The Relationship between the Level of Financial Literacy and Investment Decision-Making Millennials in Malaysia

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Abstract: The world economy has become more complex and thus, an individual needs to be active in the financial market to manage the rising cost of living. Financial market investment enables an individual to obtain good returns and persevere in the face of financial challenges in the current economic situation. The Millennials, also known as Generation Y or the Net Generation, who are considered as the next generation should be financially literate and must learn to become good investors. Thus, this study provides an understanding of the impact of financial literacy on investment decision-making among Millennials in Malaysia. This study, conducted in 2015, carried out an online survey using questionnaires to understand this phenomenon. The sample size obtained was 101, targeting those aged between 18 and 35 (defined as being in the millennial age group). Chi-square and cross-tabulation methods were used to discover the relationship between level of financial literacy and investment decision-making among Millennials in Malaysia. The Pearson Chi-square value derived was 3.010, indicating it was statistically significant at the 10% level. Therefore, it can be concluded that the level of financial literacy is related to investment decision-making. The Millennials in Malaysia are highly literate in numeracy and not financially literate when it comes to inflation issues (they only possess basic financial literacy). However, while highly literate about stocks, they are incapable of differentiating between stocks and mutual funds. The findings of the study are supported by the behavioural financial theory and previous similar studies. The present study hopes to provide millennial investors with some knowledge on financial literacy that are lacking and fill the research gap related to financial literacy in Malaysia.

Key words: Behavioural financial theory, financial literacy, investment decision, millennials, investment decision

JEL classification : G11, E22, D83
1. INTRODUCTION

The purpose of this study is to find the relationship between levels of financial literacy and investment decision-making among Millennials in Malaysia and to identify the level of financial knowledge utilisation among them. A recent study by National Capabilities in the United States, showed that 23% of Millennials between the ages of 18 and 35 spend more than what they earn on financial investments (Mottola, 2014). According to the Malaysian Department of Insolvency (MDI), an average of 1,812 people are declared bankrupt every month, with an 11% rise in the average number of monthly bankruptcies from 2012 to 2013. There is a steady rise in the number of bankrupts in Malaysia with over 47% of young adults aged between 18 and 35 having serious debt issues due to living beyond their means (Badrul, 2014). A study by Ganesan (2012) showed that the majority of Millennials in Malaysia do not know how to manage their investment portfolio and fail to diversify their portfolio investment. Therefore, this study aims to identify the level of financial knowledge utilisation and investment decision-making behaviour which refers to risk attitude among Millennials in Malaysia. Hence, this study also investigates which segments of financial literacy that Millennials are lacking in.

This study asks two research questions: a) what is the relationship between levels of financial literacy and investment decision-making among millennials in Malaysia? b) Which segment of financial literacy are millennials lacking in?

This paper consists of five sections. After the introduction in section one, section two provides the literature review as well as definition of financial literacy and related concepts gleaned from previous studies. Section three looks at the data and methodology employed in this study followed by an analysis of the main findings. Finally, the paper concludes with a discussion of relevant recommendations.

2. LITERATURE REVIEW

2.1 Behavioural Finance Theory and Financial Literacy

Today, Malaysia’s Islamic finance continues to grow rapidly, supported by a conducive environment that is renowned for its continuous product innovation, diversity of financial institutions from across the world, broad range of innovative investment instruments and comprehensive financial infrastructure (Zin, Ishak, Kadir & Latif, 2011). Behavioural finance also has applications in the analysis of corporate finance decisions (Brooks, 2008). Coverage of behavioural finance, if included in an introductory investment textbook, is often included in the chapter on technical analysis. However, because technical analysis contradicts securities analysis and is quite controversial in academic and practitioner circles, combining these distinct disciplines may serve to diminish the importance of investment education (Peteros & Maleyeff, 2013).
Financial literacy (or financial knowledge) is typically an input to model the need for financial education and explains variation in financial outcomes (Huston, 2010). Previous studies revealed three main barriers to developing a standardised approach of measuring financial literacy: a lack of conceptualisation and definition of financial literacy, a lack of content of the instrument and lack of instrument interpretation (Huston, 2010). In a recent study to evaluate financial knowledge, respondents were asked five questions covering fundamental concepts of economics and finance expressed in everyday life including calculations involving interest rates and inflation, principles relating to risk diversification, the relationship between bond prices and interest rates, and the impact that a shorter term can have on total interest payments over the life of a mortgage (Mottola, 2014).

2.2 Measuring Financial Literacy: Different Approaches

A 2014 study to evaluate financial knowledge asked its respondents five questions covering fundamental concepts of economics and finance expressed in everyday life, including calculations involving interest rates and inflation, principles relating to risk diversification, the relationship between bond prices and interest rates, and the impact that a shorter term can have on total interest payments over the life of a mortgage (Mottola, 2014). In order to evaluate financial literacy more formally, researchers analysed the probability of getting the correct answers to all three literacy questions in a multivariate framework (Agarwal, Amromin, Ben-David, Chomsisengphet & Evanoff, 2010).

2.3 Investment Decision-making

Those who are not willing to take risks are less likely to participate in the stock market (Van Rooij, Lusardi & Alessie, 2011). Likewise, preferences for risks are an important determinant of stock ownership and may explain some of the differences among households. Some researchers have further argued that knowledge and cognitive ability may have an effect on preferences such as risk aversion, rate of time preference and their effect on financial decision-making. In fact, decision makers are far more successful when they are focused and equipped with a process to guide them through their conversations than if they let these conversations just “happen”. (Schwarber, Rausch, Peters, Osborne, & Snowden, 2005).

3. METHODOLOGY

Questionnaires for this study were distributed to Millennials whose age ranged between 18 to 35 years old using online survey services; online survey is much easier and faster than the conventional survey method. This study utilised snowball sampling as the researcher relied on respondents to identify additional respondents.
to be included in the sample (Handcock & Gile, 2011). In snowball sampling, the researcher can ask assistance from respondents to help identify others within the same age group and who share similar traits.

The questionnaire, derived based on previous studies, comprised two modules that measure and evaluate the financial literacy of respondents. The first module called Basic Literacy Questions and the second module called Advance Literacy Questions were used by Van Rooij et al. (2011) to measure financial literacy. It is separated into five categories, which are numeracy, interest compounding, inflation, time-value of money and money illusion. The Advanced Literacy Questions module aimed to measure more advanced financial knowledge of respondents and covered topics such as differences between stocks and bonds, function of stock market, the workings of risk diversification, and the relationship between bond prices and interest rates. Respondents had to choose their level of risk attitude and satisfaction of their financial literacy based on a 5-point scale (Strongly dissatisfied, Dissatisfied, Neutral, Satisfied and Strongly dissatisfied).

This study is a descriptive analysis of self-satisfaction on financial literacy as well as self-perception toward risks in investment decision-making. In fact, the study also employed the cross-tabulation analysis method in order to identify the level of financial knowledge utilisation among millennials in Malaysia as well as to compare the relationship between these two variables. Ultimately, the level of financial literacy will be determined based on the individual score.

4. FINDINGS

The study revealed two major findings which are: a) Millennials who lack time-value of money are more inclined to develop risk aversion of investment decision-making b) Millennials who are equipped with advanced financial literacy are willing to take risks in their investment decision-making. The descriptive analysis shows the mean for financial literacy level is 1.436 which indicates a basic financial literacy level. In addition, the mean of Investment Decision Making (IDM) is 1.287 indicating that most respondents are risk-takers rather than risk-averse.

Table 1. Descriptive statistics

<table>
<thead>
<tr>
<th></th>
<th>Total Number</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLL</td>
<td>101</td>
<td>1.0</td>
<td>2.0</td>
<td>1.4361</td>
<td>0.4983</td>
</tr>
<tr>
<td>IDM</td>
<td>101</td>
<td>1.0</td>
<td>2.0</td>
<td>1.287</td>
<td>0.4547</td>
</tr>
<tr>
<td>Valid N(listwise)</td>
<td>101</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 2. Cross-tabulation between financial literacy level and investment decision-making: FLL * IDM

<table>
<thead>
<tr>
<th>IDM</th>
<th>Risk-taker</th>
<th>Risk-averse</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLL Basic</td>
<td>37</td>
<td>20</td>
<td>57</td>
</tr>
<tr>
<td>% of Total</td>
<td>36.6%</td>
<td>19.8%</td>
<td>56.4%</td>
</tr>
<tr>
<td>FLL Advanced</td>
<td>35</td>
<td>9</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td>34.7%</td>
<td>8.9%</td>
<td>43.6%</td>
</tr>
<tr>
<td>Total Number</td>
<td>72</td>
<td>29</td>
<td>101</td>
</tr>
<tr>
<td></td>
<td>71.3%</td>
<td>28.7%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 3. Contingency

<table>
<thead>
<tr>
<th></th>
<th>Risk-taker</th>
<th>Risk-averse</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic</td>
<td>37</td>
<td>20</td>
<td>56</td>
</tr>
<tr>
<td>Advanced</td>
<td>35</td>
<td>9</td>
<td>45</td>
</tr>
<tr>
<td>Total</td>
<td>72</td>
<td>29</td>
<td>101</td>
</tr>
</tbody>
</table>

The statistical results for the independent Chi-square test or relatedness are shown in Table 3. The Case Processing Summary box shows the frequencies for level of financial literacy and investment decision-making. In total, we obtained (N =) 101 observations with no missing cases. The contingency table is also shown in the FLL * IDM cross-tabulation column. The column labelled FLL presents financial literacy level and the row labelled IDM represents investment decision-making. In the Chi-square Test box, the calculated Pearson Chi-square value derived was 3.010 and since the p-value is 0.083, the null hypothesis is not supported at the 10% level of significance.

• H1: Investment decision-making is statistically dependent of financial literacy
• H0: Investment decision-making is statistically independent of financial literacy
Thus, it can be concluded that the level of financial literacy is related to investment decision-making.

![Graph showing percentage of correct answers vs percentage of risk takers for basic financial literacy](image1)

**Figure 1.** A summary of cross-tabulation analysis on percentage of risk attitude for basic financial literacy

![Graph showing percentage of correct answers vs percentage of risk takers for advanced financial literacy](image2)

**Figure 2.** A summary of cross-tabulation analysis on percentage of risk attitude for advanced financial literacy

This study found that Millennials in Malaysia have a high level of basic financial literacy and are willing to take risks in their investment decision-making. This finding is supported by the behavioural finance theory which states that knowledge and cognitive ability may have an effect on preferences such as risk aversion and the rate of time preference affecting financial decision-making (Dohmen, Falk, Huffman & Sunde, 2010). The study also showed that millennials in Malaysia are highly literate in numeracy but not so in inflation when it comes to basic financial literacy. In addition, this study found that millennials who are financially literate on interest compound are willing to take risks in their investment decision-making. Interest compound is interest added to the principal of a deposit or loan so that the added...
interest also earns interest. However, in basic financial literacy, a millennial who has adequate financial knowledge about inflation is not willing to take risks in his or her investment decision-making. Inflation is the rate at which the general level of prices for goods and services increases and consequently, decreases the purchasing power of the currency. Millennials in Malaysia are highly literate on stocks but are unable to differentiate between stock and mutual funds when it comes to advanced financial literacy. This study found that Millennials who are financially literate on the difference between stock and mutual funds are willing to take risks in their investment decision-making. This finding is supported by Van Rooij et al. (2011) who expounded that an individual who is less literate about the stock market are less likely to participate in the stock market. The other finding, with regard to advanced financial literacy, shows that Millennials who are financially literate about mutual funds are not willing to take risks in their investment decision-making.

As mutual funds are considered low-risk, it is strongly associated with risk-averse investment decision-making. In order to determine the consistency of respondents towards their risk attitude, they were asked whether they were risk-takers or not. It was found that more than half of the respondents were aware of their risk attitude. This study also found that formal financial education is associated with the level of financial literacy. Those who have formal financial education such as a degree in finance have advanced financial knowledge compared to those who do not and the latter are placed in the basic financial literacy category.

Surprisingly, this study found that there were respondents who did not have formal financial education but still demonstrated advanced financial literacy. This correlates with Van Rooij’s team (2011) who found that an individual learns from the negative experiences of parents; those with parents who had a low understanding of financial matters are more likely to have high literacy in this area. Thus, it can be concluded that formal financial education is not the only proxy that can contribute to financial literacy level but experiences and family background can also have an impact. However, those who have formal financial background are more willing to take risks in their investment decision-making.

5. CONCLUSION

The study’s findings show that millennials who are financially literate about the difference between stock and mutual funds are willing to take risks in their investment decision-making while those who are financially literate about mutual funds are not. These findings are consistent with Van Rooij et al’s (2011) who stated that an individual who is less literate about the stock market is less likely to participate in the stock market.

This study has implications to educational institutions that are involved in financial education such as inflation, stocks and mutual funds by helping them to formulate better learning outcomes and to provide better understanding of financial
issues. In addition, it is recommended that such educational institutions provide more investment platforms or formats such as stimulations and games in their teaching and learning components to assist and guide Millennials in gaining better investment experiences.

Due to the small number of respondents, the study lacks validity in the interpretation of outcome. Hence, the findings might not represent the true result or perspective of the respondents. It is suggested that future research should expand the scope of study by comparing the financial literacy of different ethnic Millennials in Malaysia. In addition, it is highly recommended that future research should consider increasing sample size by using manual as well as online approaches. This could reduce the gap in the level of subjectivity that is not acknowledged in behavioural studies.

Nowadays, individuals need to be active in the financial market in order to maintain a high standard of living. Thus, with sound financial investments, an individual can reap good returns and survive in the current uncertain economic climate. In summary, millennials in Malaysia who are considered as the next ruling generation should strive to be financially literate and train to become good investors. Thus, this study provides an understanding of the impact of financial literacy on investment decision-making amongst millennials in Malaysia and also sheds light on how financial knowledge can influence the way millennials manage their finances.

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References


