with regards to questions on “relationship between interest rates and bond prices” and on “long-term return” (33.13% and 28.13% respectively), indicating relatively weak knowledge in asset pricing and return on assets in the long-run. See Figure 3. The overall performance as shown in Figure 4 appeared to be rather unsettling as merely 12.5% of the total respondents were able to answer all eight questions correctly. Our results thus indicated that advanced level of financial literacy was yet pervasive among the sample population.

Based upon the spread of the correctness of responses received, three performance groups were identified within the “basic” and the “advanced” levels. The “High Financial Literacy Group” encompassed individuals who provided more than 60% correct answers; the “Medium Financial Literacy Group” were

individuals who provided less than 60% correct answers and less than four “do-not-know” responses¹; and the “Low Financial Literacy Group” were individuals who provided more than four “do-not-know” responses. The resultant performance groups were shown in Figure 5. The categorization provided a sound framework to analyze the relationship between financial literacy and personal financial planning of the respondents.

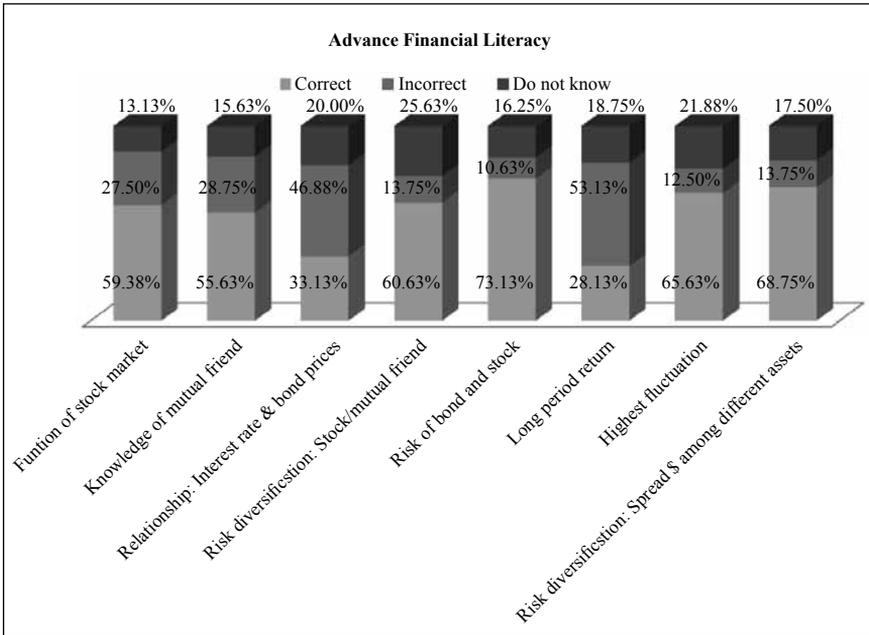


Figure 3 Advanced financial literacy – Spread of responses (by question)

The comparison of financial literacy levels vis-a-vis the key financial planning issues that the individuals would normally be expected to deal with were shown in Figure 6. At the basic financial literacy level, for instance, of all individuals who planned according to current financial situation, an overwhelming 95.19% were those who exhibited high level of financial knowledge, 3.85% showed medium level and 0.96% showed low level of financial knowledge. Similar observations were noted for the five other financial planning issues (see Figure 6a).

¹ “Do-not-know” response indicates respondent lack literacy on the relevant topics as compared to those who get the incorrect answers (Lusardi, 2008a).

Financial Literacy and Personal Financial Planning in Klang Valley, Malaysia

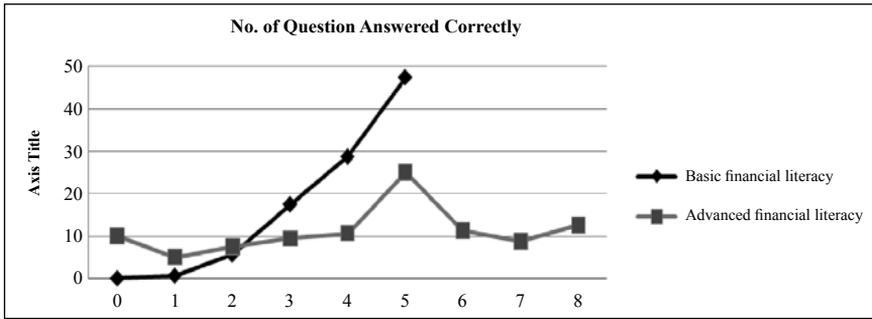


Figure 4 Financial literacy level – Summary performance

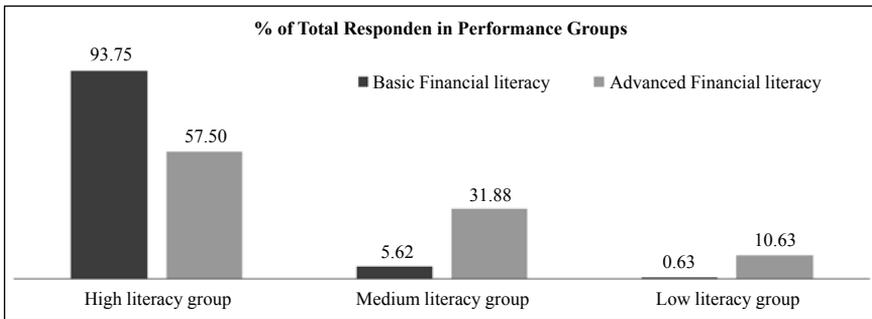


Figure 5 Performance groups of individuals' financial literacy level

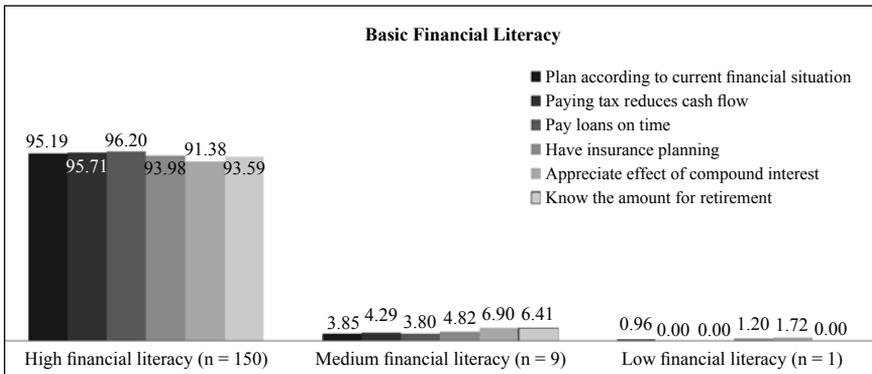


Figure 6a Relationship between basic financial literacy and personal financial planning

At the advanced financial literacy level, majority (between 53.45% and 65.38%) of the individuals who practices each of the six issues in financial planning were those who possess high level of financial literacy, followed by individuals with medium financial literacy level (between 25.96% and 41.38) and low financial literacy level (between 4.82% and 10.13%). See Figure 6b. Based on these results, it appears that individuals in high financial literacy group is most ready to pursue personal financial planning, followed by individuals in the medium financial literacy group and then the low financial literacy group.

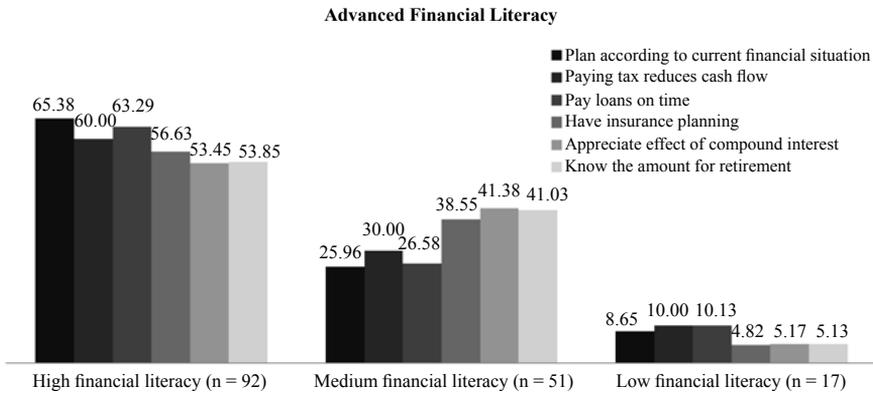


Figure 6b Relationship between advanced financial literacy and personal financial planning

When Chi-Square test was conducted for respondents' financial literacy level in relation to their respective education level, the results (see Table 2) indicated that the lack of basic financial literacy depends upon the education level of respondents ($p < 0.05$). Similar results were shown for at advanced level ($p < 0.05$).

With respect to the respondents' perceptions on the major aspects of personal financial planning, the mean scores of the 5-point Likert scale and their respective questions were shown in Table 3. In total there were seven aspects and 29 questions. Overall, the perceptions ranged between neutral and weak on the various components in personal financial planning. Specifically, respondents showed relatively neutral understanding on the concept of financial planning (mean score 2.45). They perceived setting financial goals and objectives in life as somewhat important (2.44) and they might have a habit to review financial plan periodically (2.75). While the respondents made considerably serious effort to gather data and analyze current financial situation prior to making financial decision (2.26), they tend not to rely on financial professionals to execute their financial plans (3.23).

Table 2 Chi-square Test: Respondents' education level and number of correct answers

	Value	Df	Asymp. Sig. (2-sided)
Basic financial literacy			
Pearson Chi-square	33.425 ^a	20	.030
Likelihood ratio	35.911	20	.016
N of valid cases	160		
Advance financial literacy			
Pearson Chi-Square	92.779 ^b	40	.000
Likelihood Ratio	85.384	40	.000
N of Valid Cases	160		

^a 23 cells (76.7%) have expected count less than 5. The minimum expected count is .01.

^b 41 cells (75.9%) have expected count less than 5. The minimum expected count is .10.

With regards to tax management, respondents appeared not to agree with paying tax despite the minimal amount (3.39) as paying tax may reduce disposable income. However, respondents were almost neutral (2.58) on exercising their rights on maximizing the personal tax relieves and tax rebate when they were filling their tax returns. The mixed results seemed to indicate that respondents were not certain about the entitlements of a taxpayer. Also, respondents provided neutral opinion, and thus might be somewhat doubtful, as to whether they should manage own taxes (2.87).

In terms of liabilities management, respondents generally showed vague agreement on settling outstanding credit card balances in full (2.56) and timely payment for mortgage and hire purchase installments (2.45). In spite of this, they were somewhat in disagreement that the annual interest rate of 18% imposed by financial institution on credit card balance was a reasonable charge (3.21). Also, respondents appeared to be less favourable in utilizing the numerous personal loan services available in the market to manage their finances (3.08).

In managing insurance coverage, although the results indicated that respondents were not too capable of differentiating the insurance products available in the market (2.98), they possessed some form of insurance coverage. Specifically, many have secured sufficient insurance coverage in the event of death, disability or sickness (2.56) and that the protections were more than just on life.

The respondents seemed to know how to properly utilize lump sum money (2.56) and they were not investing based upon the opinions of family and friends (3.05). Nevertheless, they appeared to lack understanding in the impact of compound interest (2.76) and in their own risk profile (2.58). Also, many did not have investment in different instruments (2.92) thereby suggested that they somewhat lacked knowledge in managing their investments.

Table 3 Respondents' perception of personal financial planning

Component	Subject	Mean score
6-Step financial planning	1 Understanding of financial planning	2.45
	2 Set financial goals and objectives in life	2.44
	3 Gather data and analyze current financial situation before make a financial decision	2.26
	4 Execute plan with the help of experts i.e. financial planner, insurance advisor, etc.	3.23
	5 Review financial plan periodically after implementation	2.75
Managing tax	1 Utilize tax relieves and rebate in filling tax return	2.58
	2 Do not mind paying tax as amount payable is very minimal	3.39
	3 Manage own taxes	2.87
Managing liabilities	1 Pay off full credit card outstanding amount every month	2.56
	2 Opine that interest charges by financial institution on credit card balance is reasonable	3.21
	3 On time settlement of mortgage and hire purchase installments	2.45
	4 Opine that various personal loans available in the market is a convenient financial tool	3.08
Managing insurance	1 Have sufficient insurance coverage in the event of death, disability or sickness	2.56
	2 Have only life insurance, no other type of insurance	3.53
	3 Able to distinguish different types of insurance in the market	2.98
	4 Do not have any insurance	3.74
Managing investment	1 Invest based on opinions of friends and family	3.05
	2 Understand own risk profile	2.58
	3 Have investments in different investment instruments	2.92
	4 Appreciate the interest compounding effect	2.76
	5 If given a lump sum money, know how to use it properly	2.56
Managing retirement	1 Know the amount of money needed for retirement	2.65
	2 Have started retirement planning	3.11
	3 Have a formal retirement plan	3.37
	4 Opine that the money in EPF is sufficient to use during retirement	3.34
Estate planning	1 Have a will	3.23
	2 Understand what a trust is	2.62
	3 Opine that estate planning is important	2.76
	4 Estate planning leave peace of mind	2.69

“1” = Strongly agree; “2” = Agree; “3” = Neutral; “4” = Disagree; “5” = Strongly disagree

The results on retirement management were rather disturbing. Respondents generally were aware of the amount of money they would need for retirement (2.65). They were also mindful that the money accumulated in Employee Provident Fund (EPF) contributed by both their employer and themselves were insufficient for their years of retirement (3.34). In spite of these, respondents generally were yet started with their retirement planning (3.11) and there was no formal retirement plan (3.37) at hand. Similar concerns were noted with respect to estate planning. Our results suggested that the respondents were not well verse with estate planning, in that they demonstrated relatively weak understanding on trust (2.62) and did not already have a will (3.23). Such observations might be attributed to the fact that respondents failed to view estate planning as important (2.76) and leading to peace of mind (2.69).

DISCUSSION

The present study used close-ended questionnaire to solicit primary data from general public in Klang Valley of Malaysia. By arguing that individuals require financial literacy to pursue financial planning for themselves, we structured our study and sought to identify the level of financial literacy of individuals and how this was reflected upon personal financial planning.

The findings indicate that an overwhelming majority of the respondents possess sound basic financial literacy, and more than half of them are reasonably financially literate at an advanced level. Nevertheless, the results confirm the contention from extant literature that many lack knowledge in financial economic concepts particularly in relation to stock markets and mutual funds, and the working of compound interest (Bernheim, 1995, 1998 (cited in Lusardi, 2008b); Hilgert, *et al.*, 2003; and Lusardi & Mitchell, 2007).

In differentiating among the individuals' personal financial planning based on their level of financial literacy, our observations suggest that individuals with high financial literacy demonstrate the highest tendency to engage themselves in financial planning when compared to their counterparts in the medium and low financial literacy level. The results reinforce the findings of extant research (Agnew & Szykman, 2005; Agarwal, *et al.* 2007; Alessie, *et al.*, 2007; Cory & Pickard, 2008; Lusardi, 2008a; 2008b; and Lusardi & Mitchell, 2005; 2007) and confirm the common phenomenon in many countries that the lack of financial literacy interrupts an individual's decisions in financial planning.

The perceptions of respondents that were gathered in this study have also deepened our understanding of the current situation in this country. Taken together, the respondents were found hesitant to seek helps from the financial experts and they generally showed rather neutral perceptions on the key components of personal financial planning, namely the steps involved in financial planning, tax planning, liability management, insurance planning, investment planning, retirement planning and estate planning.

There may be a few contributors to such observations. First, financial planning is a relatively new concept in the country and the general public has yet been well informed and educated about such concept and the underlying benefits that may accrue thereafter. Second, the limited knowledge that the general public has pertaining to the financial planning profession might have caused them to manage the personal financial affairs by themselves and to manage in such a way they feel comfortable. Third, public might be confused by the massive amount of varied professional titles (e.g., financial advisor, financial consultant, wealth advisor) in use in the market and thus decided to withhold from engaging the professionals.

Our observations indicate that level of education received by individuals might be the root cause for their lack of financial literacy and consequently low involvement in personal financial planning. Accordingly, there is sound motivation for the necessary intervention in the content and delivery of existing education systems to strive to increase the financial literacy of public at large and to prepare them with skills required to make informed choices as well to work towards life-long successful financial situations. Appropriate financial education plays a key role not only in helping individuals manage their financial well-being and investments (Hassan & Lawrance, 2007), but also prevents individuals from becoming the victims of fraudulent activities (OECD, 2008). At a macro level, such education also ensures the smooth functioning of financial markets and the economy (OECD, 2008).

One caveat of the findings is that the study employed the non-random sampling method for data collection. This method provides findings that are broad but superficial, and may not be representative of the population in the country. Given that our topic of study is still at its infant stage in the country and the awareness and interest level is understandably low, it was deemed not feasible to conduct random sampling of the population. The second caveat considers that the use of close-ended structure of questionnaire might risk possible misinterpretations of the survey questions since there further clarification was not provided for. Also, the approach might have solicited some biased responses as respondents could be looking for the “right” answer or an answer that they thought would be “acceptable” to the researchers.

CONCLUSION

Despite all the above caveats, the present study enriches our understanding of personal financial planning in Malaysia and how the development might be influenced by financial literacy level of the individual consumers. The study showed that individuals who are more financially literate focused more on personal financial planning to pre-empt adverse impacts that poor financial planning might have on their lives, vice versa. This goes on to confirm that financial literacy is a useful indicator of an individual’s financial planning decision. Individuals who are

thinking to opt in and map their ways to financial well-being have to increase their awareness of the multiple areas of personal financial planning and be geared up with the required financial knowledge. To this effect, the education level attained by the individuals provides a strong foothold for such progression. Financial planning professionals in practice would need to engage effective communication and education when delivering their services to clients who come with differing financial literacy level. Such good practice would enable more of the general public to reap the benefits of personal financial planning. When effective financial planning becomes widespread in the country, economic growth will be stimulated (Case and Fair, 1999) and social problems arising from poverty and criminal activities would be minimized if not eliminated.

REFERENCES

- Agarwal, S., Driscoll, J.C., Gabaix, X. and Laibson, D. (2007) *The Age of Reason: Financial Decisions Over the Lifecycle*. Mimeo, Harvard University.
- Agnew, J.R. and Szykman, L.R. (2005) Asset Allocation and Information Overload: The Influence of Information Display, Asset Choice, and Investor Experience, *The Journal of Behavioral Finance*, 6(2), 57-70.
- Alessie, R., Lusardi, A. and Van Rooij, M. (2007) Financial Literacy and Stock Market Participation, *Italian Congress of Econometrics and Empirical Economics*, January.
- Case, K.E., and Fair, R.C. (1999) *Principles of Economics* (5th edn.). Prentice Hall: Upper Saddle River, New Jersey.
- Cheah, E., Devadason, R., Sito, Alex. and Wong, B.C. (1998) *Financial Freedom-Your Guide to Lifetime Financial Planning*, KL Mutual Fund Berhad, Kuala Lumpur.
- Citi (2008) *Citibank Introduces Citi Fin-Q to Malaysians*, Citigroup.com. Retrieved on 20 June 2008 from www.citi.com/citigroup/press/2008/080205e.htm.
- Cory, S.N. and Pickard, A.D. (2008) 2+2=? It's Time for Americans to Become More Financially Literate, and Accounts Can Help Them Do So, *Strategic Finance*, 49-52.
- Gan, H. (2008) Financial Planning As A Profession, *Financial 1st*, June, 22-23.
- Hassan, M.K. and Lawrance, S. (2007) *An Analysis of Financial Preparation for Retirement*, Working Paper, Network Financial Institute at Indiana State University.
- Hilgert, M.A., Hogarth, J.M. and Beverly, S.G. (2003) Household Financial Management: The Connection between Knowledge and Behavior, *Federal Reserve Bulletin*, July, 309-322.
- Lee, B. K. and Ong, A. (2001) *Personal Financial Planning in Malaysia-Your Blueprint to Financial Success*, AFPJ Pte Ltd, Singapore.
- Lusardi, A. (2008a) *Household Saving Behaviour: The Role of Financial Literacy, Information, and Financial Education Programs*. Mimeo, Dartmouth College.
- Lusardi, A. (2008b) *Financial Literacy: As Essential Tool for Informed Consumer Choice*, Working Paper, National Bureau of Economic Research.

- Lusardi, A. and Mitchell, O.S. (2005) *Financial Literacy and Planning: Implications for Retirement Wellbeing*. Working Paper, Pension Research Council, Wharton School, University of Pennsylvania.
- Lusardi, A. and Mitchell, O.S. (2007) *Financial Literacy and Retirement Planning: New Evidence from Rand American Life Panel*. Mimeo, Dartmouth College.
- Malaysia Financial Planning Council, MFPC (2004) *RFP Module 1- Fundamentals of Financial Planning*, 3rd ed., MFPC, Kuala Lumpur.
- Manning, E. (2008) *Morality of Financial Literacy*, Accessed on July 11, 2008 from http://tntalk.newsvine.com/_news/2008/02/27/1330144-the-morality-offinancial-literacy, accessed.
- Nik Mahmood, N.R. (2006) *Speech at the Closing Ceremony of MFPC 2006 Financial Planning Road Show*, 12 August 2006. Accessed on July 18, 2008 from <http://www.mfpc.org.my/images/Speech%20by%20Dr.Nik%20Ramlah%20Nik%20Mahmood%2C%20Senior%20Executive%20Director%2C%20Strategy%20%26%20Development%20Division%20at%20the%20Closing%20Ceremony%20MFPC%202006%20Financial%20Planning%20Road%20Show.pdf>.
- Organization for Economic Co-Operation and Development, OECD (2008) *Improving Financial Literacy: Analysis of Issues and Policies*. Accessed on August 7, 2008 from http://www.oecd.org/document/28/0,3343,en_2649_15251491_35802524_1_1_1_1,00.html.
- Saunders, M., Lewis, P. and Thronhill, A. (2003) *Research Methods for Business Students* (3rd edn.). Prentice Hall: London.
- Smith, B. (2005) OECD's *Financial Education Project: Improving Financial Literacy and Capacity*, paper presented at Canadians and Their Money: A National Symposium on Financial Capability", 9-10 June 2005, Ottawa.
- Vitt, L.A. (2000) *Personal Finance and the Rush to Competence: Financial Literacy Education in the US*, Institute for Socio-Financial Studies, Fannie Mae Foundation.

APPENDIX 1

Questions Used to Determine Individual's Financial Literacy Level

Basic Level of Financial Literacy:

Areas	Questions
1 <i>Numeracy - percentage</i>	If the chance of getting a disease is 10%, how many people out of 1,000 would be expected to get the disease? (i) 100 (ii) 10 (iii) 11 (iv) Do not know
2 <i>Numeracy - division</i>	If 5 people all have the winning number in the lottery and the prize is RM 2million, how much will each of them get? (i) RM400,000 (ii) RM 40,000 (iii) RM2,000,000 (iv) Do not know
3 <i>Compound interest</i>	Let's say you have RM200 in a savings account. The account earns 10% interest per year. How much would you have in the account at the end of two years? Assuming you did not take out the money and interest after first year. (i) RM220 (ii) RM 242 (iii) RM 240 (iv) Do not know
4 <i>Time value of money</i>	Suppose you have a friend inherits RM10,000 today and his siblings inherits RM10,000 3 years from now. Who is richer because of the inheritance? (i) My friend (ii) His sibling (iii) They're equally rich (iv) Do not know
5 <i>Inflation</i>	Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, would you be able to buy more than, exactly the same as, or less than today with the money in this account? (i) More (ii) Less (iii) Exactly the same (iv) Do not know

Advanced Level of Financial Literacy:

Areas	Questions
1 <i>Function of stock market</i>	Which of the following statements describes the main function of the stock market? (i) The stock market helps to predict stock earnings (ii) The stock market results in an increase in the price of stocks (iii) The stock market brings people who want to buy stocks together with those who want to sell stocks (iv) None of the above (v) Do not know;
2 <i>Knowledge of mutual funds</i>	Which of the following statements is correct? (i) Once one invests in a mutual fund, one cannot withdraw the money in the first year (ii) Mutual funds can invest in several assets, for example invest in both stocks and bonds (iii) Mutual funds pay a guaranteed rate of return which depends on their past performance (iv) None of the above (v) Do not know
3 <i>Relationship between interest rates and bond prices</i>	If the interest rate falls, what should happen to bond prices? (i) Rise (ii) Fall (iii) Stay the same (iv) None of the above (v) Do not know
4 <i>Risk diversification: Company stock or mutual fund?</i>	Buying a company stock usually provides a safer return than a stock mutual fund. (i) True (ii) False (iii) Do not know
5 <i>Riskier: Stocks or bonds?</i>	Stocks are normally riskier than bonds. (i) True (ii) False (iii) Do not know
6 <i>Long period returns</i>	Considering a long time period (for example 10 or 20 years), which asset normally gives the highest return? (i) Savings accounts (ii) Bonds (iii) Stocks (iv) Do not know
7 <i>Highest fluctuations</i>	Normally, which asset displays the highest fluctuations over time? (i) Savings accounts (ii) Bonds (iii) Stocks (iv) Do not know
8 <i>Risk diversification: Spreading money among different assets</i>	When an investor spreads his money among different assets, the risk of losing money: (i) Increase (ii) Decrease (iii) Stay the same (iv) Do not know

APPENDIX 2

Questions Asked on Various Key Components of Personal Financial Planning

Components	Questions
<i>Six-step financial planning</i>	<ul style="list-style-type: none"> • I know what is financial planning. • I set financial goals and objectives in my life. • I gather relevant data and analyze my current financial position before I make a financial decision i.e. buy a house, car, vacation, etc. • I execute my financial plan with the help of experts i.e. tax advisor, insurance advisor, mutual fund advisor, etc. • I review my financial plan periodically after the implementation.
<i>Managing your taxes</i>	<ul style="list-style-type: none"> • I utilize the various tax relieves and rebate that I am entitled to when I am filing in my tax return. • I am happy to pay tax as the amount I am paying is very minimal as compared to others. • I manage my own taxes.
<i>Managing your liabilities</i>	<ul style="list-style-type: none"> • I pay off the full credit card outstanding amount every month. • Interest charged by financial institutions on credit card outstanding amount is reasonable. • I pay my mortgage and hire purchase installments on time every month. • Personal loans offer by financial institutions in the market is a convenient tool for me to use- I can borrow for any reason at any point of time.
<i>Managing your insurance</i>	<ul style="list-style-type: none"> • I have enough insurance to ensure that if I were to pass away or become sick or be disabled, my family and I would not suffer financially or be financially disabled. • Currently I have life insurance but no other type of insurance i.e. health or critical illness, personal accident, or insurance on my properties such as car and house. • I can distinguish the different types of insurance policies offer in the market. • I do not have any insurance.

- Managing your investment*
- I invest my money based on the opinions of other i.e. friends and family.
 - I understand my risk profile- high risk taker, medium risk taker, or low risk taker.
 - I invest in different investment instruments i.e. share, unit trust, real estate, bond with minimal knowledge and research on it.
 - The principal of compounding interest works for me in my investment.
 - If I were given an amount of equal to six month salary to invest, I would know exactly what to do with it.
- Managing your retirement*
- I know the amount I need to fund a comfortable retirement.
 - I have started planning for my retirement.
 - I have a formal retirement plan that was developed in consultation with a financial professional like financial planner, banking or insurance professional.
 - The mandatory Employee Provident Fund (EPF) contributions make by my employer and myself are sufficient for me to use during my retirement.
- Estate planning*
- I have a will.
 - I understand what a trust is.
 - Estate planning is important to me.
 - Having estate planning leave me peace of mind if I were to pass away yesterday.
-