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Impact of Financial Literacy Levels Among Sri Lankan Investors on Investment Choices

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ABSTRACT

Purpose: The purpose of this study is to investigate the level of financial literacy among Sri Lankan investors and its impact on investment choices.

Design/methodology/approach: The population of this study consisted of the individual investors of Sri Lanka. Accordingly, a sample of 352 responses were obtained through a survey which was conducted using structured self-administered questionnaire. The independent variable of the research is financial literacy with the dependent variable being the investment choice. Multinomial logistic regression was used to test the hypothesis.

Findings: The results of the study revealed that the majority of investors in Sri Lanka are having low objective and subjective financial literacy. Further, the results revealed that financial literacy has a statistically significant impact on the current and future choice of different investment products as the main source of investment.

Originality: Financial literacy level of individual investors was assessed by using the mean value of the financial literacy score, which has not been commonly used in the Sri Lankan context. This study further contributed to the local body of literature by analyzing the investors' current main and secondary holdings of seven different investment products and their future investment preference towards these products.

KEYWORDS

Financial literacy, Investment choice, Level of financial literacy in Sri Lanka, Behavioral finance, Investment, Investor

JEL CLASSIFICATION

G11, G53, D83

I. Introduction

The financial and capital markets of a country play a significant role in promoting economic growth. In the current context, global financial markets are soaring with complex financial products, for example, structured products. Due to the high complexity, low transparency of products and lagging investor sophistication, only a few investors can understand how they function. Hence, naïve and less financially literate investors may get exploited from such sophisticated financial products (Baker & Puttonen, 2019). According to Lusardi and Mitchell (2013), complex financial products are becoming highly prevalent in financial markets, however, investors depict the absence of the necessary know-how to invest in such products.

This scenario provides evidence for the requirement of adequate financial literacy to arrive at accurate financial decisions; hence attracting the attention of many researchers towards financial literacy. Financial literacy has been defined by the Organisation for Economic Co-operation and Development: International Network on Financial Education (OECD INFE) (2011) as, a combination of awareness, knowledge, skill, attitude and behavior necessary to make sound financial decisions and ultimately achieve individual financial wellbeing, which is a widely used definition in financial literacy literature. Financial literacy plays a vital role in a country as it assists in terms of financial inclusion and the financial practices of the micro entrepreneurs of the country (Grohmann, Klühs & Menkhoff, 2018). Further, investors with low financial literacy

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are likely to make poor decisions which leads to sub optimization of economic goals.

Financial literacy is of utmost importance to the financial markets and the investors, as it facilitates better management of financial affairs of individuals leading to efficient financial system and economic performance. Financially literate investors are aware about the risks faced by their investment decisions. This reduces the burden of safeguarding investors in financial markets. Moreover, it assists regulatory bodies in fostering quality and integrity in financial markets.

Financial literacy guides investors in making confident investment decisions, and in safeguarding financial interest. Rodrigues et al. (2019) highlighted the importance of financial literacy with the growth in the complex investment products available and stated that financially literate investors will be able to withstand the volatility of financial markets, understand risk and make better financial decisions. On the other hand, Basu and Dulleck (2020) stated that a high level of financial literacy is needed to invest in complex financial products such as hybrid securities. However, even though investors find such products to be complex and difficult to understand, they continue to invest in such securities. Such investment decisions are encouraged by behavioral factors such as overconfidence, illusion of control and framing bias.

Currently, in the Sri Lankan context, a variety of investment choices are available for the retail investors including equity, government securities, debentures, unit trusts, insurance products and retirement plans (Weerawansa & Morage, 2019). Further, the Colombo Stock Exchange (CSE) is in the process of introducing new investment options to Sri Lanka. Resultantly, Real Estate Investment Trusts (REITs) was introduced to Sri Lanka in 2020 (Echelon, 2021). Moreover, CSE is developing the infrastructure needed to introduce new financial products to Sri Lanka such as equity and fixed income derivatives, commodities and structured products like mortgage-backed securities (Fernando, 2020). Hence, to reap the maximum benefits from the existing investment products, as well as complex products that will be introduced in future, the local individual investors must possess a fluent level of financial literacy.

Even though a relatively wide choice of products is available, according to Jayawardana (2017), Sri Lankans' most preferred choice of investment is savings and fixed deposit products at banks and finance companies. Hence, a low penetration in other investment products is identified. For example, there are over 750,000 Central Depository Accounts (CDS) in Sri Lanka. However, only around 25,000 accounts engage in trading actively, with the remaining accounts mostly being duplicate or dormant accounts (Abeysuriya, 2017). Furthermore, ideally there should be a high demand for retirement plans, pension products and insurance products as Sri Lanka is faced with an aging population. However, the tendency of individuals investing in such products is low due to insufficient knowledge about aspects such as personal finance planning and inflation (Kulasena, 2017).

Based on the Global Financial Literacy Survey conducted by Standard & Poor's (2014) the financial literacy of Sri Lanka is 35%. However, Sri Lanka possesses a high literacy rate, which is defined as the ability to read and write, of 91.9% (CIA The World Factbook, 2021). This depicts the existence of a large gap between the literacy rate and financial literacy rate in Sri Lanka.

To summarise, a significant body of literature shows that there is a wide choice of investment products and choices available in the country. On the other hand, based on a survey conducted seven years ago, financial literacy is low in Sri Lanka and there is a significant gap between literacy and financial literacy. This depicts a need to identify the level of financial literacy and how it affects the choice of investment products among individuals.

Accordingly, the aim of this study is to investigate the level of financial literacy among Sri Lankan investors and its impact on investment choices. Therefore, the primary objective is to investigate the level of financial literacy among the individual investors in Sri Lanka. The second objective is to identify the impact of objective and subjective financial literacy on investment choices.

Standard and Poor's national survey conducted in 2014 identified a low level of financial literacy of 35% in Sri Lanka. From 2014 to 2020, the country's key economic indicators such as the Gross Domestic Product and Gross National Income have improved, while improvements in the social indicators such as mean household income, mid-year population are observed (Central Bank of Sri Lanka, 2020). Hence, it is important to identify the level of financial literacy in the country, following the economic and social developments post-2014.

This study is significant to the local body of literature due to two reasons. Accordingly, first reason is that the previous studies that have investigated the financial literacy post-2014 are mostly focusing on one specific category such as undergraduates (Edirisinghe, Ajward & Dissabandara, 2015; De Silva & Lasantha, 2019; Kumari, 2020) or one type of investors such as equity investors (Weerasekara, Heenkenda & Hapugoda, 2018; Weerawansa & Morage, 2019). Hence, this study fills this empirical gap in the local literature by considering any type of individual investor.

The second reason is that most studies have identified the financial literacy level as the number of correct answers as a percentage of total questions (Edirisinghe et al., 2015; Weerasekara et al., 2018; De Silva & Lasantha, 2019). However, this study follows a different approach where the level of financial literacy is identified based on the mean financial literacy score of the sample (Rasool & Ullah, 2020). Therefore, this research is intended to fill the above-identified empirical gap, while channeling novelty to local literature.

II. Literature Review and Hypothesis Development

Financial Literacy

Global financial markets have become easily accessible to small investors with wide-spread availability of new complex financial products and services. Hence, financially immature and unsophisticated investors face difficulties in handling such financial products. Similarly, Gui, Huang and Zhao (2021) state that the liberalization of the financial markets has imposed a higher degree of responsibility upon the individual investors for their own wealth management through their own decision making. Further, they assert that with the increasing complexity of financial products, the investors are not sophisticated enough to predict the underlying risk of such financial products.

Resultantly, worldwide, financial literacy and a financially literate population have been identified as remarkable component that benefits both the individual investors as well as national economies. Accordingly, financial literacy has become a variable that is often measured, especially in the behavioral finance literature (Aren & Hamamci, 2020). It is worthwhile to understand that there is no universal definition for financial literacy and various definitions are provided by authors for financial literacy. However, with the aim of providing clarity, Robb, Babiarz and Woodyard (2012) made a clear contrast between the two terms financial literacy and financial education. They stated that financial literacy is involved with the individual's capability to comprehend financial information and use such information for effective decision making. They referred financial education as the ability to recall a set of facts.

Among these definitions of financial literacy, several common dimensions have been

identified and tested by different authors in their studies. The dimension of financial knowledge was commonly used in studies where financial knowledge was assessed using a set of questions and ultimately financial literacy was determined based on the answers provided by respondents (Huston, 2010; Lusardi & Mitchell 2014, cited by Potrich et al., 2015). Further, three dimensions, financial knowledge; financial behavior and financial attitude, are another set of commonly used dimensions of financial literacy that are used to assess financial literacy (OECD 2013, cited by Potrich et al., 2015).

According to Huston (2010) financial literacy consists of the financial knowledge and the use of such knowledge in managing personal finance. Similarly, Lusardi and Mitchell (2014) defined financial literacy as "people's ability to process economic information and make informed decisions about financial planning, wealth accumulation, debt and pension". On the other hand, the OECD INFE (2011) provided a definition for financial literacy as,

"A combination of awareness, knowledge, skills, attitudes and behaviors necessary to make sound financial decisions and ultimately achieve individual financial wellbeing"

with the inclusion of five different dimensions for financial literacy. Hence, the questionnaires developed by Van Rooij, Lusardi and Alessie (2011) and OECD (2011) are the most widely adopted questionnaires to test financial literacy by authors. Moreover, scholars have also divided financial literacy as subjective financial literacy (SFL) and objective financial literacy (OFL). The subjective financial literacy refers to the level of financial literacy the individual assumes that he/she has, whereas objective financial literacy is a measurement of an individual's financial knowledge based on various questions (Tang & Baker, 2016). Further, their study proposed that individual's self-esteem impacts the financial behavior through his/her subjective financial literacy.

According to Bellofatto et al. (2018), objective financial literacy is a measure based on a designed set of questions that assess how their knowledge in fundamental concepts affect investment decisions. Contrastingly, subjective financial literacy is a measure based on the individual's self-assessment of his/her knowledge. Their findings concluded that cross-sectional changes in retail investors' behavior can be explained by subjective financial literacy. Further, their findings showed that higher financial literacy led to smarter investments, more trading and are less susceptibility to the disposition effect.

It is noteworthy to highlight the importance of financial literacy that has been discussed in the financial literacy related literature. If an investor is unaware about the basic principle of risk-return trade off of financial products, they may invest in a financial product that provides a higher return, which is also carrying a higher risk, which in reality might not be consistent with that investor's risk attitude (Gui et al., 2021).

Jappelli and Padula (2013) stated that the benefit of financial literacy is that it will help the investors to choose better investment options that will provide a higher return on each euro saved. However, they also argued that financial literacy has a cost as well, which is the time, effort and monetary investment that individuals have to make to acquire financial literacy. Their study concluded that, the financial literacy of a country can be improved through the improvement of mathematical skills of individuals and by providing incentives for people to invest in financial literacy. However, on the contrary, Garcia (2013) argued that investors have a limited ability to deliberate on the information provided in the financial education programs.

Empirical Findings on the Financial Literacy

As financial literacy is considered an important variable in behavioral finance

research, scholars have assessed how financial literacy impacts investment decisions. Van Rooij et al. (2011) measured financial literacy and studied the stock market participation of investors to observe the impact of financial literacy on the choice of stock ownership. Most of the respondents have shown basic financial literacy with the understanding of interest compounding, time value of money, and inflation. However, most respondents have not shown the knowledge on areas such as the difference between stocks and bonds, risk diversification and the relationship between bond prices and interest rate. They concluded that there is an impact of financial literacy on the investment choices of individuals as those individuals with low financial literacy are much less likely to make investments in stocks. Similarly, Kimball and Shumway (2010) found a higher likeliness of more sophisticated individual investors choosing stocks. Further, Lusardi and Mitchell (2011) found that financially savvy individuals are more likely to plan for their retirement. Moreover, they established that when investors do not comprehend concepts such as interest compounding, diversification and inflation, it is unlikely they would make the choice of investing in comparatively complex products such as stocks. Consistent with these studies, Aren and Zengin (2016) found that investors with low level of financial literacy would prefer investment choices such as deposits and foreign currency whereas individuals with higher financial literacy would prefer investment choices such as stocks or own a portfolio. They concluded a substantial relationship among financial literacy and the investment choices.

In the Sri Lankan context, Edirisinghe et al. (2015) conducted a survey using an author developed questionnaire, to assess the level of financial literacy among undergraduates of higher educational institutes. The authors have considered the percentage of correct answers of the respondents in terms of evaluating the level of financial literacy and concluded that based on the overall score, less than two thirds out of the survey questions have been answered accurately.

Weerasekara et al. (2018) examined the antecedents and consequences of financial literacy of retail investors at the CSE; considering the investment choice as stocks. The study found that only 6.9% of respondents answered all eight questions accurately, while 78% have been able to answer more than five questions correctly. Further, they found that the antecedents of gender, education and investment experience impact financial literacy of CSE investors. Moreover, Weerasekara et al. (2018) found that financial literacy affects the portfolio return of investors at the CSE.

In the study conducted by Weerawansa and Morage (2019), has tested financial literacy using five-point Likert scale questions and the average answers provided. Subsequently they concluded that financial literacy among the stock investors is at a moderate level.

De Silva and Lasantha (2019) tested how financial literacy and risk aversion impact the investment choices of undergraduates in Sri Lanka and detected a positive relationship between financial literacy and investment choices. Accordingly, individuals with high financial literacy have opted for equity and debt options, rather than choosing savings deposits. They further attempted to identify the level of financial literacy among undergraduates and found that the majority of respondents have rated their subjective financial literacy level to be average. On the other hand, the objective financial literacy score, which has been calculated as a percentage of correct answers, has been above Sri Lanka's overall financial literacy level of 35%, which was assessed by Standard and Poor's (2014).

Correspondingly, Kumari (2020) conducted a study with undergraduates as the sample, and concluded that financial literacy significantly influences the investment decisions. Further, the study disclosed that three dimensions of financial literacy; namely, knowledge about financial products, knowledge about

investment options and financial skills impacted on the investing decision of undergraduates.

Subsequent to the literature review, it was evident that the previous studies are focusing on one specific type of investor such as undergraduates or investors who have invested in one type of investment product such as stocks. Further, such studies have assessed the financial literacy level based on the number of correct answers as a percentage of total questions. Hence, to fill this empirical gap in local literature, this study will consider any type of investor (investors with savings or fixed deposits, corporate debentures, government securities, unit trusts or other long-term investments such as real estate and retirement plans).

Hypothesis of the Study

Literature based on the global context concluded a substantial relationship among financial literacy and the investment choices. Van Rooij et al. (2011) observed an impact of financial literacy on the choice of stock ownership. Similarly, Kimball and Shumway (2010) found a higher likeliness of more sophisticated individual investors choosing stocks. Further, Lusardi and Mitchell (2011) found that financially savvy individuals are more likely to plan for their retirement. Moreover, Aren and Zengin (2016) found that investors with low level of financial literacy would prefer investment choices such as deposits and foreign currency whereas individuals with higher financial literacy would prefer investment choices such as stocks or own a portfolio.

Similarly, literature in the local context also concludes a relationship among financial literacy and investment choices. Accordingly, De Silva and Lasantha (2019) tested how financial literacy impacts the investment choices of undergraduates and found a positive relationship between financial literacy and investment choices. Moreover, Kumari (2020) conducted a study with undergraduates as the sample, and concluded that financial literacy significantly influences the investment decisions. Conclusively, the literature review of the study led to the development of the following hypothesis of this research.

H_1: Financial literacy significantly impacts investment choice.

III. Methodology

Research Design, Data Collection and the Sample

This study is associated with positivism philosophy as the researcher works with observable social reality. Correspondingly, this study followed the deduction approach where hypothesis will be developed to test the impact of financial literacy on investment choices of investors. While being in-line with positivism; deductive approach; and mono method quantitative choice, the chosen research strategy is the survey method.

The population of this study was the individual investors of Sri Lanka. Hence, any individual who at least owns a deposit (savings or fixed) in a bank is considered as an investor for this study, following the same sample selection method as Aren and Zengin (2016). Due to the practical limitation faced in obtaining the number of savings account holders in Sri Lanka, the population of the study was approximated to the number of local individual investors in the CSE, which was 626,343 as of 2020 (Colombo Stock Exchange, 2020). It is noteworthy, that this approximation is way below the actual population of the study. Subsequently, the researcher selected a sample size of 384, based on the Krejcie and Morgan Table, and followed the convenient sampling technique. A structured questionnaire was shared among 384 and received 352 responses depicting a response rate of 91.67%. Out of the collected 352 responses, 7 respondents had not responded to the investment choice section of the questionnaire, hence were eliminated as they cannot be considered as investors, as they do not own any investments. Another 4 responses were eliminated due to incompleteness of responses in other sections

of the questionnaire. Hence, 341 responses were used for the analysis. SPSS 28.0 was utilized to test the hypothesis of this research.

Operationalization of Variables

This study is aimed at testing both the subjective financial literacy and objective financial literacy level. The subjective financial literacy of the respondents is measured through a question that allows the respondents to self-evaluate their financial knowledge level (Tang & Baker, 2016). Objective financial literacy is measured using six questions from the questionnaire developed by Rooij et al. (2011), which are focused on the knowledge dimension of financial literacy; a commonly tested dimension. Authors opted to choose questions from the questionnaire developed by Rooij et al. (2011) as it is one of the most widely accepted and used questionnaires in testing the objective financial literacy (Appendix 1).

The investment choices were identified by providing seven investment products namely; savings, fixed deposits, stocks, corporate debentures, government securities, unit trust and other long-term investments (such as real estate, retirement plans etc.), to be chosen based on their current investments and future investment preferences (Aren & Zengin, 2016).

Table 1. Operationalisation Table

Variable		Indicators	Measurement
Financial Literacy	Independent Variable	Subjective financial literacy (Tang & Baker, 2016)	5-point Likert scale question
		Numeracy (Rooij et al., 2011)	Multiple choice question
		Interest compounding (Rooij et al., 2011)	Multiple choice question
		Inflation (Rooij et al., 2011)	Multiple choice question
		Safer: company stock or mutual fund (Rooij et al., 2011)	Multiple choice question
		Risk diversification (Rooij et al., 2011)	Multiple choice question
		Relation between interest rates and bond prices (Rooij et al., 2011)	Multiple choice question
Investment Choice	Dependent Variable	Primary and secondary investment preference (Aren & Zengin, 2016)	Multiple choices
		Future investment consideration (Aren & Zengin, 2016)	Multiple choices

Conceptual Framework

Following a critical evaluation of literature in the preceding section, the conceptual framework was developed with the variables drawn from literature. Accordingly, the conceptual framework (Figure 1) was developed with financial literacy as the independent variable and investment choice as the dependent variable.

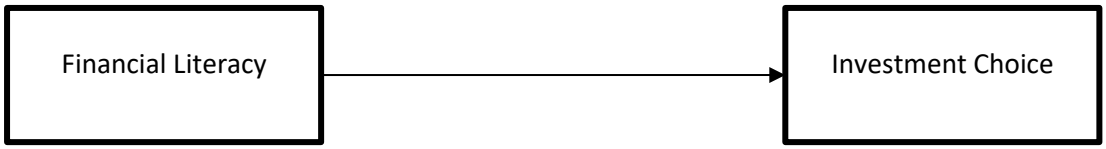

Figure 1: Conceptual Framework

IV. Findings and Discussion

Analysing the Level of Financial Literacy

In this section of the study, the level of subjective financial literacy and objective financial literacy were analyzed descriptively. As indicated in Table 2 below the mean objective financial literacy was 3.3 whereas the median and mode were 3.0. Similarly, the mean subjective financial literacy was 3.37 with median mode being 3.0. The standard deviation depicts that the responses related to financial literacy were scattered around the mean showing a consistent distribution of data.

Table 2. Descriptive Statistics

	Objective Financial Literacy	Subjective Financial Literacy
Mean	3.30	3.37
Median	3.00	3.00
Mode	3	3
Standard deviation	1.153	0.957
Range	5	4
Minimum	0	1
Maximum	5	5

Level of Objective Financial Literacy

Objective financial literacy was measured through six questions from the questionnaire developed by Rooij et al. (2011). The dimensions of numeracy, interest compounding, inflation, comparative safety of mutual funds, risk diversification and relationship between interest rates and bond prices were tested. To measure the objective financial literacy, the same method applied by Rasool and Ullah (2020) was followed in this study. Therefore, based on the number of correct answers provided by the respondents for the six objective financial literacy questions, a score was calculated out of five.

The mean score obtained by investors was 3.30. By applying the same decision criteria of Rasool and Ullah (2020), the investors that obtained an objective financial literacy score above 3.30 were considered to be having a high objective financial literacy, and those with a score below 3.3 were considered to be having a low objective financial literacy. The below Table 3 shows that 55.4% of investors are having a low objective financial literacy in Sri Lanka.

Table 3. Summary of Objective Financial Literacy Score

Objective Financial Literacy Score	Frequency	Percentage
Above 3.30	152	44.6%
Below 3.30	189	55.4%

Table 4 below shows the investors' financial literacy related to each of the dimensions tested through the questionnaire. It is noteworthy that 91.2% of the investors have performed well on the numeracy dimension. However, the investors' knowledge related to the relationship between interest rates and bond prices is considerably low with only 38.1% of investors showing knowledge related to this dimension.

Table 4. Results of Objective Financial Literacy Questions

OFL Dimension	Correct		Incorrect	
	Frequency	Percentage	Frequency	Percentage
Q1 Numeracy	311	91.2%	30	8.8%
Q2 Interest compounding	259	76.0%	82	24.0%
Q3 Inflation	250	73.3%	91	26.7%
Q4 Comparative safety of mutual funds	168	49.3%	173	50.7%
Q5 Risk diversification	228	66.9%	113	33.1%
Q6 Relationship between interest rates and bond prices	130	38.1%	211	61.9%

Level of Subjective Financial Literacy

To identify a respondent's subjective financial literacy, they were asked to self-evaluate their financial knowledge level on a scale of one to five, where one meant very low subjective financial literacy and five meant very high subjective financial literacy (Tang & Baker, 2016).

The same decision criteria applied by Rasool and Ullah (2020) were followed to assess the level of subjective financial literacy of the respondents. The mean value for subjective financial literacy was 3.37, and accordingly, an investor with a subjective financial literacy above 3.37 was considered to be having a high subjective financial literacy, and those with a score below 3.37 were considered to be having a low subjective financial literacy. Therefore, the below Table 5 shows that 54.0% of respondents have self-assessed their financial literacy level to below.

Table 5. Summary of Subjective Financial Literacy Level

Subjective Financial Literacy Score	Frequency	Percentage
Above 3.37	157	46.0%
Below 3.37	184	54.0%

Analysis of Investors' Choice of Investment Products

Out of the total investors, the highest percentage of investors (65.4%) hold savings as the main source of investment currently as shown in Table 6. The second highest current main investment is fixed deposits (48.4%), while the least amount of investors have debentures as the main investment. However, this scenario slightly changes with future investment considerations where 53.1% of investors are willing to hold fixed deposits as the main investment (Table 7). Therefore, it is evident that currently, as well as in future, the highest number of investors will be concentrated among savings and fixed deposits in Sri Lanka.

On the other hand, over 80% of investors do not have any investments in corporate debentures, treasury bills and bonds and unit trusts (Table 6). Similarly, in terms of future investment considerations, more than 70% of investors would not consider investing in these three products (Table 7). This confirms that currently as well as in future, corporate debentures, treasury bills and bonds and unit trusts are the least preferred investment products in Sri Lanka.

Further, significantly, 40.8% of the investors consider holding other long-term investments such as real estate and retirement plans as the main investment in future. Remarkably, 69.2% have not invested in stocks currently. However, 65.4% of investors are willing to invest in stocks as a primary or secondary investment in future, where a boost in the investor participation in stock market can be expected in future.

Table 6. Percentage of Investors Holding Different Products Currently

Current investment	Savings	Fixed deposits	Stock	Corporate debentures	Treasury bills and bonds	Unit trust	Other long term
Main	65.4%	48.4%	7.9%	3.2%	5.3%	5.9%	12.3%
Secondary	29.3%	29.2%	22.9%	8.5%	8.5%	9.7%	28.7%
Has not invested	5.3%	22.4%	69.2%	88.3%	86.2%	84.5%	58.9%

Table 7. Percentage of Investors Willing to Invest In Different Products In Future

Future investment preference	Savings	Fixed Deposits	Stocks	Corporate Debentures	Treasury Bills and Bonds	Unit Trust	Other Long Term
Main	46.3%	53.1%	25.5%	8.5%	8.5%	9.1%	40.8%
Secondary	33.1%	30.8%	39.9%	17.6%	19.1%	17.6%	34.3%
Not investing	20.5%	16.1%	34.6%	73.9%	72.4%	73.3%	24.9%

Multinomial Logistic Regression

In this section of the study, an attempt was made to test the hypothesis developed. The dependent variable of investment choices was identified by providing seven investment products to be chosen based on their current investments and future investment preferences. Therefore, since the dependent variable is a categorical variable, the multinomial logistic regression was used to test the hypothesis of the study.

Prior to undertaking the multinomial logistic regression analysis, the multicollinearity of objective financial literacy and subjective financial literacy was tested using the variance

inflation factor (VIF). As shown below in Table 8, no problem of multicollinearity was observed according to the VIF of both the variables.

Table 8. Test of Multicollinearity Using VIF Variable

Variable	VIF
Objective Financial Literacy	2.082
Subjective Financial Literacy	2.082

Based on the multinomial regression, Table 9 below summarizes the statistical significance of the level of financial literacy on the choice of selecting each investment product as the main investment of the respondent. Accordingly, the subjective financial literacy and objective financial literacy impact the choice of fixed deposits and stocks under a significance level of 1% and 5% respectively for current investment choices. Further, the impact of objective financial literacy is statistically significant under 1% for the choice of savings, corporate debentures and other long-term investments as the future investment choice as illustrated in Table 10. Therefore, the analysis led to the acceptance of the hypothesis; financial literacy significantly impacts investment choice. The complete output of the multinomial logistic regression analysis is available at Appendix 2 for current investment choices and Appendix 3 for future investment choices.

Table 9. Multinomial Logistic Regression Results for Current Investments

Investment	Type	Level of Literacy	B	Sig.	Statistical significance under
Fixed deposit	Main	SFL = 3	-12.979	0.000	1%
		SFL = 4	-14.209	0.000	
Stock	Main	OFL = 4	-1.599	0.036	5%
Treasury bills and bonds	Main	OFL = 2	2.162	0.090	10%
		OFL = 4	1.553	0.063	
Unit trust	Main	OFL = 2	-2.983	0.096	10%
		SFL = 1	3.366	0.065	

Table 10. Multinomial Logistic Regression Results for Future Investment Choices

Investment	Type	Level of Literacy	B	Sig.	Statistically Significant Under
Saving	Main	OFL = 0	20.158	0.000	1%
		OFL = 2	2.123	0.000	
Fixed deposit	Main	OFL = 4	0.740	0.085	10%
		SFL = 4	-0.884	0.078	
Corporate debenture	Main	OFL - 2	-3.615	0.008	1%
Unit trust	Main	OFL = 1	-3.189	0.048	5%
		OFL = 2	-3.032	0.011	
		SFL = 1	2.692	0.082	10%
Other long term	Main	OFL = 1	-2.571	0.002	
		OFL = 2	-2.227	0.000	1%
		OFL = 3	-1.816	0.001	
		SFL = 1	2.425	0.017	1%
		SFL = 2	1.237	0.085	10%
		SFL = 3	1.163	0.061	

Source: Author developed based on survey data (2021)

Summary of Key Findings

A key finding of this study was the majority of investors in Sri Lanka are having low objective financial literacy and low subjective financial literacy. This finding is supported by Standard and Poor's (2014) that showed Sri Lanka has a low financial literacy level. However, these findings contradict with findings of Edirisinghe et al. (2015), De Silva and Lasantha (2019) and Weerasekara et al. (2018), where they found a relatively high objective financial literacy level in Sri Lanka. This contradiction can be attributed to the differences in the method of calculating the objective financial literacy score and the sample considered for the study. On the other hand, this study also found that respondents have poor knowledge in the relationship between interest rates and bond prices and are consistent with the findings of Weerasekara et al. (2018). Moreover, De Silva and Lasantha (2019) concluded that majority of respondents have rated themselves to be having average subjective financial literacy, which contradicts with this study as majority of respondents have low subjective financial literacy. The said contradiction can be justified based on the sample selected for this study, where an investor of any age category was considered in contrast to the research of De Silva and Lasantha (2019), where only undergraduates were considered.

Another key finding of the study was that the financial literacy significantly affects the investors' current choice of different investment products as well as future choice of investment products and agrees with international (Kimball & Shumway, 2010; Van Rooij et al., 2011; Lusardi & Mitchell, 2011; Aren & Zengin, 2016) and local literature (De Silva & Lasantha, 2019; Kumari, 2020).

V. Conclusions

The first key finding of this study was the majority of investors in Sri Lanka are having low objective and subjective financial literacy. Further, they have poor knowledge in the relationship between interest rates and bond prices. The second key finding was that financial literacy has a statistically significant impact on the current and future choice of different investment products as the main source of investment.

This study contributed to the existing body of empirical research in Sri Lanka by assessing the financial literacy level of different types of investors by using the mean value of the financial literacy score as Rasool and Ullah (2020), which has not been commonly used in the Sri Lankan context.

Important implications for the policymakers are that they can collaborate with the government and private sector employers to establish a compulsory policy to educate their newly hired employees (as a part of the induction process) on different investment options available in the country and the importance of investing a portion of their salary, as new employees are prone to making new finance-related decision (Lusardi 2008). Further, the policy-makers can also provide incentives for general public to invest in their financial literacy.

The implications for the educators of the country through this study is that the Educational Institutions can improve their syllabuses for both management as well as science streams including financial knowledge and mathematical skill components so that both basic and advanced financial literacy of the younger generation can be improved (Jappelli & Padula, 2013). According to Hadar et al. (2013, cited by Tang & Baker, 2016), it is noteworthy that not only the promotion of OFL, but the promotion of subjective financial knowledge is also important to ensure that individuals' self-worth and feelings are not affected. Further, education programs can include the development of behavioral and psychological traits which can impact the financial behavior, so that it will assist individuals in making conscious financial decisions.

Further, the financial intermediaries should note that provision of excessive information to investors can have a negative impact on

their subjective financial literacy level (Tang & Baker, 2016). Moreover, investment advice should be customized to each individual as the financial literacy levels vary.

The main limitation of the study was that the scope was limited to financial literacy, whereas there are other behavioral and market factors that affect the investment decision of individuals. Further, only seven investment products were considered whereas there are many other new investment products in the country which are not considered.

Future studies can be developed to identify how behavioral finance factors such as overconfidence, anchoring, mental accounting etc. can affect the investment choices made by investors. Furthermore, studies can be conducted to identify how emotions of investors such as sadness, hope, anger, fear etc. can affect the investment choices.

References

Abeysuriya, R. (2017, January 20). Stock market readying for transformational change – Echelon. https://www.echelon.lk/stock-market-readying-for-transformational-change/

Aren, S., & Hamamci, H. N. (2020). Relationship between risk aversion, risky investment intention, investment choices: Impact of personality traits and emotion. Kybernetes, 49(11), 2651–2682. https://doi.org/10.1108/K-07-2019-0455

Aren, S., & Zengin, A. N. (2016). Influence of Financial Literacy and Risk Perception on Choice of Investment. Procedia - Social and Behavioral Sciences, 235, 656–663. https://doi.org/10.1016/j.sbspro.2016.11.047

Baker, H. K., & Puttonen, V. (2019). Trap 4: Investing in Complex Products. In Navigating the Investment Minefield (pp. 117–132). Emerald Publishing Limited. https://doi.org/10.1108/978-1-78769-053-020191007

Basu, A. K., & Dulleck, U. (2020). Why do (some) consumers purchase complex financial products? An experimental study on investment in hybrid securities. Economic Analysis and Policy, 67, 203–220. https://doi.org/10.1016/j.eap.2020.07.005

Bellofatto, A., D'Hondt, C., & De Winne, R. (2018). Subjective financial literacy and retail investors' behavior. Journal of Banking & Finance, 92, 168–181. https://doi.org/10.1016/j.jbankfin.2018.05.004

Central Bank of Sri Lanka. (2020). Annual Report 2020 | Central Bank of Sri Lanka. https://www.cbsl.gov.lk/en/publications/economic-and-financial-reports/annual-reports/annual-report-2020

CIA The World Factbook. (2021). Sri Lanka. In The World Factbook. Central Intelligence Agency. https://www.cia.gov/the-world-factbook/countries/sri-lanka/#people-and-society

Colombo Stock Exchange. (2020). Colombo Stock Exchange. https://cdn.cse.lk/pdf/annual-reports/Annual-Report-2020.pdf

De Silva, D. N. W., & Lasantha, S. A. R. (2019, January 1). Impact of Financial Literacy and Risk Aversion on Investment Choices of Undergraduates in Sri Lanka. International Conference on Business and Information, University of Kelaniya.

Echelon. (2021). The Colombo Stock Exchange: Gearing for a new age – Echelon. https://www.echelon.lk/the-colombo-stock-exchange-gearing-for-a-new-age/

Edirisinghe, S.S., Ajward, R., & Dissabandara, H. (2015). The Analysis of Degree and Impact of Demographic Factors on Financial Literacy in a Non-University Higher Education Institution in Sri Lanka. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.2699764

Fernando, N. (2020, December 30). CSE eyes introduction of a range of new products in 2021—Opinion | Daily Mirror. https://www.dailymirror.lk/businessopinion/CSE-eyes-introduction-of-a-range-of-new-products-in-2021/306-202751

García, M. J. R. (2013). Financial Education and Behavioral Finance: New Insights into the Role of Information in Financial Decisions. Journal of Economic Surveys, 27(2), 297–315.

https://doi.org/10.1111/j.1467-6419.2011.00705.x

Grohmann, A., Klühs, T., & Menkhoff, L. (2018). Does financial literacy improve financial inclusion? Cross country evidence. World Development, 111, 84–96. https://doi.org/10.1016/j.worlddev.2018.06.020

Gui, Z., Huang, Y., & Zhao, X. (2021). Whom to educate? Financial literacy and investor awareness. China Economic Review, 67, 101608. https://doi.org/10.1016/j.chieco.2021.101608

Huston, S. J. (2010). Measuring Financial Literacy. Journal of Consumer Affairs, 44(2), 296–316. https://doi.org/10.1111/j.1745-6606.2010.01170.x

Jappelli, T., & Padula, M. (2011). Investment in financial literacy and saving decisions. Journal of Banking & Finance, 37(8), 2779–2792. https://doi.org/10.1016/j.jbankfin.2013.03.019

Jayawardana, K. (2017, November 16). Investment options beyond fixed deposits and savings accounts—Financial News | Daily Mirror. https://www.dailymirror.lk/financial-news/Investment-options-beyond-fixed-deposits-and-savings-accounts/265-140481

Kimball, M. S., & Shumway, T. (2010). Investor Sophistication and the Home Bias, Diversification, and Employer Stock Puzzles (SSRN Scholarly Paper ID 1572866). Social Science Research Network. https://doi.org/10.2139/ssrn.1572866

Kulasena, M. (2017, May 18). Financial literacy in Sri Lanka, its impact on personal finance and national economy | Daily FT. https://www.ft.lk/columns/financial-literacy-in-sri-lanka-its-impact-on-personal-finance-and-national-economy/4-615957

Kumari, D. A. T. (2020). The Impact of Financial Literacy on Investment Decisions: With Special Reference to Undergraduates in Western Province, Sri Lanka. Asian Journal of Contemporary Education, 4(2), 110–126. https://doi.org/10.18488/journal.137.2020.42.110.126

Lusardi, A. (2008) Financial literacy: An essential tool for informed consumer choice? (Working Paper No. 14084; Working Paper Series). National Bureau of Economic Research. https://www.nber.org/papers/w14084

Lusardi, A., & Mitchell, O. S. (2011). Financial Literacy and Planning: Implications for Retirement Wellbeing (Working Paper No. 17078; Working Paper Series). National Bureau of Economic Research. https://doi.org/10.3386/w17078

Lusardi, A., & Mitchell, O. S. (2013). Older Adult Debt and Financial Frailty. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.2376493

Lusardi, A., & Mitchell, O. S. (2014). The Economic Importance of Financial Literacy: Theory and Evidence. Journal of Economic Literature, 52(1), 5–44. https://doi.org/10.1257/jel.52.1.5

OECD (2013). (n.d.). Retrieved August 31, 2021, from https://www.oecd.org/daf/fin/financial-education/TrustFund2013_OECD_INFE_Fin_Lit_and_Incl_SurveyResults_by_Country_and_Gender.pdf

OECD INFE. (2011). Measuring Financial Literacy: Questionnaire and Guidance Notes for Conducting an Internationally Comparable Survey of Financial Literacy (OECD Working Papers on Finance, Insurance and Private Pensions No. 1; OECD Working Papers on Finance, Insurance and Private Pensions, Vol. 1). https://doi.org/10.1787/5kmddpz7m9zq-en

Potrich, A. C. G., Vieira, K. M., & Kirch, G. (2015). Determinants of Financial Literacy: Analysis of the Influence of Socioeconomic and Demographic Variables. Revista Contabilidade & Finanças, 26, 362–377. https://doi.org/10.1590/1808-057x201501040

Rasool, N., & Ullah, S. (2020). Financial literacy and behavioural biases of individual investors: Empirical evidence of Pakistan stock exchange. Journal of Economics, Finance and Administrative Science, 25(50), 261–278. https://doi.org/10.1108/JEFAS-03-2019-0031

Robb, C. A., Babiarz, P., & Woodyard, A. (2012). The demand for financial professionals' advice: The role of financial knowledge, satisfaction, and confidence. Financial Services Review, 21(4), 291–305.

Rodrigues, L. F., Oliveira, A., Rodrigues, H., & Costa, C. J. (2019). Assessing consumer literacy on financial complex products.

Journal of Behavioral and Experimental Finance, 22, 93–104. https://doi.org/10.1016/j.jbef.2019.02.005

Standard & Poor's. (2014). Financial Literacy Around the World: Insights from the S&P Global FinLit Survey (p. 28). https://gflec.org/wp-content/uploads/2015/11/3313-Finlit_Report_FINAL-5.11.16.pdf?x27564

Tang, N., & Baker, A. (2016). Self-esteem, financial knowledge and financial behavior. Journal of Economic Psychology, 54, 164–176. https://doi.org/10.1016/j.joep.2016.04.005

van Rooij, M., Lusardi, A., & Alessie, R. (2011). Financial literacy and stock market participation. Journal of Financial Economics, 101(2), 449–472. https://doi.org/10.1016/j.jfineco.2011.03.006

Weerasekara, C., Heenkenda, J., & Hapugoda, J. (2018). Antecedents and consequences of financial literacy: A case of retail investors at the colombo stock exchange in Sri Lanka. Vistas Journal, 11(10), 21–40.

Weerawansa, S. R. S. D. K., & Morage, N. S. (2019). The Degree of Financial Literacy as a Deterministic Factor in Investment Decisions: Evidence from Colombo Stock Exchange (CSE) of Sri Lanka. Sri Lanka Journal of Economic Research, 7(1), 15–44. https://doi.org/10.4038/sljer.v7i1.39

Appendices

Appendix 1.: Questionnaire

1. What is your age?
   - 18 – 25 years
   - 26 – 35 years
   - 36 – 45 years
   - 46 – 55 years
   - 56 – 65 years
   - Above 65 years
2. What is your gender?
   - Male
   - Female
3. What is your highest educational qualification?
   - Primary education
   - Ordinary level
   - Advanced level
   - Degree
   - Postgraduate
4. What is your level of monthly income?
   - Less than Rs. 50,000
   - Between Rs. 50,000 – Rs. 100,000
   - Between Rs. 101,000 – Rs. Rs. 155,000
   - Between Rs. 156,000 – Rs. 200,000
   - More than 200,000
5. How much are you willing to invest from your monthly income?
   - Less than Rs. 10,000
   - Between Rs. 10,000 – Rs. 20,000
   - Between Rs. 21,000 – Rs. 30,000
   - Between Rs. 31,000 – Rs. 40,000
   - More than Rs. 40,000

Financial Literacy

In this section, you will be given with statements related to Financial Literacy. You may select the most appropriate answer based on your knowledge and understanding.

	1 Very low	2 Low	3 Neutral	4 High	5 Very high
6. On a scale from 1 to 5, where 1 means very low					

and 5 means very high, how would you assess your overall financial knowledge?					

7. Suppose you had Rs. 100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow?
   - More than Rs. 102
   - Exactly Rs. 102
   - Less than Rs. 102
   - Do not know
   - Refusal
8. Suppose you had Rs. 100 in a savings account and the interest rate is 20% per year and you never withdraw money or interest payments. After 5 years, how much would you have on this account in total?
   - More than Rs. 200
   - Exactly Rs. 200
   - Less than Rs. 200
   - Do not know
   - Refusal
9. Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account?
   - More than today
   - Exactly the same
   - Less than today
   - Do not know
   - Refusal
10. Buying a company stock usually provides a safer return than a stock mutual fund. Agree or disagree?
   - Agree
   - Disagree
   - Do not know
   - Refusal

	Increase	Decrease	Stay the same	Do not know	Refusal
11. What happens to the risk of losing money when an investor spreads his money among different assets?					
12. If the interest rate falls, what should happen to bond prices?					

Investment Choice

In this section, you will be given with several investment options available in Sri Lanka. You may select the most suitable option.

	Main	Secondary	Has not invested
13. Which of the following do you currently hold as a main investment and secondary investment?			
i. Savings	□	□	□
ii. Fixed Deposit	□	□	□
iii. Stock market investment (company shares)	□	□	□
iv. Corporate debentures	□	□	□
v. Treasury bills and bonds	□	□	□
vi. Unit trust	□	□	□
vii. Other long term investment plans (real estate, retirement plans etc.)	□	□	□
14. In which of the following would you consider to invest in the future?			
i. Savings	□	□	□
ii. Fixed Deposit	□	□	□
iii. Stock market investment (company shares)	□	□	□
iv. Corporate debentures	□	□	□
v. Treasury bills and bonds	□	□	□
vi. Unit trust	□	□	□
vii. Other long term investment plans (real estate, retirement plans etc.)	□	□	□

	1 Strongly disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly agree
15. My financial knowledge, awareness and skills impact the investment choices I make					
16. My income has an impact on the investment choices I make					
17. The amount that I am willing to invest from my income has an impact on the investment choices I make					

Appendix 2: Multinomial Logistic Regression Results for Current Investments

Investment	**Type**	**Level of Literacy**	**B**	**Sig.**
Savings	Main	OFL = 1	0.531	0.938
		OFL = 2	2.021	0.729
		OFL = 3	-2.073	0.656
		OFL = 4	0.380	0.939
		OFL = 5	0	-
		SFL = 1	-0.752	0.931
		SFL = 2	1.024	0.888
		SFL = 3	-2.347	0.718
		SFL = 4	0.428	0.948
		SFL = 5	0	-
Fixed deposit	Main	OFL = 1	-2.375	1.000
		OFL = 2	-17.052	1.000
		OFL = 3	-0.265	0.992
		OFL = 4	-14.874	0.595
		OFL = 5	0	0.993
		SFL = 1	2.123	1.000
		SFL = 2	0.882	1.000
		SFL = 3	-12.979	0.000
		SFL = 4	-14.209	0.000

		SFL = 5	0	-
Stock	Main	OFL = 1	-0.553	0.639
		OFL = 2	-0.050	0.958
		OFL = 3	-0.841	0.283
		OFL = 4	-1.599	0.036
		OFL = 5	0	-
		SFL = 1	0.308	0.823
		SFL = 2	0.294	0.785
		SFL = 3	-0.766	0.447
		SFL = 4	0.066	0.928
		SFL = 5	0	-
Corporate debenture	Main	OFL = 1	0.363	0.867
		OFL = 2	0.050	0.980
		OFL = 3	1.875	0.205
		OFL = 4	-0.450	0.747
		OFL = 5	0	-
		SFL = 1	1.132	0.577
		SFL = 2	-2.383	0.194
		SFL = 3	-2.135	0.184
		SFL = 4	-1.646	0.237
		SFL = 5	0	-

Treasury bills and bonds	Main	OFL = 1	2.025	0.179
		OFL = 2	2.162	0.090
		OFL = 3	1.792	0.130
		OFL = 4	1.553	0.063
		OFL = 5	0	-
		SFL = 1	-0.767	0.570
		SFL = 2	-3.285	0.017
		SFL = 3	-2.845	0.006
		SFL = 4	-3.226	0.000
		SFL = 5	0	-
Unit trust	Main	OFL = 1	-3.081	0.128
		OFL = 2	-2.983	0.096
		OFL = 3	-0.390	0.674
		OFL = 4	-0.330	0.673
		OFL = 5	0	-
		SFL = 1	3.366	0.065
		SFL = 2	-0.714	0.606
		SFL = 3	-0.278	0.772
		SFL = 4	-1.006	0.211
		SFL = 5	0	-

Other long term	Main	OFL = 1	-0.963	0.332
		OFL = 2	-0.927	0.240
		OFL = 3	-0.894	0.177
		OFL = 4	-0.526	0.340
		OFL = 5	0	-
		SFL = 1	1.843	0.119
		SFL = 2	1.170	0.221
		SFL = 3	0.533	0.504
		SFL = 4	0.636	0.343
		SFL = 5	0	-

Source: Author developed based on survey data (2021)

Appendix 3: Multinomial Logistic Regression Results for Future Investment Choices

Investment	**Type**	**Level of Literacy**	**B**	**Sig.**
Savings	Main	OFL = 1	0.864	0.250
		OFL = 2	2.123	0.000
		OFL = 3	0.795	0.113
		OFL = 4	0.306	0.483
		OFL = 5	0	-
		SFL = 1	0.451	0.668
		SFL = 2	-0.313	0.647
		SFL = 3	-0.353	0.541

		SFL = 4	0.134	0.781
		SFL = 5	0	-
Fixed deposit	Main	OFL = 1	0.512	0.482
		OFL = 2	0.452	0.435
		OFL = 3	0.471	0.328
		OFL = 4	0.740	0.085
		OFL = 5	0	-
		SFL = 1	-0.971	0.272
		SFL = 2	-0.646	0.345
		SFL = 3	-0.824	0.164
		SFL = 4	-0.884	0.078
		SFL = 5	0	-
Stock	Main	OFL = 1	1.116	0.209
		OFL = 2	-0.248	0.702
		OFL = 3	-0.281	0.588
		OFL = 4	-0.087	0.848
		OFL = 5	0	-
		SFL = 1	-1.739	0.195
		SFL = 2	-0.529	0.501
		SFL = 3	0.325	0.612
		SFL = 4	0.811	0.132
		SFL = 5	0	-

Corporate debenture	Main	OFL = 1	-1.599	0.228
		OFL = 2	-3.615	0.008
		OFL = 3	-1.041	0.229
		OFL = 4	-0.873	0.291
		OFL = 5	0	-
		SFL = 1	0.269	0.883
		SFL = 2	-0.212	0.887
		SFL = 3	0.858	0.502
		SFL = 4	-0.050	0.965
		SFL = 5	0	-
Treasury bills and bonds	Main	OFL = 1	-1.342	0.304
		OFL = 2	-0.946	0.381
		OFL = 3	-0.804	0.348
		OFL = 4	0.098	0.898
		OFL = 5	0	-
		SFL = 1	1.144	0.439
		SFL = 2	1.192	0.323
		SFL = 3	0.099	0.929
		SFL = 4	0.369	0.676
		SFL = 5	0	-
Unit trust	Main	OFL = 1	-3.189	0.048
		OFL = 2	-3.032	0.011

		OFL = 3	-1.275	0.119
		OFL = 4	0.143	0.846
		OFL = 5	0	-
		SFL = 1	2.694	0.082
		SFL = 2	0.488	0.698
		SFL = 3	1.084	0.274
		SFL = 4	-0.55	0.944
		SFL = 5	0	-
Other long term	Main	OFL = 1	-2.571	0.002
		OFL = 2	-2.227	0.000
		OFL = 3	-1.816	0.000
		OFL = 4	-0.507	0.280
		OFL = 5	0	-
		SFL = 1	2.425	0.017
		SFL = 2	1.237	0.085
		SFL = 3	1.163	0.061
		SFL = 4	0.785	0.129
		SFL = 5	0	-