

IMPACT OF FINANCIAL LITERACY ON INVESTMENT DECISION OF INDIVIDUAL INVESTORS IN COLOMBO STOCK EXCHANGE

Thilakarathna, M.D.N¹, Rajakaruna, G.K.N.P²

^{1,2}Department of Accountancy, Faculty of Business Studies and Finance, Wayamba
University of Sri Lanka

¹divyanjalithilakarathna@gmail.com, ²niluka@wyb.ac.lk

ABSTRACT

Financial literacy is enhancing the financial developments and economic growth of the country. Investment decisions are crucial decisions in finance management that provide benefits for individuals and the whole economy. Individuals' quick consumption and delayed consumption for higher future consumption benefits are traded off in investment decisions. This study aims to identify the impact of financial literacy on investment decision of individual investors in Colombo Stock Exchange (CSE). This research adopts the survey strategy which is available to conduct quantitative research and utilize the financial literacy on investment decision of individual investors in Kurunegala District and a sample of 203 respondents was selected. This study used financial literacy as independent variable and investment decision as dependent variable and considered financial knowledge, financial attitude, and financial behavior as indicators of the financial literacy. The collected data was analyzed using SPSS software and it was used descriptive statistics, correlation, and regression analysis as statistical techniques. The findings of the study reveal that financial knowledge, financial behavior and financial attitudes are positively affect to the investor's investment decision making in Colombo stock exchange Sri Lanka. So, these findings will be helpful for the future researcher and for financial literacy to identify the factors affecting investment decision of individual investors and how they provide effective and efficient in stock market.

Keywords: *Financial Attitudes, Financial Behavior, Financial Knowledge, Financial Literacy, Investment Decision.*

1. INTRODUCTION

Sri Lanka is regarded as a nation with an excellent educational system and a greater proportion of illiteracy. Poor financial decision-making, bad financial practice, less net wealth accumulation, inability to make informed financial decisions, worse saving habits, lack of portfolio diversification, inadequate stock participation, inability to make personal contributions, poor retirement planning, and unpreparedness for post-retirement times could all result from a lack of financial literacy (Davis et al., 2006). In the last couple of years, financial literacy received special attention from researchers, financial institutions, and policymakers (Kumari, 2017; Lusardi, 2019). The capability to manage personal finances has become increasingly important in today's world. People must plan for long-term investments

for their retirement and children's education. They must also decide on short-term savings and borrowing for a vacation, education, emergency, a house, a car loan, and other items. Additionally, they must manage their own medical and life insurance needs (Chen & Volpe, 1998). Financial literacy is a basic concept in understanding money and its use in daily life. This includes the way income and expenditure are managed and the ability to use the common methods of exchanging and managing money. Also, financial literacy incorporates an understanding of everyday situations that need to be understood such as savings, borrowings, credit, and insurance (Roy & Jane, 2018; Singh & Kumar, 2017). The understanding of financial terminologies and concepts includes an understanding of key financial views central to investing and managing funds to increase wealth and security. According to (Lusardi 2019), Students need financial skills perhaps more now than ever before. The reason is that the current developments in the financial market have focused renewed attention on the importance of people being both well informed about their financial options and discerning financial consumers short, being financially literate. Also, financial literacy can help to prepare consumers for tough financial times, by promoting strategies that mitigate risk such as accumulated savings, differentiating assets, and purchasing insurance. Financial literacy typically related individuals' knowledge of economics and finance with their financial decisions related to savings, retirement planning, or portfolio choice. Investment decisions are crucial decisions in finance management that provide benefits for individuals and the whole economy. Individuals' quick consumption and delayed consumption for higher future consumption benefits are traded off in investment decisions. Stock market investments are popular investment alternatives among individuals which contain higher risk and higher expected return. Investors expect their initial investment to have a higher return.

Even though many factors affect investment decisions, such as financial knowledge, attitudes, and behavior among these factors, financial literacy is a highly considerable factor. Colombo stock exchange investors in Sri Lanka teach them about the extent to which financial knowledge, attitude, and behavior influence investment decisions, and it sharpens their knowledge about the wise and more rewarding ways to make investment decisions in the past, present, and future. As well as it will be very difficult to gather the data from investors of CSE in Sri Lanka because some investors do not like to give their knowledge related to the individual investor's decision-making stock market. Financial literacy is essential for any institutional and individual investors. It helps to get an effective and efficient decision regarding their investment. Financial literacy is improving the country's financial development and economic progress. Financial decisions made early in life will result in either a life of concern or a life of ease in the end. As a result, financial literacy is necessary and plays an important role (Graf, 2012).

The majority of studies have discovered a link between financial literacy, knowledge, and investing decisions (Guiso, 2003). Several studies on the influence of financial literacy and knowledge have concentrated on the link between financial literacy and individual investor's decision making (Guiso, 2003). Investors are more concerned about their money, whether it is earning gain or loss. According to the (Volpe et al,

2002), Investors must make reasonable decisions about how to invest this surplus money in various investment options. High profits and low risk may be the primary goals of investors.

The preceding research indicates that it is important to consider how financial literacy affects investment choices. Therefore, this study fills the research problem by answering the research question of “how far does the financial literacy impact on investors’ decision making in Colombo stock exchange in Sri Lanka”. The objective is to investigate the impact of financial literacy on the investors’ decision-making in Kurunegala district, Sri Lanka. Moreover, this study mainly focuses on three dimensions of financial literacy namely financial knowledge, behavior, and attitude and to what extent they impact on investor’s decision making.

2. LITERATURE REVIEW

Financial Literacy

Financial literacy has been defined in a variety of ways. Typically, financial literacy is defined as the ability to comprehend financial ideas. The organization for Economic Cooperation and Development- (OECD, 2005) defines financial literacy as “A combination of awareness, knowledge, skill, attitudes, behavior necessary to make sound financial decisions and ultimately achieve individual financial wellbeing”. Viewpoints of Atkins and Messy A mix of factors relevant to making financial decisions, such as awareness, knowledge, competence, attitudes, and behaviors, is referred to as financial literacy. According to (Aggarwal et al 2014) “Financial literacy enables individuals to navigate the financial world, make informed decisions about their money and minimize their chances of being misled on the financial matter”. Financial literacy, according to (Robb, Babiarz, and Woodyard 2012), entails the ability to comprehend financial information and make efficient decisions based on that information, whereas financial education simply entails recalling a set of facts. This can also be referred to by a variety of words, such as "financial competence" in the United States, which encompasses a variety of factors such as financial skills, attitudes, and knowledge (Gallery et al., 2011). Increasing financial literacy can lead to effective financial decisions (Bernheim et al., 2001). Investors in poor nations, according to (Al-Tamimi and Al Anood , 2009), have a lack of awareness about money concerns and investment decisions on average. Financial literacy is a prevalent problem in developing countries. According to studies, most people in underdeveloped nations do not invest in financial items because they are unfamiliar with them (Rathnayaka et al., 2014a). Due to a lack of financial literacy, some biases may arise during decision-making. According to (Jappeli and Padula, 2013), the majority of people lack basic economic and financial knowledge.

Financial Knowledge

Financial literacy is a type of knowledge about money. Financial literacy is described by (xiao, 2008) and (Hilgry et al, 2003) as financial knowledge, which is also considered the foundation of effective financial decision-making (Lusardi, 2012b). Financial knowledge has been proven to influence financial behavior (Babiarz and Robb, 2014) ; (Woodyard et al, 2017), financial goals (sPriyadharshini, 2017), and financial decisions (Asaad, 2015; Parker et al, 2012) in previous studies. Subjective

financial knowledge, also known as perceived knowledge, and objective financial knowledge have been used to assess financial knowledge levels. According to Gallgood and Walstad, 2013; Babiarz and robb,2014; Khan et al,2107; Mishra and Kumar,2011) subjective financial knowledge is how people view themselves in terms of what they know and how they would rate their level of financial knowledge. Objective financial knowledge is what is actually preserved in memory and quantified by testing people's degrees of understanding of various components of financial markets and goods, such as numeracy, assets, debts, savings and investments, money value, inflation, compounding interest, and risk diversification(Lusardi et al, 2010; Lusardhi and Mitchell,2014). Previous research has found a positive relationship between subjective financial knowledge and financial well-being (Riitsalu and Murakas, 2019; Woodyard, 2013) and financial behavior (Khan et al, 2017).

Financial behavior

Another definition of financial literacy is that it goes hand in hand with financial awareness, which has been shown to have a favorable impact on financial literacy. One's financial behavior is usually judged on how successfully an investor's traits consistently influence individual investment decisions as well as market consequences.

Individuals in numerous countries have demonstrated a lack of financial literacy through behavioral evidence (V.I.Dewi,E.Febrian,N.Effendi,M.Anwar, S.R.Nidar) from the 1970s to the 1990s, previous studies on financial behavior were done, contributing to the creation of financial behavior metrics (*Does the Implementation of a Net Stable Funding Ratio Enhance the Financial Stability of the Banking Industry? An International Study.*, 2008). Furthermore, (xiao, 2008) developed the theory of financial behavior, with the theory of planned behavior (TPB) to predict and understand human behavior (Rathnayaka et al., 2014b) and the trans-theoretical model of behavior change (TTM) to help people achieve positive behavior and change negative behavior as the two behavioral theories that underpin the theory of financial behavior (Prochaska et al., 1992). Furthermore,(Lim and Teo, 1997) investigated the link between knowledge and behavior in four financial management activities: cash-flow management, credit management, saving, and investing. Getting financial education can help you become more conscious of how to manage your money and have a happier future. Education aids in opening one's mind to consider other solutions to any given circumstance (Lim and Teo, 1997). Investment, according to (Geetha and Ramesh 2011), is an activity that people who have savings engage in, i.e., investments are made from savings, or in other words, people invest their savings, but not all savings are investments.

Financial attitudes

The term "financial attitude" refers to one's thoughts and attitudes towards money. Money attitudes may predate the development of money behavior, according to evidence(Roberts and Jones, 2007). In other words, money attitudes play a role in predicting financial behavior and management. According to research, people with more positive financial attitudes and perceptions are more successful in financial management and are happier with their financial assessments(Rathnayaka et al.,

2014). The preference for one investment opportunity or project over another is referred to as a financial attitude. What is an individual's view of choosing an investment, in particular? The state of mind, opinion, and judgment regarding one's finances that reflects a position taken is referred to as financial attitude (Pankow, 2012). While some studies have found that having a positive attitude toward money helps with financial management, others have found that people who have a negative attitude toward money have more financial issues (Lim and Teo, 1997).

Investment decisions of individual investors

Among the numerous types of investment options, most investors prefer to invest directly in the stock market rather than in savings accounts (Rathnayake et al, 2014). The investment decision-making process considers a wide range of considerations. Instead of evaluating only one element, investors should carefully assess investment factors using realistic business expertise and evaluate all of the factors accessible in the market before making decisions (Jagongo & Mutswenje, 2014).

A descriptive study was conducted and data was collected using a structured questionnaire in 200 families in Cambridge Massachusetts by (Carvert et al, 2005) of Harvard University in the United States of America in connection to financial literacy and financial behavior. Financially sophisticated households are more likely to buy riskier assets and invest more efficiently, according to the findings of the study, which were examined using frequency, mean, and standard deviation. In his study, (Amisi, 2012) looked at the link between financial literacy and the influence of the factors that influence investment decisions. The study used a modified Likert scale questionnaire, and the results showed that financial literacy was considerably below the required level. The amount of financial literacy was discovered to have a considerable impact on fund managers' investment decisions. Members must periodically review and analyze the performance of their chosen fund and investment option and determine whether to switch to another fund and/or investment option, because these decisions are ongoing.

Sri Lankan Context

In the last couple of years, financial literacy received special attention from researchers, financial institutions, and policy makers (Kumari, 2017; Lusardi, 2019). The capability to manage personal finances has become increasingly important in today's world. People must plan for long-term investments for their retirement and children's education. They must also decide on short-term savings and borrowing for a vacation, education, emergency, a house, a car loan, and other items. Additionally, they must manage their own medical and life insurance needs (Chen & Volpe, 1998). Financial literacy is a basic concept in understanding money and its use in daily life. This includes the way income and expenditure are managed and the ability to use the common methods of exchanging and managing money. Also, financial literacy incorporates an understanding of everyday situations that need to be understood such as savings, borrowings, credit, and insurance (Roy & Jane, 2018; Singh & Kumar, 2017). The understanding of financial terminologies and concepts includes an understanding of key financial views central to investing and managing funds to increase wealth and security. Individuals require an awareness of features available

for borrowing and investing. This awareness includes the understanding of brochures and annual statements, complex interest calculations and delaying the use of funds for utilization. Individuals further need to be aware that high return investments are also likely to involve high risk, the realization that market values fall as well as rise, and the principles of variation. This need introduces a new complex set of skills in relation to products and how they work, the advantages and disadvantages. The other component of financial literacy is the skill to utilize knowledge and understanding to make beneficial financial decisions (Kumari & Ferdous, 2019; Wagland & Taylor, 2009). there is a lot of underground theories relating to this research. First one is prospect theory. Prospect theory, as advocated by (Kahneman and Tversky 1979), It explains how investors react differently to identical situations whether they are presented in terms of gains or losses so Prospect theory is relevant to this research. Second one is Decision theory; it was developed by Warner in 1968. It explains individuals' actions.

3. METHODOLOGY

This research is a descriptive study. This study used quantitative research methodology and tests established hypotheses based on accepted ideas and concepts using a deductive method. The study's target audience is the local Kurunegala district's private investors in this contemporary study, the population has consisted of utilized financial literacy on individual investor's decision making in Kurunegala District 2022. For this study, a sample of 203 respondents was selected. In order to conduct the research, the researcher uses the Convenient sampling technique which is a non – probability sampling. The sample is selected from the individuals who meet certain criteria such as geographical proximity, availability at a given time, and the willingness of the respondents to participate. Hence this research is adopting the convenient sampling technique to select the sample. A systematic questionnaire was used to obtain primary data from CSE investors in the Kurunegala area. The conceptual framework presented in indicates the relationship between the dependent and independent variables proposed in the present study.

Conceptual Framework

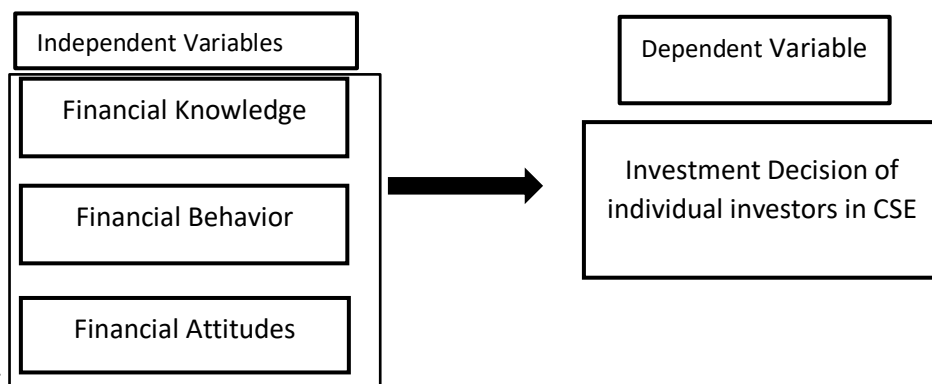


Figure 1: Conceptual Framework

The concept and measurement served as the foundation for the questionnaire on financial literacy and investing choices. Investor decision-making is the dependent variable of this study, and financial literacy has an independent influence on investor decision-making. The three components of financial literacy are financial knowledge, financial behavior, and financial attitudes. Therefore the questionnaire consists of five sections with twenty-three questions in total. Section one consists of covering demographic information about the investors. Section two includes questions related to the Financial Knowledge of respondents. Section three includes questions related to financial behavior investment decisions. Section four includes four questions for financial attitudes of respondents. Final Section is section five it includes questions with measure the investors' decision making in their overall financial literacy. In order to make the selection process effective, probability sampling is used as the sample strategy. 230 questionnaires in total were distributed to the participants by random sampling. 27 incomplete surveys were disregarded, leaving 203 questionnaires that were included in the data analysis. The analysis was conducted using IBM SPSS software. The analytical techniques employed in this study were the reliability test (Cronbach's alpha), demographic analysis, correlation analysis, regression analysis, and hypothesis testing. Research quality is assessed using a reliability test. Reliability test is concerned with a measure's correctness, whereas reliability is concerned with its consistency. According to the demographic analysis, it was utilized to provide information on research participants and is required to determine whether the subjects in a study are representative of the intended population for generalization purposes. The relationship, patterns, noteworthy connections, and trends between the independent and dependent variables are found using correlation analysis. Regression analysis concentrates more on the relationship between changes in the independent factors and changes in the dependent variable. To determine whether null hypothesis may be accepted or rejected, hypothesis testing is used. Davis et. al, (2006) demonstrates that a positive link with financial behavior, broad approaches to high levels of preparation, and retirement income planning. Thus, the following are the hypothesis:

H1: There is a positive significant impact of financial knowledge on investment decision making of individual investors in CSE.

H2: there is a positive significant impact of financial behavior on investment decision making of individual investors in CSE.

H3: there is a positive significant impact of financial attitude on investment decision making of individual investors in CSE.

4.FINDINGS AND DISCUSSION

Reliability test

The relevant Cronbach's alpha values for financial knowledge, financial attitude, and financial behavior are 0.674, 0.677, and 0.712. Each variable's value is above 0.7,

which means the results of the reliability analysis confirmed that consistency is at an acceptable level for each variable.

Descriptive analysis

From the descriptive analysis of the demographic data that the sample's respondents are more likely to identify as male and married, with mean values of 1.45 and 1.47, respectively. The age category has a mean of 3.68, indicating that most respondents fall into the second category of the age groups listed in the survey; 21 to 30 years old, to be exact. There are the identical minimum values as 2 without the verification of the decision-making of the investors. The highest mean value was found in financial behavior, with a minimum value of 1 and a maximum value of 5 for all variables. The lower mean is used in investors' decision-making and has a value of 4.05. It has a 3.60 value. The financial knowledge variable has the greatest standard deviation value of 0.694. The lowest value was 0.580 for the financial conduct variable. Based on the skewness. The skewness of every variable is more than 0.5. The financial conduct variable has the largest skewness. Its value is 0.679, and its lowest value was 0.624, according to a financial knowledge variable.

Correlation analysis

At a 99% level of confidence, the correlation matrix results show a significant association between financial knowledge ($r = 0.756^{**}$, $P < 0.01$), financial conduct ($r = 0.673^{**}$, $P < 0.01$), and financial attitude ($r = 0.742^{**}$, $P < 0.01$). As a result, investors' investment selections are positively connected with their financial knowledge, financial conduct, and financial attitude.

Table 1. Correlation Analysis

Correlations		TFK	TFA	TFB	TIDM
TFK	Pearson Correlation	1	.742*	.673	.756
	Sig. (2-tailed)		.003	.000	.001
	N	203	203	203	203
TFA	Pearson Correlation	.742*	1	.865**	.748
	Sig. (2-tailed)	.003		.000	.000
	N	203	203	203	203
TFB	Pearson Correlation	.673	.865**	1	.649
	Sig. (2-tailed)	.000	.000		.002
	N	203	203	203	203
TIDM	Pearson Correlation	.756	.748	.649	1
	Sig. (2-tailed)	.001	.000	.002	
	N	203	203	203	203

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

Source: IBM SPSS, 2022

Regression analysis

According to the regression analysis at 0.05 levels, financial conduct ($r=0.049$, $p0.05$), financial attitude ($r=0.336$, $p<0.05$), and financial knowledge ($r=0.056$, $P0.5$) all significantly positively affect investment decisions. According to the

modified R2 value of 0.789, variation in the three components of financial literacy financial knowledge, financial behavior, and financial attitude explains 78.9% of the overall variance in investment decisions. The findings suggest that factors related to financial literacy have a favorable, significant impact on investment choices.

Because financial knowledge, financial behavior, and financial attitude have a positive, significant impact on investment decisions, the hypotheses (H1, H2, and H3) are supported by the data.

Table 2. Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.848	.454		15.656	.000
FK	0.42	.053	.056	.789	.000
FA	.040	.058	.048	.679	.000
FB	.044	.063	.049	.689	.000

Hypothesis testing

According to the correlation analysis financial knowledge and investors' decision making has a 0.756 positive relationship with significant value of 0.001. Under the regression analysis, the variable of Financial knowledge and investors' decision making has a 0.056 weakly positive relationship with significant value of 0.000. There for H1 can accept and H0 can reject under the both of these analysis. According to the correlation analysis financial attitudes and investors' decision-making has a 0.748 strongly positive relationship with a significant value of 0.000. Under the regression analysis, the variable of Financial attitude and investors' decision making has a 0.048 weakly positive relationship with a significant value of 0.000. Therefore, for H2 can accept and H0 can reject both analyses. According to the correlation analysis financial behavior and investors' decision making has a 0.649 positive strong relationship with significant value of 0.002. Under the regression analysis, the variable of financial behavior and investors' decision-making has a 0.049 weakly positive relationship with a significant value of 0.000. Therefore, for H3 can accept and H0 can reject under both analyses.

5. CONCLUSION

The findings of the study reveal that financial knowledge, financial behavior and financial attitudes are positively affect to the investor's investment decision-making in Colombo Stock Exchange Sri Lanka. The study shows that there are statistically significant disparities between the level of financial literacy and gender, material status, age, and salary. Investors' financial condition and well-being are impacted by many financial behaviors, attitudes, and knowledge such as choosing financial goods without doing market research, failing to budget for future expenses, or postponing bill payments (Agnew & Szykman, 2005). Additionally, the survey shows that rather than stocks and bonds, ordinary investors are considerably more comfortable with bank savings and insurance. For logical financial decision-making, overall financial welfare, and navigating through the worst financial circumstances, financial literacy is a crucial ability in complex financial scenarios. This is because investors who are financially literate are more likely to comprehend and make decisions that would

enable them to avoid some egregious mistakes, reduce their losses, and make the best financial decisions so maximizing their financial well-being. Additionally, the sample was gathered from local Kurunegala district investors. Future studies should focus further on expanding the sample and improving the sample representation. Future studies could consider using some more qualitative techniques to gather information about investors' financial literacy levels. Investors will have a greater understanding of the subject, but they might answer with the expected response rather than their true intent. It is advised to perform an observational study to gain knowledge about financial literacy and investment choices. Financial literacy is an important concept to address the needs of the investor. Possessing a good understanding of financial literacy causes misunderstandings among investors about financial literacy. The findings also support changing the individual investor's decision-making in other sectors and how to use the stock market properly for getting maximum benefits. Furthermore, these research findings address the issues with financial literacy and support the individual investor's decision-making in formulating strategies to provide investor satisfaction to the investors while maximizing profits. These main findings help investors to decide on better investment methods in the future. This research will examine the rationale for understanding how financial literacy, as well as financial knowledge, financial behavior, and financial attitudes. Therefore, researchers recommended that investors get consulting services from financial and investment experts. Investors can make investment decisions without emotional bias if they have appropriately analyzed. It is recommended that investors improve their financial literacy.

REFERENCES

- Agnew , J., & Szykman , L. (2005). Asset allocation and information overload: The influence of information display, asset choice and investor experience. *Journal of Behavioral Finance*, 6, 57-70.
- AHMED, Z. (2019). Determinants of individual investors investment decision in pakistan stock exchange. (2019 april), 225.
- Buvanendra, K. D. (2021). Impact of personality traits on stock investment decision making and the mediating effect of financial self efficacy. *International Journal of Accounting & Business Finance*, VOL:07(2021 JUNE 01), 1-26.
- Chen, H. &. (1998). *An analysis of personal financial literacy among college students. Financial Services Review*,. Retrieved from Available at: [https://doi.org/10.1016/s1057-0810\(99\)80006-7](https://doi.org/10.1016/s1057-0810(99)80006-7).
- D.A.T, K. (2021). The impact of financial literacy on investment decision with special reference to undergraduates in western province, Sri Lanka. *Asian Journal of Contemporary Education*(2020 december 21), 110-126.
- Dewi Tamara, A. Y. (2022). The Effect of Financial Literacy, Herding Behavior and Risk Tolerance on Investment Decisions. *Budapest International Research and Critics Institute-Journal*, vol 5(2022 APRIL 8), 48-69.

- Dr. Saima Tabassum, I. A. (2021). Behavioral factors affecting investment decision-making behavior in a moderating role of financial literacy: A case study of local investors of Pakistan stock market. *International Journal of Management (IJM)*, 12(Issue 2, February 2021,), pp.321-354.
- K. M. D. M. Abeyrathna, R. M. (2022). Impact of behavioral factors on investors' investment decisions of Colombo Stock Exchange. *1st International Research Symposium on Management 2022*, 60, 48-52.
- Kumari, D. A. (2017). *Financial literacy: An essential tool for empowerment of women through financial inclusion – literature review” Equality and Management. Poland: Faculty of Economics and Management, University of Szczecin.*
- Kumari, D. A. (2019). *The mediating effect of financial inclusion on financial literacy and women's economic empowerment: A study among rural poor women in Sri Lanka. International Journal of Scientific & Technology Research,*
- Liyanage, S. T. (2021). Impact of Financial Literacy Levels Among Sri Lankan Investors on Investment Choices. *South asian journal of finance, vol.1*(2021), pp:123-147.
- Lusardi, A. (2019). *Financial literacy and the need for financial education: Evidence and implications. Swiss Journal of Economics and Statistics.*
- Novia Budi Santoso1, *. N. (2022). Individual Investors Trading Behavior in Indonesia Stock Exchange and the Covid-19. *VOL:3*(2022-09-20), 68-123.
- Peter Hunguru, V. S. (2020). Determinants of Investment Decisions: A Study of Individual Investors on the Zimbabwe Stock Exchange. *Applied Economics and Finance, VOL.7*(5 September 2020), 38-53.
- Prochaska, J. O. (1992). *In search of how people change: Applications to addictive behaviors. American Psychologist.*
- Roy, B. &. (2018). *A study on level of financial literacy among Indian women. IOSR Journal of Business and Management,*
- Tahir Mahmood, R. M. (2022). The Behavioral Analysis and Financial Performance of Individual Investors at Pakistan Stock Exchange. *International Journal of Economics and Financia, 10*(5)(2020 august 28), 158-164.
- Wagland, S. &. (2009). *When it comes to financial literacy, is gender really an issue? Australasian Accounting Business and Finance Journal,*