



# INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN ACCOUNTING, FINANCE AND MANAGEMENT SCIENCES



## Risk Profiling and Investment Instruments among Youth in Malaysia

Zainora Ab Wahid, Norliza Che-Yahya, Mohd Rahim Khamis, Zahariah Sahudin and Mohd Faizal Kamarudin

To Link this Article: <http://dx.doi.org/10.6007/IJARAFMS/v11-i1/8507> DOI:10.6007/IJARAFMS /v11-i1/8507

**Received:** 20 December 2020, **Revised:** 23 January 2021, **Accepted:** 09 February 2021

**Published Online:** 19 February 2021

**In-Text Citation:** (Wahid et al., 2021)

**To Cite this Article:** Wahid, Z. A., Che-Yahya, N., Khamis, M. R., Sahudin, Z., & Kamarudin, M. F. (2021). Risk Profiling and Investment Instruments among Youth in Malaysia. *International Journal of Academic Research in Accounting Finance and Management Sciences*, 11(1), 241-255.

**Copyright:** © 2021 The Author(s)

Published by Human Resource Management Academic Research Society ([www.hrmars.com](http://www.hrmars.com))

This article is published under the Creative Commons Attribution (CC BY 4.0) license. Anyone may reproduce, distribute, translate and create derivative works of this article (for both commercial and non-commercial purposes), subject to full attribution to the original publication and authors. The full terms of this license may be seen

at: <http://creativecommons.org/licenses/by/4.0/legalcode>

**Vol. 11, No. 1, 2021, Pg. 241 - 255**

<http://hrmars.com/index.php/pages/detail/IJARAFMS>

JOURNAL HOMEPAGE

Full Terms & Conditions of access and use can be found at  
<http://hrmars.com/index.php/pages/detail/publication-ethics>



## Risk Profiling and Investment Instruments among Youth in Malaysia

Zainora Ab Wahid, Norliza Che-Yahya, Mohd Rahim Khamis,  
Zahariah Sahudin and Mohd Faizal Kamarudin

Faculty of Business and Management, Universiti Teknologi MARA (UiTM), Puncak Alam Campus,  
Selangor, Malaysia

Email: norliza9911@uitm.edu.my

### Abstract

The investment instruments in a financial market can be in various form such as common stocks (shares in a stock exchange), unit trust (government-backed and private) and money market instruments. Each of these instruments has their own risk characteristics that require a sufficient level of understanding on the risk tolerance level that people do not always comprehend. It is argued that only after the understanding of one's risk profile an individual will be ready to invest optimally. This is because the misunderstanding of the risk tolerance level will result in mismatching between risk profile and the type of instruments hence increasing the chances of losses in investment. Thus, it is crucial for potential investors to understand their risk profile before they can even select for any of the instruments to invest. In order to resolve the above issue, this study is developed to facilitate individuals to recognize the amount of risk that they can absorb in order to help them identify the suitable types of investment instruments to participate in. In other words, this study aims to propose a conceptual framework to facilitate individuals in identifying their risk profile before embarking in any types of investments. This study will broaden the scope of literature in this area by providing evidence on Malaysian environment exclusively from the perspective of generation Y and Z.

**Keywords:** Risk Profiling, Investment Instruments, Youth, Malaysia

### Introduction

Identifying the risk profile of investors is one of the most important and fundamental elements in investment. An investment has both return and risk that investors should address objectively especially the risk aspect. Risk on investment can be recognized as the probability of losses relative to the predicted returns on any investment's instrument. In other words, risk is a tool to measure the level of uncertainty of realizing the returns as expected by investors. The risk level of investors is argued to be positively related to their level of risk tolerance which a sufficient understanding on their ability and willingness to absorb "large swings" in the value of their investments are the initial element to be attended to. It is argued that investors tend to be panic and initiate an inappropriate

investment decision (e.g., buy a share at the wrong time) if they do not initially understand their risk profile or level of risk for them to tolerate on every investment they participated. The inappropriate investment decision hence is viewed as primary cause to the increasing in the chances of losses in investment.

Despite the necessity for potential investors to understand their risk profile prior to the selection of any instruments to invest, not many have really assessed on their risk profile or risk tolerance. Risk tolerance assessments for investors can be done in many platforms including by responding for risk-related surveys or questionnaires. These risk-related surveys or questionnaires will usually enable potential investors to review possible worst-case returns from different assets classes and investment categories as well as to assess their daily behavior and personality to get an idea of their comfortability in facing for an undesired outcome on investment and flexibility to rebuild their positivity in daily life.

There are numerous factors found that contribute to risk tolerance of an investor. Among others are an investor's investment time frame, amount of capital, future earning capacity, investment experience and personal value and assets. In general, investors will not be able to tolerate for greater risk when they are not provided with sufficient protection or more stable source of alternative funds available to support for any loss on investment. In other words, investors should be satisfied with investments that are suitable for them in the light of their circumstances and financial position. Therefore, the assessment of risk profile may not only assist investors to understand their risk tolerance but also to offer an information on a type of investor they are.

Similar to risk assessment on investment, the understanding of investors on their type will also lead them to know the type of investments they should venture. In general, investors can be categorized into at least four different types namely naive, conservative, aggressive and speculative. While naive type of investors may not be willing to accept for volatility, conservative investors are willing to accept little uncertainty in their investment portfolios. In the opposite of the first two types, aggressive investors tend to be market or investment-savvy. Sufficient understanding of investment instrument and their propensities allow this group of investors to be attached to investments that are highly uncertain in returns. A more risk taking ability should be portrayed by speculative investors who are likely to reach for maximizing returns with certain level of risks.

For instance, more experienced people in terms of age can be categorized as speculative investors due the perception that they will have more financial ability to absorb and recover from any loss in investment. Paradoxically, from another side of perception, young investors normally are better in managing their risk on investment. The rationale behind this is younger investors have longer time to save and therefore few setbacks would not throw them completely off course. This rationale is precisely why Gen Y and Z of investors should consider to invest in riskier investment instruments such as common stocks. In spite of the suggestion that Gen Y and Z are risk taking type of investors, an accurate or a more reflective understanding on their risk profile or risk tolerance should be assessed individually as different individual may embrace different abilities in accepting risk. Therefore, it is crucial for individuals to identify their own risk profile before making any decision on their investment.

Presently, there are few studies that focus on resolving mismatching risk profile and investment instruments. Most of the previous studies discussed about the financial literacy (Huston, 2010; Jorgensen & Savla, 2010; Shaari, Hasan, Mohamed, & Sabri, 2013; Tang, Baker, & Peter, 2015; Van Campenhout, 2015), factors determining bankruptcy among individuals (Jamlus-Rafdi, Mohamad-Puad, Shah-Shahar, Mat-Nor, & Shah Shahar, 2015) as well as efficiency in managing funds (Mamat-Zambi, Mohamad-Hassan, & Jaafar, 2013). Due to lack of findings on the issue on resolving mismatching between risk profile and investment instruments thus this study takes an opportunity:

- i. to facilitate individuals in determining their risk profile for investment
- ii. to assist individuals in identifying the type of investment instruments based on their risk profile.

## **Literature Review**

### **Risk Profile**

An essential aspect of financial planning is risk profiling. Developing a full risk profile may extend for many meetings, and often involves questionnaires found in the academic literatures. According to Hunt (2016) this aspect of financial planning is so important because it gets to the heart of how the investor interacts with their financial world. For example, investors may have different propensities to make impulsive financial decisions that sabotage their long-term wealth creation goals, or they might be overly optimistic about the future and thus fail to save. While accounting or stock broking may deal with the quantitative aspects solely, financial planning is as much about knowing the psychology of the client and building a relationship of trust, as it is about achieving wealth for the client.

Besides that, Hoffmann, Post, and Pennings (2015) through their recent work in behavioral finance showed how investors' perceptions (i.e., return expectations, risk tolerance, and risk perception) affect hypothetical trading and risk-taking behavior. The study finds that investor perceptions and changes therein are important drivers of actual trading and risk-taking behavior: Investors with higher levels of and upward revisions of return expectations are more likely to trade, have higher turnover, trade larger amounts per transaction, and use derivatives. Investors with higher levels of and upward revisions in risk tolerance are more likely to trade, have higher buy-sell ratios, use limit orders more frequently, and hold riskier portfolios. Investors with higher levels of risk perception are more likely to trade, have higher turnover, have lower buy-sell ratios, and hold riskier portfolios. The study gives an evidence that risk profile among the investor is very important to identify to get high return in investment activities.

### **Investment Choices**

Investor risk profiling is at the heart of private wealth management. In theory, without proper knowledge of the investor's goals, time horizon, liquidity needs, and risk aversion, it is impossible to recommend suitable investments or build efficient long-term investment strategies for that investor. The investors need to analysis the investment factors carefully before making an investment decision. Risk and uncertainty is subjectively perceived and it involves psychological and emotional factors.

According to Seetharaman, Niranjana, Patwa, and Kejriwal (2017) the investment objective and asset familiarity exert an impact on investor behavior, with asset familiarity having the strongest impact. Investor behavior, in turn, influences the choice of a portfolio of the investors. This study focused on the factors affecting individual investors' behavior and their portfolio. It supports the conventional views on the influence of the independent variables of investment objective, risk profile and asset familiarity on the perceived extent of investor behavior using the partial least square (PLS) technique in testing the hypotheses. It also examined how this perceived extent of investor behavior may predict the individual choice of portfolio and its performance. The study contributes to the importance of risk profiling in the investment choices by individuals.

Due to that, investment choices are closely related to elements that need to be had by everyone in making an investment decision, and the elements consist of financial behavior, financial knowledge, and financial attitude.

### **Financial Behavior**

Financial behavior relates to how individuals react in making decisions with limited resources to finance their needs and wants. It includes how individuals manage their money by preparing the appropriate budget, nature of their saving and others (Bhushan & Medury, 2014; Kalekye & Memba, 2015). According to Atkinson and Messy (2012), financial behavior plays a vital role in individual plans for their consumption towards financial stability and indirectly enhances their financial literacy level.

Various studies found that financial behavior is one of the crucial elements of financial decision making. For instance, a study by Lusardi (2008), focused on investment planning. The study found that financial behavior influences women to decide for their investment planning during their retirement age. Another survey by Ronald and Grable (2009) produced evidence in their study that financial behavior has a relationship with an individual in the financial decision. Individuals with a lower level of financial risk tolerance will be facing difficulties in making a financial decision. Hence, to profile risk among individual and investment instruments choices, financial behavior is one element that needs to be considered based on previous studies that found that financial behavior and investment decision-making have relationships.

### **Financial Knowledge**

Financial knowledge is a crucial dimension of financial literacy and it is considered a synonym of financial literacy (Huston, 2010). There are a lot of different views and opinions regarding the definition of financial knowledge. According to Huston (2010) financial knowledge is the knowledge acquired through education and experience related explicitly to essential personal finance concepts and products. Hung et al (2009) considered financial knowledge as an individual's understanding of financial concepts. Hence, financial knowledge can be defined as the individual's ability to make decisions based on financial issues, concepts, and treated it as a pre-condition to make financial decisions effectively (Lusardi & Tufano, 2008).

According to Marsh (2006), financial knowledge can be measured through the level of understanding among individuals about the concept of personal finance. If they have a good understanding of the concept, they have a piece of good financial knowledge. Hence, it will influence an individual to make

decisions, especially related to financial management. It is proved by several studies that mentioned financial knowledge and financial decision closely related to each other. For instance, Muhamed and Abd. Razak (2012) explained how financial knowledge could improve university students' financial decision-making. The study found that 90 percent of students agree that the understanding of financial management can help them in doing financial planning for the future. Good financial knowledge and literacy are essential elements that need to be considered when making investment decisions, as well as matching profit and risk profiles among investors. Ademola, Musa and Innocent (2019) also found that there is a significant effect between financial knowledge and investment decision making. Individuals or investors with good knowledge about the investment aspect will make a good financial decision in the market or vice versa. But, a study from Herdjiono and Damanik (2016) found that financial knowledge does not influence financial behavior because financial education is less effective in low-medium income countries or regions.

### **Financial Attitude**

Financial attitudes can be defined as someone's beliefs, values, and psychological tendencies when making a financial decision. Faith and values are related to personal financial concepts; for instance, one believes that they must have an appropriate level of savings. The psychological tendency will affect how to evaluate financial management practices with some degree of agreement and disagreement. According to Ajzen (1991) financial attitude is the predisposition to behave in a particular manner formed due to some economic and non-economic beliefs possessed by the individual on the outcome of specific behavior. Individuals with high financial attitudes were more likely to have a positive attitude towards financial planning (Murphy & Yetmar, 2010) spending behaviors (Jorgensen, Foster, Jensen & Vieira, 2017) and good decision making to doing something with their money (Dewi & Salwani, 2020). Due to that, financial attitudes can play as one of the critical elements that contribute to the individual's want to decide to use their own money in investment as a tool to generate more money.

A study by Rai, Dua & Yadav (2019) found that financial attitudes can be recognized as important factors in examining financial literacy. The evidence is based on the study about the association between financial attitudes and financial literacy levels among working women in New Delhi, India. The finding is synchronized with a lot of previous studies that focus on financial attitudes and financial literacy levels (Arora, 2016; Haque & Zulfiqar, 2015; Huston, 2010). Another study by Bhushan and Medury (2014) also mentioned that to enhance financial literacy among generations, the most important thing that needs to be focused on should be developing favorable financial attitudes among the people of the country.

### **Research Methodology**

This study develops and employs questionnaires to help individuals determine their risk profile as its primary data collection method. The respondents of the surveys will be Malaysian youth aged between 25 to 39 years old. This study is based on data collection through a well-structured questionnaire. To measure the financial behavior and financial attitude questions adopted from Shockey (2002) and OECD (2013) covered savings behavior, bill, loan repayment behavior, responsible investment behavior, financial planning behavior, risk attitude, the stress in handling finances and satisfaction with the financial situation. A study by Bhushan and Medury (2014) and

Hasler and Lusardi (2017) used to measure financial knowledge and the questions related to financial numeracy, savings and investments, borrowings, insurance, risk, and return. Simple random sampling technique will be used due to the big population and sample size involved. For population, youth age between 25 to 39 years in Klang Valley will become the respondents in this study. In terms of sample size, this study will simply adopt the process of determining the sample size for a population, by using Krejcie and Morgan table. The table came up with a table using sample size formula for population. Data will be analyzed using the Microsoft Office Excel software. This is because after respondents answer the questionnaires data will be gathered to identify their risk profile and investment instruments.

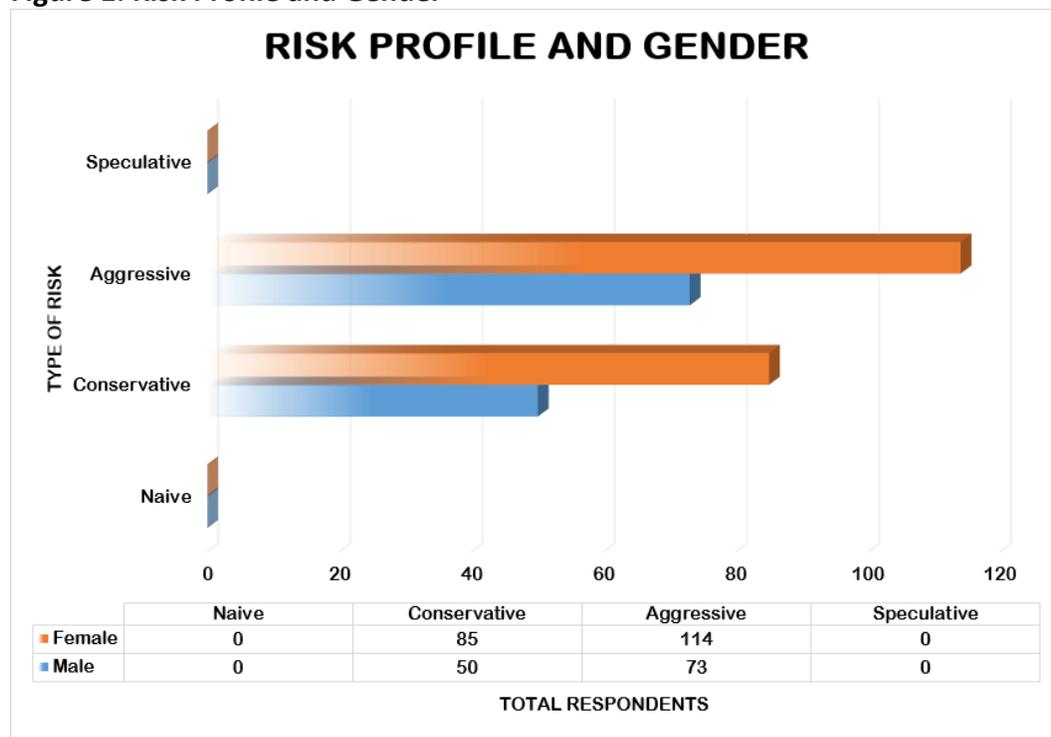
### Empirical Results and Discussion

All data collected were analyzed, whereby all statistical results obtained would be described accordingly. Table 1 displays a summary of the descriptive results obtained in this study.

**Table 1: Descriptive Results**

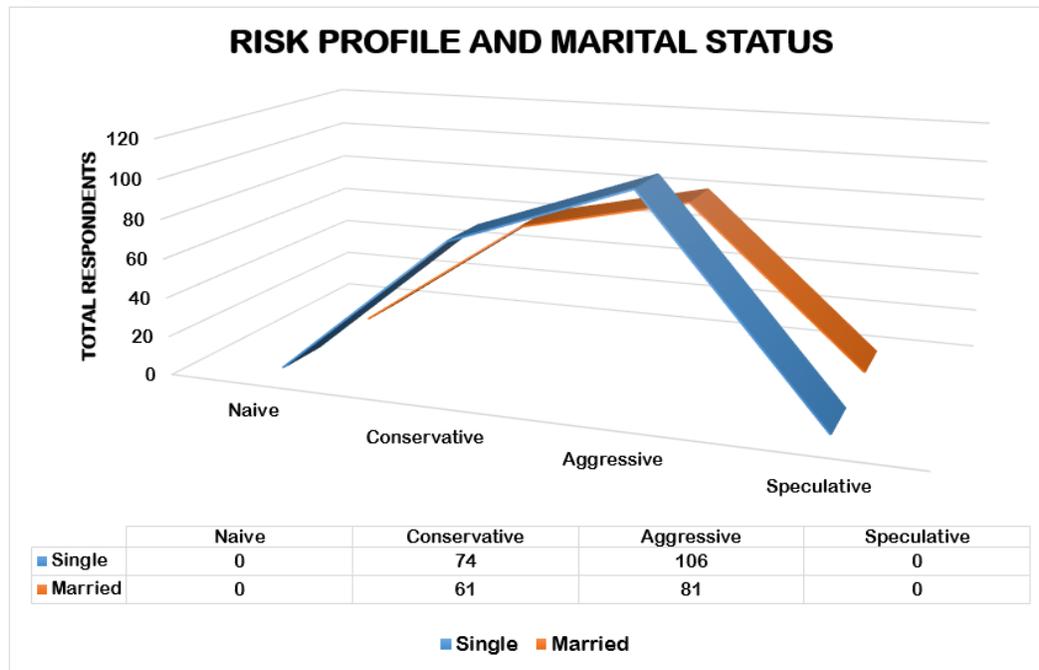
<b>Demographic</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Age</b>		
25-29	205	64
30-39	117	36
<b>Gender</b>		
Male	123	38
Female	199	62
<b>Level of Income</b>		
1000-2000	87	27
2001-3000	82	26
3001-4000	52	16
4001-5000	46	14
More than 5000	55	17
<b>Marital Status</b>		
Single	180	56
Married	142	44
<b>Education</b>		
Secondary	18	6
University	304	94
<b>Employment Status</b>		
Student	11	4
Full Time	239	74
Self Employed	41	13
Part Time	17	5
Others	14	4

Figure 1: Risk Profile and Gender



The socio-demographics information obtained in this study is demonstrated in Figure 1. In terms of gender, a larger percentage that is 61.8 percent of the respondents is female, which was consistent with the national overall population average. On the other hand, the remaining 38.2 percent is male. Out of 199 female respondents, 42.71 percent can be categorized as conservative and another 57.3 percent as aggressive in investing their money. Conversely, there are 40.65 percent and 59.3 percent of male respondents can be categorized as conservative and aggressive respectively, in their types of risk profile.

Figure 2: Risk Profile and Marital Status



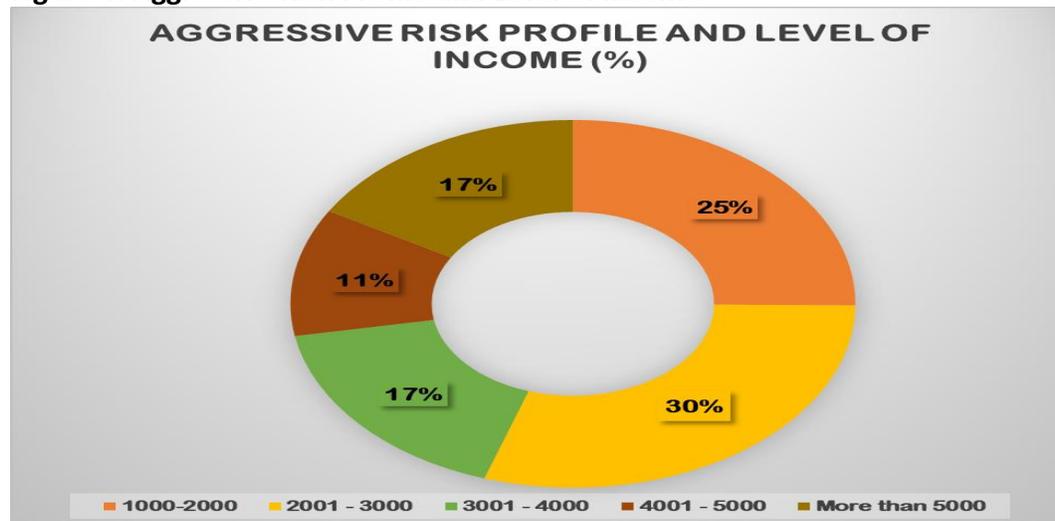
The total respondents also consist of married and single individual. From our sample, in Figure 2, 44.1 percent are married individuals, while the remaining 55.9 percent were still single. When we look at the overall sample, 41.9 percent is conservative and 58.1 percent aggressive. Additionally, out of the conservative types of risk profile, 45.2 percent is married and the balance of 54.8 percent single. It simply shows that, there are greater number of single individuals is categorized under conservative as compared to married individual. Alternatively, there are 56.7 percent of single individual is aggressive and only 43.3 percent is married. This indicates that, there are more single individual are aggressive compared to married individuals. This can clearly confirm that single individuals invest more than the married individuals. This may be because married individuals need more money to pay for their family commitments.

Figure 3: Income and Risk Profile



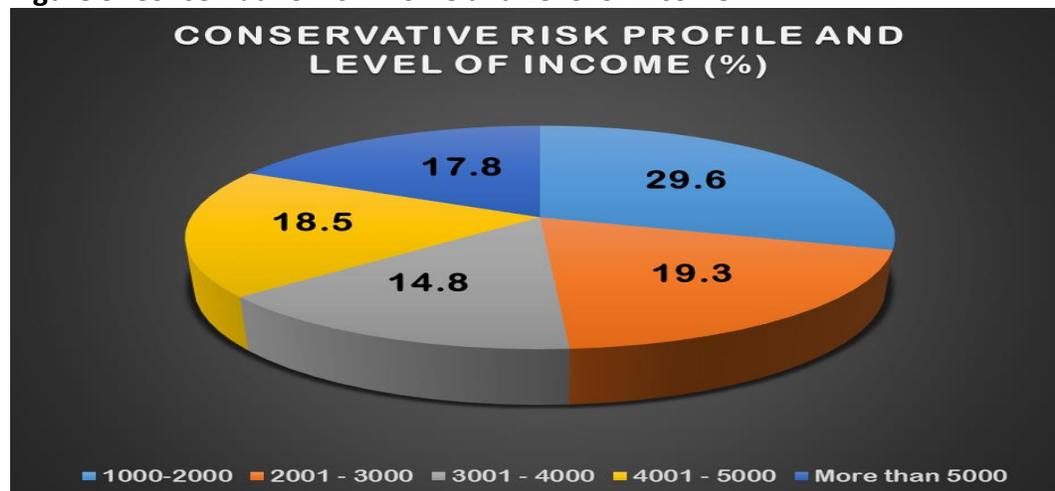
As shown in Figure 3, we found that majority of the respondents (52.5 percent) recorded a monthly income of less than RM3,000, which classified them into the B40 category. In contrast, 30.4 percent possessed a monthly income between RM3,001 to RM5,000, while 17.1 percent respondents had an income more than RM5,000. The interesting part of our findings is, 29.6 percent of the lower income group, which is from RM1,000 to RM2,000 are majority and active group for conventional category. Meanwhile, for aggressive category, 29.95 percent comes from individual who possessed a monthly income between RM2,001 to RM3,000. As the results, however, revealed a greater percentage of respondents who earned less than RM3,000 for their monthly income.

**Figure 4: Aggressive Risk Profile and Level of Income**



As we can see in Figure 4 below, for the Aggressive category, which is 30 percent comes from individual who possessed a monthly income between RM2,001 to RM3,000. Followed by 25 percent, comes from individual who possessed a monthly income between RM1000 to RM2,000. Next, 17 percent and 11 percent, which comes from those who possessed a monthly income between RM3,001 to RM4,000 and RM4,001 to RM5,000 respectively. And finally, another 17 percent, which comes from those who possessed a monthly income more than RM5,000.

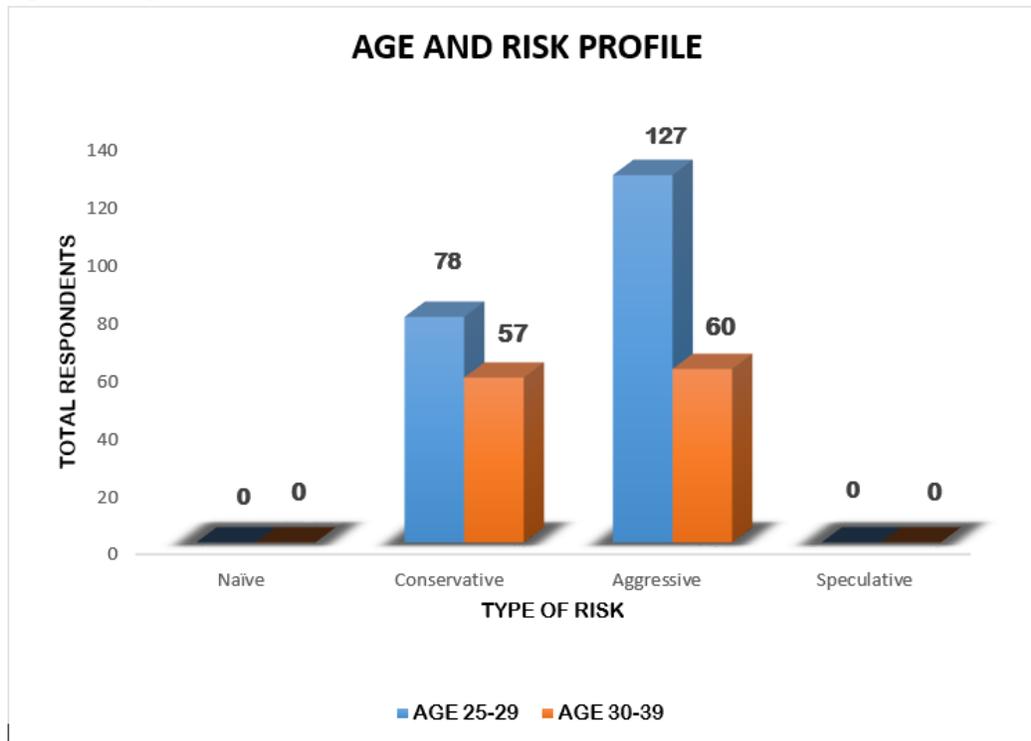
**Figure 5: Conservative Risk Profile and Level of Income**



On the other hand, for Conservative category, as displayed in Figure 5, the biggest portion is 29.6 percent. It comes from individual who possessed a monthly income between RM1,000 to RM2,000. Then, it is followed by 19.3 percent and 18.5 percent, from those who possessed a monthly income between RM2,001 to RM3,000, and between RM4,001 to RM5,000 respectively. Subsequently, it goes along with 17.8 percent, which the income earner is more than RM5,000. And lastly, the smallest percentage is 14.8 percent which comes from those who earned Rm3,001 to RM4,000.

From both pie chart above, it can be concluded that, individual who possessed a monthly income between RM1,000 to RM2,000, are the ones who have Aggressive and Conservative Risk Profile. Surprisingly, those who earned RM5,000 and above, becomes among the lowest proportion who have Aggressive and Conservative Risk Profile.

**Figure 6: Age and Risk Profile**



Last but not least, in term of age, as shown in Figure 6, the highest percentage of respondents for Aggressive category are comes from the age group between 20 to 29 years (62 percent), followed by 30 to 39 years (51.3 percent). On the other hand, for conservative category, the age group between 20 to 29 years (38 percent), followed by 30 to 39 years (48.7 percent).

Moreover, slightly more than half of the respondents (52.5 percent) had a very low income, denoting the definite need for more information and guidance about financial readiness for this group of relatively younger respondents. Remarkably, these respondents indicated that they did not have sufficient income for living expenses. Similarly, almost half (27.0 percent) generated income merely sufficient for their basic needs. With the depressed real wage growth, the data indicated that the respondents were just able to meet day-to-day expenses, whereby only 17.1 percent had enough income to live comfortably with some savings.

### **Conclusion and Recommendations**

This study aimed to match risk profile and financial instruments to achieve better understanding regarding the issue of mismatching risk profile and financial instruments. The investigation includes an analysis of the risk profile among youth in Malaysia. In fulfilling the objectives of this paper, the

descriptive statistics was analyzed to show the group of youth and their risk profiling. Result shown that, from the four categories of risk profile; naive, conservative, aggressive and speculative, most of respondents came from group of conservative and aggressive category of risk profile. None of the respondents are represented from the naive and speculative category of risk profile. This shows that the youths are very cautions in making decisions related investment activities. They could be consent about safety on their income compared to high return received. Other than that, the lack of knowledge about financial market environment also will influence them in making decision to select which financial instruments suit with them. Moreover, this study also provides a useful insight and information to help individuals, especially the beginners on investment to identify their risk tolerance level before embarking on any investment activities. At the same time, this study could also assist individuals to improve their investment skills.

Hence, the findings of this study can provide a few contributions in the context of the wealth or asset allocation process. This context is an investment strategy that tries to minimize risk and maximize profit or return in an investment portfolio. To achieve the objective, the individual needs to understand their risk profile before selecting suitable investment instruments to invest in. Accordingly, the risk profile can be considered as one of the crucial aspects of a successful investor in wealth allocation. With the understanding of his/her risk profile and investment instruments, an individual should be able to develop an appropriate investment policy statement and, also portfolio management process. Investment policy statement requires the individual to plan his/her investment strategy, objectives, and risk tolerance. Simultaneously, the portfolio management process is for the individual to create and maintain a portfolio to meet his/her goals. Without proper understanding on his/her risk profile with suitable investment, an uninformed or a bias investment decision in asset and wealth allocation can be expected to occur, especially among youths or a young group of investors.

It is recommended that future researchers to test other factors that may influence the adoption and implementation of risk profiling in investments. The factors may include a more comprehensive demographic profile such as whether the respondents are from urban or rural areas, also whether they work with public or private companies and many others. This conceptual paper is subjected to some limitations surrounding similar conceptual academic works.

### **Acknowledgement**

The authors would like to acknowledge that this article is part of a research project funded by of the Faculty of Business and Management, Universiti Teknologi MARA. Project ID: 600-IRMI 5/3/DDF (FPP) (020/2019).

### **References**

- Ademola, S. A., Musa, A. S., & Innocent, I. O. (2019). Moderating Effect of Risk Perception on Financial Knowledge, Literacy and Investment Decision. *American International Journal of Economics and Finance Research*, 1(1), 34-44.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50, 179–211

- Arora, A. (2016). Assessment of financial literacy among working Indian women. *Business Analyst*, 36(2), 219–237.
- Atkinson, A., Messy, F. A. (2012). *Measuring financial literacy: Results of the OECD/International Network on Financial Education (INFE) pilot study*
- Bhushan, P., Medury, Y. (2014). An empirical analysis of inter linkages between financial attitudes, financial behavior and financial knowledge of salaried individuals. *Indian Journal of Commerce and Management Studies*, 5(3), 58.
- Dewi, A. S., & Salwani, U. D. (2020). The influence of financial attitudes, financial literacy, and parental income on personal financial management (A case study of students of Bandung). In *Managing Learning Organization in Industry 4.0: Proceedings of the International Seminar and Conference on Learning Organization (ISCLLO 2019)*, Bandung, Indonesia, October 9-10, 2019 (p. 261). Routledge.
- Hasler, A., Lusardi, A. (2017). *The gender gap in financial literacy: A global perspective*. Washington, DC: Global Financial Literacy Excellence Center, The George Washington University School of Business
- Haque, A., & Zulfiqar, M. (2015). Women's economic empowerment through financial literacy, financial attitude and financial wellbeing. *Research Journal of Finance & Accounting*, 6(21), 57–66.
- Herdjiono, I., & Damanik, L. A. (2016). Pengaruh financial attitude, financial knowledge, parental income terhadap financial management behavior. *Jurnal Manajemen Teori dan Terapan/ Journal of Theory and Applied Management*, 9(3).
- Hoffmann, A. O., Post, T., & Pennings, J. M. (2015). How investor perceptions drive actual trading and risk-taking behavior. *Journal of Behavioral Finance*, 16(1), 94-103.
- Hasler, A., & Lusardi, A. (2017). *The gender gap in financial literacy: A global perspective*. Washington, DC: Global Financial Literacy Excellence Center, The George Washington University School of Business
- Hunt, K. (2016). Investment Risk Profiling: Lessons from Psychology. *Financial Planning Research Journal* 2 (2), 49-54
- Huston, S. J. (2010). Measuring financial literacy. *Journal of Consumer Affairs*, 44(2), 296-316.
- Jamlus-Rafdi, N., Mohamad-Puad, N. A., Shah-Shahar, W. S., Mat-Nor, F., & Shah Shahar, W. S. (2015). Faktor-Faktor Muflis di Kalangan Belia. *Proceeding of the 2nd International Conference on Management and Muamalah 2015 (2ndICoMM) 16th – 17th November 2015*, 484-488.
- Jorgensen, B. L., & Savla, J. (2010). Financial literacy of young adults: The mportance of parental socialization. *Family relations*, 59(4), 465-478.
- Kalekye, P., Memba, F. (2015). The role of financial literacy on the profitability of women owned enterprises in Kitui Town, Kitui Country, Kenya. *International Journal of Science & Research*, 4(6), 2360–2365.
- Lusardi, A., Mitchell, O. S., and Curto, V. (2006). Financial literacy among the young. *Journal of Consumer Affairs*, 44(2), 358–380
- Mamat-Zambi, N., Mohamad-Hassan, H., & Jaafar, S. B. (2013). Hubungan antara Amalan Pengurusan Kewangan Pelajar dan Kursus PA305: Pengurusan Kewangan Peribadi - Satu kajian kes di Politeknik Tuanku Sultanah Bahiyah. *Technical And Education Colloquium (TEC) PTSB*, 25-31. doi:<http://ecrim.ptsb.edu.my/file/20150209071437.pdf>

- Marsh, B. A. (2006). Examining the personal finance attitudes, behaviours, and knowledge levels of first-year and senior students at Baptist universities in the state of Texas. (Unpublished master's thesis). University of Bowling Green State.
- Murphy, D. S., & Yetmar, S. (2010). Personal Financial Planning Attitudes: A Preliminary Study of Graduate Students. *Management Research Review*, 33(8), 811-817
- Seetharaman, A., Niranjani, I., Patwa, N., & Kejriwal, A. (2017). A Study of the Factors Affecting the Choice of Investment Portfolio by Individual Investors in Singapore. *Accounting and Finance Research*, 6(3), 153-168. doi: <https://doi.org/10.5430/afr.v6n3P153>
- Shaari, N. A., Hasan, N. A., Mohamed, R., & Sabri, M. (2013). Financial literacy: A study among the university students. *Interdisciplinary Journal of Contemporary Research in Business*, 5(2), 279-299.
- Shockey, S. S. (2002). Low-wealth adults' financial literacy, money management behavior and associated factors, including critical thinking. Unpublished doctoral dissertation, Ohio State University.
- Rai, K., Dua, S., & Yadav, M. (2019). Association of Financial Attitude, Financial Behaviour and Financial Knowledge Towards Financial Literacy: A Structural Equation Modeling Approach. *FIIIB Business Review*, 8(1), 51-60. h
- Ronald, A., Sages, J. E. G. (2009). Financial Numeracy, Net Worth, and Financial Management Skills: Client Characteristics That Differ Based on Financial Risk Tolerance. *Journal of Financial Service Professionals*, 57-65
- Tang, N., Baker, A., & Peter, P. C. (2015). Investigating the disconnect between financial knowledge and behavior: The role of parental influence and psychological characteristics in responsible financial behaviors among young adults. *Journal of Consumer Affairs*, 49(2), 376-406.
- Van Campenhout, G. (2015). Revaluing the role of parents as financial socialization agents in youth financial literacy programs. *Journal of Consumer Affairs*, 49(1), 186-222.
- OECD. (2013). Financial literacy and inclusion. Results Of OECD./INFE Survey Across Countries And By Gender