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The Factors Affecting Malaysian Investment Risk Tolerance for Retirement Plans

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Abstract: ***Risk tolerance is the risk levels that you able to tolerance/acceptance. It is one of the important factors for both investment managers and investors to make investment decisions. However, understanding and measuring of personal investment risk tolerance is not a simple process. Therefore, this research attempts to measure Malaysian investment risk tolerance and determine the factors that affect Malaysian investment risk tolerance for retirement plans. Besides that, the purposes of this study was to study the relationships between financial risk tolerance and factors of age, gender, education level, income level, investment goals, and investment time horizon. In the research, the data analysis will use descriptive statistics analysis, Pearson correlation coefficient, and significant test by the Statistical Package for the Social Sciences (SPSS). Results of Pearson correlation coefficient, and significant test indicated that age, income level and investment goals had the significant relationships with financial risk tolerance, although gender, education level and investment goals had no significant effect on financial risk tolerance.***

Keywords: Risk tolerance, Investment goals, Investment time horizon, Retirement plans

I. INTRODUCTION

All the investments are included risk. Risk defined in traditional viewed as a 'negative' and 'exposing to danger or hazard' (Damodaran, ND). However, Andersen et al. (2014) stated that the risk has another meaningful definition which risk must contain this duality as both danger and opportunity. It also means that cannot have one, but without the other. In investment, the risk can refer as all the money invested from an investor is not promised can withdraw as the initially invested (The Mutual Fund Education Alliance, 2014). Besides that, a risk is "volatility", the change of movement in the markets occurs constantly over time (The Mutual Fund Education Alliance, 2014). However, risk also provides an equivalent return on the investment (Maranjian, 2013). Maranjian (2013) stated that, high risk provide high return, whereas low risk will provide low return. For example, the lottery is very high risk because it just needs a very low cost and may be returned in a "multimillion-dollar jackpot" or the investors will lose all the invested money (Maranjian, 2013). Whereas low risk investment activities have government bond, bank saving account, and etc. Low risk investment is the investor feel safety and able to get back the investment money (Maranjian, 2013).

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However, the return of the low risk investment will be low too. According to Central Bank Malaysia, the average saving rate for deposit in the Interbank Money Market is 3.25% (Bank Negara Malaysia, 2014). It may seem like slightly good because investors have not worry loses money and every month has 3.25% interest rate as the return. When investors face the inflation factor, which trend average 3.71% in 2014 and actual 3.3% in July 2014, investors are losing the power of purchasing over time with such investment (Trading Economics, 2014). It means that the interest rate or return of low risk investment cannot overcome the inflation rate.

In order to achieve investor's financial goals, investors should know their personal risk tolerance. Risk tolerance is the level of risk that agreed by two individuals and may be disagree on its tolerability (Bratfos, 2009). It's also defined as the risk level that individuals are able to tolerate (The Mutual Fund Education Alliance, 2014). Marquit, 2013 mentioned that age, income, and other circumstances will interact to form your current level of risk tolerance. Therefore, this research is to understand how the personal factors, investment goal and time horizon influences toward the Malaysian risk tolerance.

After aware the personal tolerance of risk level, investors can construct their portfolio based on the personal risk tolerance, which is the investor's affordability when the value of investment "move up and move down" and the investors' "investment temperament" (Oasis Group Holdings, ND). Investment temperament has three basic categories which are "conservative, moderate or aggressive" (Oasis Group Holdings, ND). Conservative is the investor who not keen to "tolerance noticeable downside market fluctuations, and is willing to forego most all significant upside potential" (Tools For Money, 2014). Therefore, conservative investors will invest majority of the money in low-risk activities, which is 47% of the investment portfolio, then 45% in share market and 8% in money market (Refer to Appendix 1). For moderate, it is the investor who willing to take some risk in order to get "good return" and "invest long-term for retirement" (Tools For Money, 2014). The investment portfolio of the moderate investor is majority invest in share market, which occupied 64%, then 31% in bond and 5% in money market (Refer to Appendix 1). Lastly, the aggressive investors are who "want to substantially outperform the markets and know they are exposed to much more risk than the markets" because "they could easily lose up to 40% of their portfolio value in a few months, and it may take years, if ever, to recoup these losses" (Tools For Money, 2014). The major investment of aggressive investor is in share market, which occupied 79%, then 20% in bond and 1% in money market.

Retirement plan needs a huge amount of money to proceed. In this research, researcher cited 'The Star' newspapers on 15 Jun. 2014, Malaysians have no enough saving for their retirement plan.

Based on a wealth advisor, Malaysians are earning more at present, but their ability to save has not being enhanced and many are still not ready for retirement (Mahalingam, 2013). According to World Health Organization, the total population of Malaysia has 29.24 million peoples in 2012, and the life expectancy for males is 72 years old, whereas the female is 76 years old (WHO, 2014). Assumed that, each of the Malaysian retires with 55 years old and they have another 17 to 21 years to go on. Especially the Employees Provident Fund (EPF) stated that "retirees use up an average of RM150, 000 of their EPF savings in the first three to five years of retirement" (Shahriman, 2013). Besides that, annual report of EPF 2011 also mentioned that 86.5% of the 6.3 million contributors have less than RM100, 000 in their account (Shahriman, 2013). It is clear to show that most of the Malaysian has no enough saving for the retired life.

Therefore, Malaysia's government had applied 'two initiatives', which are "increasing the minimum retirement age to 60" and "introducing the private retirement scheme" in order to solve the problem (Shahriman, 2013). However, the citizen extends the working journey to the retirement minimum age, which 60 years age also does not mean that they are able to have enough saving for the retirement plan. Whereas, the private retirement scheme is a long term investment plan for retirement purpose that encouraged by the government, which it can help citizen to raise the retirement fund (Securities Commission Malaysia, 2013). Consequently, Malaysian also can make more investments in order to increase wealth for retirement plan or emergency. For that reason, investors should understand their level of risk tolerance and construct a suitable portfolio.

Based on the researchers, Yao et al. (2011) in the research of "decomposing the age effect on risk tolerance" stated that the retirement safety nets were established in the United States which provides 50% or more of their retirement income. In the United States, nine out of ten retired individuals receive Social Security. In contrast, Malaysia's government was applied 'two initiatives' (as mentioned in the above) in order to ensure the retirees have enough fund to survive while they are permanently leaving for work, but not everyone is able to save enough fund before they retire. Therefore, investment can help the Malaysian can increase revenue or income. However, the issue is not everyone can estimate the risk and their personal risk tolerance to make the financial decisions, especially those who do not obtain sufficient knowledge of investment. Besides that, they also may not know how to appraise or evaluate their own risk tolerance. Furthermore, the reason of carrying this research is that most of the relevant study was carried in other countries, especially developed countries like United States but there are only a few in Malaysia. Therefore, this is also the researcher's challenge and the purpose of having this research. Another reason to carry this study in Malaysia is Malaysia is a booming economic country, therefore the risk tolerance of the citizen may differ from the developed countries.

The research objective is to increase the understanding and awareness the level of risk tolerance of individuals in order to plan their investment portfolio accordance their risk tolerance level. Understand the personal level of risk tolerance is very importance and select the investment within the level of risk tolerance because certain investments fluctuate more severely in value than others, however it may have the potential for higher returns. Therefore, the objectives of this research papers are:

1. To study the correlation between personal factors (age, gender, education level and income level) toward the risk tolerance.
2. To determine the correlation between the investment goals and risk tolerance.
3. To examine the relationship between the time horizons and risk tolerance.

II. LITERATURE REVIEW

A. Risk tolerance

There are many researches regarding investment risk tolerance. Investment risk tolerance is the most important activities for financial planners and the most challenging to assess because it is unquantifiable (Injodey and Alex, 2011, Tran and Paradi, 2008).

Based on the Callan and Johnson (2002), risk tolerance is a complex psychological concept that is a key feature of financial attitudes and planning which is the risk level that an individual willing to accept. Moreover, Callan and Johnson (2002) indicated that risk tolerance is a complex attitude which is it has a multiple levels of interpretation. Therefore, risk tolerance reflects an individual's values, beliefs and personal goals, and overlaps with feelings of wanting to feel confident and in control (Callan and Johnson, 2002)

Jain and Mandot (2012) stated that assessing an individual's risk tolerance can be tricky which was not only how much risk he can afford to take but also how much risk he can stand to take. The ability of handling risk or accept the risk for an individual may be related to individual characteristics such as age, time horizon, liquidity needs, portfolio size, income, investment knowledge etc. (Jain and Mandot, 2012). Moreover, the other factors like marital status, number of children and/or gender change will change the expected level of risk tolerance changes mentioned by Riley and Russon (1995).

Generally, researchers use questionnaire to collect data of risk tolerance and the variables of impacts on risk tolerance such as Jain and Mandot (2012), Linciano and Soccorso (2012), Anbar and Eker (2010), and etc. Furthermore, Linciano and Soccorso (2012) found that risk tolerance is a composite quantity, a valid questionnaire must measure each item separately: assessing an answer depending on both risk attitude and financial capacity. Risk tolerance must be assessed separately from measuring the set of variables including the personal characteristics, time horizon and investment goals (Linciano and Soccorso, 2012).

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B. Personal Factors

The study is to examine the correlation between the factors and personal risk tolerance. The personal factors that to examine in this research have including age of individual, gender, income level and education level.

C. Age of Individual

A number of researches conducted to examine the relationship between the age of individual and level of risk tolerance. There are some researchers discovered that the relationship between age and personal risk tolerance was positive such as Bertaut (1998), Grable (2000), Guiso et al. (1996), Hui and Hanna (1997), and etc. Besides that, they also stated that the "age as independent variables" and younger people only willing to take smaller risky assets in their portfolio" (Guiso et al., 1996). These also mean that the personal risk tolerance level rises when the age of individual increase.

On the other hand, Finke and Huston (2003) and Jianakoplos and Bernasek (2006) mentioned that financial risk tolerance decreased with age. Besides that, Yao et al. (2011) also found that risk tolerance generally decreased as people age which was negative relationship. The result shows that the inverse relationship in that the highest risk tolerance was associated with the youngest mean and median age which is 45.6 and 45, respectively; and the lowest risk tolerance was associated with the highest mean and median age which is 47.1 and 47, respectively. As hypothesized, the effect of aging on risk tolerance was negative. Each additional year of age decreased the likelihood of reporting any level of risk tolerance by 2% (Yao et al, 2011). According to Strydom and Metherell (2012) and Sadiq and Ishaq (2014), they also indicated that there was a negative correlation between the age of individual and financial risk tolerance.

However, other researches like Bashir et al. (2013), they revealed that there was no relationship between the age of individual and risk tolerance. Based on the study of past researchers, there were negative relationships more than positive relationships between the variable of age of individual and risk tolerance.

D. Gender

There were a number of researches conducted to investigate the relationship between the gender and personal risk tolerance. The results of previous researches were most support that males can afford more risk than females. Based on the Grable (2000) and Mujahid et al. (2014), they found that males were more risk tolerant than females. Besides that, Larkin et al (2012) and Grable and Lytton (1998) indicated that males are more tolerant of risk compared to females. Watson and McNaughton (2007) also found that the females are not very willing to tolerate high risk compared to males. Furthermore, Strydom and Metherell (2012) also proved the statement of "females have a lower financial risk tolerance than males", which stated by Anbar and Eker (2010).

On the other hands, Riley and Russon (1995) found that the females have a greater risk tolerance than males. However, Jain and Mandot (2012) stated that there were no relation between the investors' gender and the level of risk taken by him/her.

E. Education Level

Bases on Grable and Lytton (1998), several researchers have argued that increased levels of education (i.e., formal attained academic training) allow someone to assess risk and benefits more carefully than someone with less education. Based on Larkin et al. (2012), Mujahid et al. (2014), Sadiq and Ishaq (2014), Taft et al. (2013) and Moreschi (2005), they found that the correlation between the education level and risk tolerance is positive which mean that higher education level investors are able to take high risk compare to lower education level investors.

However, Jain and Mandot (2012) revealed that there was a relationship between education level and risk tolerance which proved by Chi-square and there was a negative relationship between these two variables which proved by Pearson Correlation. On the other hand, Bashir et al. (2013) found that there was no significant relationship between the education level and risk tolerance. Moreover, some researchers did not find a significant correlation between education and risk tolerance such as Gumede (2009), Strydom and Metherell (2012) and etc. At the same time, the Strydom et al (2009) study did not investigate this relationship. Based on the study of past researchers, there were positive relationships more than negative relationships and no relationship between the variable of education level and risk tolerance.

F. Income Level

Based on Yao et al. (2011), higher annual household income had a positive effect on willingness to take high and some financial risks and more non-financial assets increased the likelihood of taking all levels of financial risks. In addition, Anbar and Eker (2010) mentioned that financial risk tolerance increases with income level. The reason of risk tolerance increases with income level is high income level individuals have the ability to afford the losses incurred from a risky investment (Grable and Lytton, 1998, Hallahan et al., 2004, Watson and McNaughton, 2007). Furthermore, Jain and Mandot (2012) proved that the alternative hypothesis in the research which was there is a relationship between the investors' level of income and the level of risk taking ability by Chi-square and Pearson Correlation was shown that it had a positive relationship between these two variables. Besides that, Sadiq and Ishaq (2014) also indicated that there was a positive correlation between the income level and financial risk tolerance.

On the other hand, Faff (2008) indicated that the relationship between risk tolerance and income level was negative. The reason that having a negative relationship between the two variables is individuals who have lower income and wealth are willing to accept or tolerate high risk in order to become wealthier (Anbar and Eker, 2010, Faff, 2008). Moreover, the researchers of "Financial Attributes and Investor Risk Tolerance at the Nairobi Securities Exchange – A Kenyan Perspective", Olweny et al. (2013) mentioned that individual income levels have a significant relationship with the risk tolerance.

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In the research, they indicated that the risk tolerance increases with individual earnings. However, individuals who have highest income level which exceed Ksh 120,000 per month, the wealthy may not be willing to accept higher risks (Olweny et al., 2013).

The result of the research was shown that the lower income level individuals had an average risk tolerance. Then, the level of risk tolerance was increasing with the level of income. However, the risk tolerance was reduced from high risk tolerance to above average for the highest income level group.

On the other hand, the Bashir et al. (2013) also found that there was no significant relationship between the income level and risk tolerance. Nevertheless, Larkin et al. (2012) found that there is no evidence that persons in Dublin have a significantly higher or lower risk tolerance.

In conclusion, the relationship between the income level and risk tolerance was negative relationships higher than positive relationships accordance to the study of past researchers which also mean that higher income investors has a lower risk tolerance compared to lower income investors.

Hypothesis 1

H_1: There is the relationship between personal factors and personal risk tolerance.

G. Investment Goal

Investment goal is the objective of doing investment or the target return of the investment. Hanna and Chen (1997) stated that the most crucial decision for allocation of asset categories in the portfolio determined the saving or investing for intermediate term goals such as college fund, and long term goals such as saving for retirement. Furthermore, Hanna and Chen (1997) also found that the relationship between these two variables was positive.

According to Yao et al. (2005), the correlation between the investment goal and risk tolerance was positive in which the long-term goals such as retirement, everyone should be willing to take some risk in order to have a reasonable return. Besides that, people who are inappropriately low financial risk tolerance might suffer in retirement (Yao et al., 2005). Therefore, Yao et al. (2005) concluded that investing too aggressively for short term goals increases one's exposure to large losses.

This variable has a limitation which is it do not have many researchers to investigate the relationship between the two variables. However, the past research on this independent variable has a positive relationship, which also means that long-term goals have a higher risk tolerance whereas short-term goals have a lower risk tolerance.

Hypothesis 2

H_1: There is the relationship between the investment goals and personal risk tolerance.

H. Time Horizon

The time horizon is an important variable which will affect individual investment risk tolerance. The fundamental logic underlying this hypothesis is the longer the time period between initial investment and need for monies from the portfolio, the greater the probability the client can recoup any temporary loss in wealth (Riley and Russon, 1995).

Based on Riley and Russon (1995), they found that the relationship between the time horizons and risk tolerance was positive which mean that individuals risk tolerance increased with their time horizon. Besides that, Jaggia and Thosar (2000) indicated that "the optimal proportion in the risky asset rises from 55 percent for a one-year horizon to around 78 percent for a twenty year horizon. Therefore, they concluded that individuals are more risk tolerant when the investment horizon is long (Jaggia and Thosar, 2000). Furthermore, Droms and Strauss (2013) also proved that the time horizon increase, then the risk tolerance will be increased. Individuals who are expect to retire in a later period, their time horizon will have a positive effect on their investment risk tolerance (Sung and Hanna, 1998).

The research of Yao et al. (2011) was controlled the time horizon which the availability of the longest time to choose was longer than 10 years. However, the younger generations are likely to have a 20–30 year investment horizon because it can reduce the unsystematic risks (Yao et al, 2011). Nevertheless, Yao et al. (2011) did not have deep investigated this relationship.

Besides that, Jain and Mandot (2012) also did not investigate the relationship between the time horizon and risk tolerance. In conclusion, the relationship between the time horizon of investment and risk tolerance was positive relationships based on the study of past researchers which also mean that the longer investment time horizon led to a higher risk tolerance.

Hypothesis 3

H_1: There is the relationship between the time horizon and personal risk tolerance.

III. METHODS & MATERIALS

A. The Research Design and Sample Size

The primary collection data method in this study is through a questionnaire. The questionnaire is designed to evaluate the risk tolerance of individuals based on variables of personal factors (age of individual, gender, education level and income level), investment goals and time horizon. The questionnaire is used to gather information regarding age, monthly personal income, monthly family's total income, net income, investment time horizon as well as the personal risk tolerance. Each question will provide certain score for a different choice in the questionnaire and it can provide an indication of personal risk tolerance.

The research will take 100 respondents as sample size. However, only 92% of participants responded since there are five set of questionnaires were incomplete. Therefore, only 87 set completed questionnaires can be utilized to this research. Furthermore, the target respondent is individuals who are aged 18 and above within Klang Valley. The questions were adopted and adapted from the "Schwab model portfolios" which created by Charles Schwab & Co (2014).

B. Data Analysis

Besides that, the data analysis will be use descriptive statistics analysis tools such as mean, standard deviation and others to examine the relationship between independent variables

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(personal factors, investment goals and time horizon) and the risk tolerance of individuals. Furthermore, the software that will be used in the research is the Statistical Package for the Social Sciences (SPSS).

C. Findings

Objective 1 (The correlation of the personal factors and risk tolerance)

The relationship of age and risk tolerance

Table 1.1: The mean and standard deviation of age and risk tolerance

	Mean	Std. Deviation	N
Age (Age of Participant)	2.3563	1.34663	87
RT (Risk Tolerance)	19.2184	6.65500	87

Table 1.2: The correlation of age and risk tolerance

		Age of Participant	RT (Risk Tolerance)
Age (Age of Participant)	Pearson Correlation	1	.255*
	Sig. (2-tailed)		.017
	N	87	87
RT (Risk Tolerance)	Pearson Correlation	.255*	1
	Sig. (2-tailed)	.017	
	N	87	87

*. Correlation is significant at the 0.05 level (2-tailed).

In Table 1.1, the mean of the age in this research was 2.356, which means that the average of the total participants was most between the age ranges of 25 to 44. Besides that, the standard deviation of the age was 1.347. Then the mean of the risk tolerance was 19.218 points and the standard deviation of it was 6.655.Table 1.2 indicate that the Pearson Correlation between age and risk tolerance was 0.255, which means that it has a positive relationship. When the age of individual increases, then the personal risk tolerance level will also increases. However, the r-value of 0.255 was showed that the relationship between the two variables was weak relationship. Besides, there was a significant relationship between the independent variable of age and dependent variable of risk tolerance, where the p-value was 0.017. In concise, this independent variable of age was reaching the alternative hypothesis, which there was a relationship between age and risk tolerance.

D. The relationship of gender and risk tolerance

Table 1.3: The mean and standard deviation of gender and risk tolerance

	Mean	Std. Deviation	N
Gender (Gender of Participant)	1.4253	.49725	87
RT (Risk Tolerance)	19.2184	6.65500	87

Table 1.3: The correlation of gender and risk tolerance

		Gender of Participant	RT (Risk Tolerance)
Gender (Gender of Participant)	Pearson Correlation	1	-.109
	Sig. (2-tailed)		.314
	N	87	87
RT (Risk Tolerance)	Pearson Correlation	-.109	1
	Sig. (2-tailed)	.314	
	N	87	87

In Table 1.3, the mean of the gender in this research was 1.425, which means that the most of the participants was males. Besides that, the standard deviation of the gender was 0.497. Table 1.4 showed that the r-value was -0.109, which it has a negative relationship between gender and risk tolerance. Therefore, it indicated that increasing gender by 1 point and causes to negative change of 0.109 points in the risk level that taken by investors. Hence, the r-value of -0.109 was showed that the relationship between the two variables was weak relationship. However, the p-value was showing 0.314 in the Table 1.4, which exceed the significant level (p-value $\leq$ 0.05). Therefore, there were no significant relationship between the independent variable of gender and dependent variable of risk tolerance. In concise, null hypothesis is accepted here and alternative hypothesis is rejected.

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E. The relationship of education level and risk tolerance

Table 1.4: The mean and standard deviation of education level and risk tolerance

	Mean	Std. Deviation	N
Education (Education Level of Participant)	1.8506	.81453	87
RT (Risk Tolerance)	19.2184	6.65500	87

Table 1.5: The correlation of education level and risk tolerance

		Education Level of Participant	RT (Risk Tolerance)
Education (Education Level of Participant)	Pearson Correlation	1	.079
	Sig. (2-tailed)		.467
	N	87	87
RT (Risk Tolerance)	Pearson Correlation	.079	1
	Sig. (2-tailed)	.467	
	N	87	87

In Table 1.5, the mean of the participant's education level in this research was 1.851, which means that the most of the participants holding under-graduate and non-graduate. Besides that, the standard deviation of the participants' education level was 0.815. Table 1.6 showed that the r-value was 0.079, which it has a positive relationship between education level and risk tolerance. Therefore, it indicated that the education level increases by 1 point and causes to positive change of 0.079 points in investors' risk tolerance. Hence, the r-value of 0.079 was showed that the relationship between the two variables was weak relationship. However, the p-value was showing 0.467 and it was exceed the significant level (p-value $\leq$ 0.05). Therefore, there were no significant relationship between the independent variable of education level and dependent variable of risk tolerance. In concise, null hypothesis is accepted here and alternative hypothesis is rejected.

F. The relationship of income level and risk tolerance

Table 1.6: The mean and standard deviation of income level and risk tolerance

	Mean	Std. Deviation	N
Income (Income Level of Participant)	2.4943	1.51637	87
RT (Risk Tolerance)	19.2184	6.65500	87

Table 1.7: The correlation of income level and risk tolerance

		Income (Income Level)	RT (Risk Tolerance)
Income (Income Level of Participant)	Pearson Correlation	1	.328**
	Sig. (2-tailed)		.002
	N	87	87
RT (Risk Tolerance)	Pearson Correlation	.328**	1
	Sig. (2-tailed)	.002	
	N	87	87

**. Correlation is significant at the 0.01 level (2-tailed).

In the Table 1.7, the mean of the income level in this research was 2.49, which means that the average of the total participants' income level was between the ranges of RM 15,001 to RM 45,000 per annum. Besides that, the standard deviation of income level was 1.52.Table 1.8 indicated that the Pearson Correlation between income level and risk tolerance was 0.328, which means that it has a positive relationship. It also means that when increasing 1 point of income level of individual leads to positive change of 0.328 points in the personal risk tolerance level. However, the r-value of 0.328 was showed that the relationship between the two variables was weak relationship.Besides that, there were a significant relationship between the independent variable of individual's income level and dependent variable of risk tolerance, where the p-value was 0.002. Therefore, the alternative hypothesis was accepted here and the null hypothesis was rejected.

Objective 2 (The correlation of the investment goals and risk tolerance)

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Table 1.8: The mean and standard deviation of investment goals and risk tolerance

	Mean	Std. Deviation	N
Goals (Investment Goals)	2.0575	.79762	87
RT (Risk Tolerance)	19.2184	6.65500	87

Table 1.9: The correlation of investment goals and risk tolerance

		Goals (Investment Goals)	RT (Risk Tolerance)
Goals (Investment Goals)	Pearson Correlation	1	.138
	Sig. (2-tailed)		.203
	N	87	87
RT (Risk Tolerance)	Pearson Correlation	.138	1
	Sig. (2-tailed)	.203	
	N	87	87

In the Table 1.9, the mean of the investment goals in this research was 2.057, which means that most of the participants' current investment goals were medium-term goals. Besides that, the standard deviation of the investment goals was 0.497. Table 1.10 showed that the r-value was 0.138, which it has a positive relationship between investment goals and risk tolerance. When the investment goals increases by 1 point, and leads to positive change of 0.138 points in the personal risk tolerance level. Hence, the r-value of 0.138 was showed that the relationship between the two variables was weak relationship. However, the p-value was showing 0.203, which exceed the significant level (p-value $\leq$ 0.05). Therefore, there were no significant relationship between the independent variable of investment goals and dependent variable of risk tolerance. In concise, null hypothesis is accepted here and alternative hypothesis is rejected.

Objective 3 (The relationship of the time horizons and risk tolerance)

Table 1.10: The mean and standard deviation of investment time horizon and risk tolerance

	Mean	Std. Deviation	N
Time (Time Horizon of Investment)	7.7011	5.00027	87
RT (Risk Tolerance)	19.2184	6.65500	87

Table 1.11: The correlation of investment time horizon and risk tolerance

		Time (Time Horizon of Investment)	RT (Risk Tolerance)
Time (Time Horizon of Investment)	Pearson Correlation	1	.257*
	Sig. (2-tailed)		.016
	N	87	87
RT (Risk Tolerance)	Pearson Correlation	.257*	1
	Sig. (2-tailed)	.016	
	N	87	87

*. Correlation is significant at the 0.05 level (2-tailed).

In the Table 1.11, the mean of the investment time horizon in this research was 7.701 points and the standard deviation of the investment time horizon was 5. Table 1.10 showed that the r-value was 0.257, which means that it has a positive relationship between investment goals and risk tolerance. When the investment goals increases by 1 point, and leads to positive change of 0.257 points in the personal risk tolerance level. Hence, the r-value of 0.257 was showed that the relationship between the two variables was weak. Besides that, there were a significant relationship between the independent variable of investment time horizon and dependent variable of risk tolerance, where the p-value was 0.016. In concise, the alternative hypothesis was accepted here and the null hypothesis was rejected.

IV. CONCLUSIONS AND RECOMMEDATIONS

A. Conclusion

The first objective is to study the correlation between personal factors (age, gender, education level and income level) toward the risk tolerance. In previous research, most of the research found that financial risk tolerance decreased with age; males had higher financial risk tolerance than females; higher education qualification investor has higher financial risk tolerance than lower education qualification investor; and financial risk tolerance increased with individual's income level. Nevertheless, the personal factors were tested in this research and it was found that individual's age and income level changes will lead to the changes of risk level taken by investor. The result of this research was financial risk increased with investor's age and income level. Besides that, the gender and education level of personal factors have no significant relationship with the risk level that affordability of investor in this research, and it was supported by the previous researchers, Jain and Mandot (2012), Bashir et al. (2013),

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Gumede (2009) as well as Strydom and Metherell (2012).

Second research objective is to determine the correlation between the investment goals and risk tolerance. There were fewer researchers conducted study in factors of investment goals, however, they have found that long-term investment goals investor have higher risk tolerance than short-term investment goals in previous research. In this research, researcher has found that there was no significant relationship between the investment goals and investor's risk tolerance.

The last research objective is to examine the relationship between the time horizons and risk tolerance. Most of the previous researchers have found that there were positive relationship between the investment time horizon and risk tolerance, which also means that the higher time horizon points investor have greater risk tolerance than lower points investor. Subsequently, the significant relationship between these two variables was found in this research and proved the previous research result.

In conclusion, the risk tolerance level of Malaysia investors will be affected by the factors of age of individual, investor's income level, and investment time horizon. Therefore, the result of this research will be useful for financial agents or consultants to construct portfolio for investors.

B. Recommendation

Investment manager or financial consultants can use this research findings to create a different risk level portfolio according to the different investors' investment temperament, which it has conservative, moderate or aggressive. In order to understand the principal's investment temperament and their risk tolerance profile, investment manager or financial consultants should analyse investor's risk before construct a portfolio for investor and the risk profiling can be obtained through risk tolerance questionnaire. Besides that, financial advisors should ensure the investor protection guideline has been provided to investors. One of the protections is to provide transparency and disclose information to principal in order to increase principal understand toward the financial products of the portfolio. Moreover, Securities Commission Malaysia (2011) also mentioned that the some products risk issues was due to lack of transparency and disclosure, which was the product risks were hidden. Therefore, transparency and disclosure is very important and it can reduce the investment risk. When principal or investor has in-depth understanding the products that have been invested, they will feel safety and the personal risk tolerance might be increase upon providing the investor protection. Retirement plan required a huge amount of money to proceed, and Malaysian have insufficient savings to proceeds. Therefore, Malaysian should take precautions for the retirement plan, such as they can make investments and others. If Malaysian enrols into investment, then they also have the responsibility to understand personal risk tolerance with the purpose of constructing a suitable portfolio.

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