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**Department of Accountancy**

Faculty of Business Studies and Finance  
Wayamba University of Sri Lanka  
Kuliyaipitiya

# **JOURNAL OF SACFIRE**

## **Volume 2 Issue II**



**Department of Accountancy**  
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Wayamba University of Sri Lanka

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## DOES FAMILIAL OR INDIVIDUAL LARGEST SHAREHOLDER DETERIORATE FIRM VALUE?

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### ABSTRACT

The main purpose of this study is to examine the expropriating behavior of large shareholders at the cost of minority shareholders. Particularly, the companies that are in early stages of their life cycle may characterize concentrated ownership where owner-managers may make all efforts to increase firm value. Therefore, the paper intends to study the impact of ownership concentration on families or individuals on the corporate performance of listed companies in Sri Lanka. Such block owners can exert control towards corporate management to safeguard their interest. Thus, it is important to determine how such dominating power of large shareholders expropriate corporate resources. Data is collected from companies' annual reports as longitudinal data for seven years from the year 2013. Firm value is proxied by Tobin's Q and ROA. Panel regressions on firm and industry fixed-effects reveal that the presence of the largest familial or individual shareholder deteriorates market-based performance, but not accounting-based performance. Inferior market performance could be due to the fact that concentrated ownership to families or individual could worsen market liquidity. Our results propose that firms with concentrated ownership to families and individuals would not be attractive for growth investors as they expect to earn a higher return through more liquid stocks. However, the negative market outcomes of such large shareholders seem to be mitigated by the presence of one of the big-4 auditors and of an independent board. These findings offer some important policy implications particularly for market regulators such that reconsidering the minimum public holding of firms and strengthening rules and regulations in order to protect the rights of minority shareholders.

**Keywords:** *Agency Theory, Corporate Performance, Familial or Individual Largest Shareholder, Sri Lanka*

### 1. INTRODUCTION

The term corporate governance was first introduced in the 1980s. Owing to major corporate scandals that took place all over the world, good practices of corporate governance were formed in the form of codes. Following corporate scandals, the United Kingdom drafted pioneering codes of best practices in corporate governance. During the late 1980s and early 1990s, a number of major British corporations, including Maxwell Communication Corporation, Pollypeck International, and the Bank of Credit and Commerce International, filed for bankruptcy. Further, bad

governance practices directed some other scandals world-wide such as Enron, WorldCom, and Tyco International. Cadbury and Greenbury committees in the UK were the driving forces of the evolution of such corporate governance practices. The reports of respective committees gave recommendations to listed companies on how management is responsible to implement internal governance structure. From time to time, scholars pay attention towards the conflicts of interest between different stakeholder groups. Several corporate governance mechanisms are implemented to solve such conflicts of interest and ultimately, to reduce the associated costs.

Ownership structure plays a vital role in reducing agency conflicts to the extent that corporate monitoring is attached to the ownership. Recent empirical research shows that founding-family ownership is connected with higher corporate performance in terms of both accounting performance and market valuation, when compared to widely-held companies (Anderson and Reeb, 2003; Villalonga and Amit, 2006; Barontini and Caprio, 2006). Berle and Means (1932) discuss that corporate governance is a mechanism of diffusion in the share capital possession of current organizations and has a separate ownership from control, and it is the method by which firms are overseen and regulated.

The arguments of agency theory lie at the heart of mainstream corporate governance frameworks (Berle and Means, 1932; Jensen and Meckling, 1976; Fama and Jensen, 1983). It explains the conflict between inside owners and outside parties of the firm. As per Jensen and Meckling (1976), the model on agency costs and ownership structure plays a key role. And also, even if there is no evident principal-agent relationship, agency costs emerge in any situation that involves a joint effort by two or more persons. The arguments of the agency theory were developed by Demsetz (1983) who concludes that a firm's ownership structure should be viewed as an endogenous result of actions that reflect shareholder involvement. Accordingly, there should not be a systematic relationship between changes in ownership structure and changes in corporate performance. Large shareholders in concentrated ownership firms hold a significant number of shares in order to increase the value of their holdings (Li, Wang, and Deng, 2008). Alternatively, if large owners utilize their control rights to gain personal gain, performance may decrease (Shleifer and Vishny, 1986). Owners of legal entities are more driven to make profits and have access to information, and also, they may perform better (La Porta, Florencio, and Shleifer, 1999).

Asian economies encounter the typical agency problem between large shareholders and minority shareholders (Claessens and Fan, 2002). Similarly, the ownership structure of Sri Lankan firms is highly concentrated in the hands of a few individuals, families, or corporate groupings who usually enjoy control rights exceeding cash flow rights. Usually, control is exercised in business groups through control pyramids or intermediate private firms (Mapitiya et al., 2015). Nazliben, Renneboog, and Uduwalage (2023) report that large shareholders (share blocks 3% or more) account for 78.80% of equity stake in Sri Lankan firms. Out of which, cumulative equity stake of large block owners (10% or more) stands at 69.08%. Therefore, it can be believed

that large shareholders may expropriate corporate resources to maximize their own benefits at the cost of minority shareholders. This can particularly be applicable when large shareholders unnecessarily interfere with managerial actions. This can be more severe when the ownership is concentrated to individuals or families. Particularly, such firms may practice nepotism where relatives or friends are taken into key positions of the firm. In family firms, decision making dominance of family members in the board as well as management team could be characterized. According to Nazliben, Renneboog, and Uduwalage (2023), families and individuals claim 15.09% of total equity of Sri Lankan firms, and a family or an individual is observed as the largest shareholder in approximately 12% of firms.

In Sri Lanka, the empirical literature often focuses on the classical agency problem between managers and shareholders and how it deteriorates corporate performance (e.g. Manawaduge and Zoysa, 2013). This may not be the severe agency problem in the corporate sector as the ownership is highly concentrated. In this research, we strive to implement a novel approach to examine the expropriating behavior of familial and individual large shareholders at the cost of minority shareholders. Therefore, the objective of this study is to examine the impact of ownership concentration on families or individuals on corporate performance. We further examine how this relationship is mediated by big-4 auditors, board independence and board size.

## **2. LITERATURE REVIEW**

Corporate Governance is a global phenomenon that attracts a lot of interest from academics and practitioners alike. A rising amount of research in this area indicates that this new field is gaining relevance, and its development has an impact on various disciplines. Experiencing many corporate failures across the world, "Corporate Governance" came into practice to manage the best interest of all stakeholders, to increase investor confidence, and to strengthen existing internal control mechanisms. Thus, corporate governance and control systems must be effective and efficient in order to mitigate possible expropriations. According to Williamson (1985), the firm's managers should be considered as a control mechanism to ensure that the firm's assets are handled in the best interests of shareholders. Long term value of the firm is, therefore, influenced by the distribution of ownership among different shareholder groups. Nevertheless, separation of ownership and control in the corporate setting often leads to agency problems between managers and shareholders.

### **Agency Theory**

The notions of separation of ownership from control and the agency theory have been the key considerations in investigating the association between ownership composition and firm performance. Berle and Means (1932) first noted an agency conflict between principal and the agent due to the separation of ownership and control. As the agents may strive to maximize their own benefits, rights of the principal may not be protected. Jensen and Meckling (1976) propose agency theory which states that a divergence of interest between managers and shareholders creates



an agency cost in modern corporations where managers will tend to act in their own interest, but not always in the interest of shareholders. Shleifer & Vishny (1997) also emphasize that separation of ownership and control is the key to agency conflicts between the providers of capital and those who run the business.

Agency cost comprises three components such as monitoring cost, bonding cost, and residual loss (see Jensen & Meckling, 1976). Monitoring costs are the control costs incurred when limiting the harmful activities of the agent. Bonding cost arises in relation to agent's actions which are beneficial to the principal. When both monitoring costs and bonding costs fail to control the harmful activities of the agent, residual loss incurs. These costs reduce corporate performance (Bozec & Bozec, 2007; Clark & Wójcik, 2005). Jensen & Meckling (1976) argue that the principal can mitigate the divergence of interest between agent and principal by introducing incentive instruments for managers and implementing monitoring procedures towards managerial actions. The approach of Jensen and Meckling has a number of advantages, the most important of which is its generality; agency interactions are all around us. When the firm is having weaker governance structure, managers act rationally to maximize their own benefits.

To mitigate the self-interested behavior of management, corporate governance practices can be implemented as a governing mechanism that requires delegating the board of directors the monitoring power over management. While corporate managers and shareholders are denoted as agent and principal respectively, board of directors is established as the monitoring body (Mallin, 2004). From time to time, agency theorists contribute to various governance mechanisms by ways of protecting shareholders' interests, minimizing organizational costs, and guaranteeing the companies' capacity to oversee and control their managers.

### **Ownership Concentration**

Empirical evidence on the relation between ownership composition and corporate performance are mixed. If the ownership is concentrated, it reduces the agency cost and provides monitoring incentives. Accordingly, based on such ownership structure, insider owners may have incentives to maximize own benefits, which may ultimately align with increased firm value.

As per Porta et al. (2002), countries with lesser shareholder protection are characterized by concentrated ownership structures, resulting in conflicts between majority shareholders and minorities. Large shareholders in small businesses are willing to integrate personal success and work mission with the success and mission of the corporation (Ciampi, 2015). Berle & Means (1932) state that there is a negative relationship between publicly-held firm's ownership structure and performance. Morck et al. (1988) ignore the endogenous issue and find a non-linear relationship between ownership structure and corporate performance proxied by Tobin's Q.

Results are inconsistent in the literature on the relations between ownership structure and corporate performance due to contextual differences among countries. For example, in emerging economies, corporate ownership is highly concentrated among families or individuals, which has a major positive effect on corporate performance

(Zeitun & Tian, 2007). Loderer & Martin (1997) and Demsetz & Villalonga (2001) find that there is no relationship between ownership structure and corporate performance in U.S. companies.

### **Individual or Family Ownership**

At first glance, founding families appear to be just one of several categories of blockholders. Similar to other large shareholders such as institutional shareholders, financial institutions and other corporate shareholders, families or individual blockholders may have a key interest in mitigating agency conflicts and consequently, boosting corporate performance. Family ownership should particularly be a powerful incentive because many families invest the majority of their own money in the business without diversifying their investment portfolio.

Family businesses may be more successful in terms of creating a work climate assuring trust and loyalty in employees' minds, which can ultimately result in lesser attrition and staffing costs (Ward, 1988). The long-term nature of family shareholdings also suggests that family businesses develop a reputation that influences their relationships with customers and capital providers. Anderson & Reeb (2003) find that family ownership is an effective organizational structure in the USA. In terms of market-based and accounting-based measures, family firms perform better than non-family firms.

On the other hand, family ownership may come with additional expenses and drawbacks. Family shareholders may largely expropriate minority shareholders' rights in order to maximize their own gains rather than the worth of the firm (Faccio et al., 2001). In addition, La Porta et al. (1999) establishes that many nations, including industrialized ones, lack appropriate laws and regulations to control major shareholders' expropriating behavior towards the rights of minority shareholders. In the empirical literature, many studies on founding-family ownership establish that family-owned businesses outperform. Accordingly, familial businesses can perform better than widely-held firms and those with other types of block holders.

## **3.METHODOLOGY**

The sample consists of 130 non-financial firms listed on the Colombo Stock Exchange excluding the financial sector firms due to their different reporting practices and extensive regulatory requirements. Data is collected as longitudinal data for seven years from the year 2013. The panel data window ultimately creates 910 firm-year observations. We consider the largest shareholder as the independent variable of the study, a binary variable that takes the value 1 if the largest shareholder is an individual or family, and 0 otherwise (see table 1). Corporate performance is the dependent variable which is proxied by Tobin's Q and return on assets (Demsetz & Villalonga, 2001; Morck et al., 1988). Tobin's Q has recently garnered a lot of interest as a performance indicator for the future. In order to compute return on assets, we use earnings before interest and taxes (EBIT) scaled by total assets. According to King & Santor (2008), Tobin's Q is a measurement that looks ahead and seeks to reflect how

the market values the firm's assets about its book value and the company's potential for future growth.

The ownership structure of the company might interact with other corporate governance mechanisms. Besides, the study uses corporate governance mechanisms such as auditor of the company (dummy variable equals 1 if the auditor belongs to a big-4 audit firm), board size, and board independence (proportion of independent non-executive directors) as interaction terms on the relationship between largest shareholder and corporate performance.

Firm size (natural logarithm of total assets), financial leverage (ratio of the book value of total liabilities to total assets), CEO duality, and firm age can influence corporate performance and they are used as control variables. Table 1 illustrates detailed descriptions of these variables. Results are generated through correlation analysis, and panel regression analysis with interaction terms.

**Table 1. Variable Definitions**

Variable	Acronym	Measurement
<i>Dependent variables</i>		
Tobin's Q	Tob. Q	(Book value of liability + market value of equity) / Book value of assets
Return on Assets	ROA	Earnings before interest and taxes to total assets
<i>Independent Variables</i>		
Largest Shareholder	Larg. Sha.	Dummy variable equals to 1 if the largest shareholder is a family or an individual, and 0 otherwise
<i>Interaction Variables</i>		
Auditor	Auditor	Dummy variable equals to 1 if the auditor belongs to big-4 audit firm, and 0 otherwise
Board Size	Boar. Siz.	Number of directors on the board
Board Independence	Boar. Ind.	Proportion of independent non-executive directors
<i>Control Variables</i>		
Firm Size	Firm Size	Natural logarithm of total assets
Financial Leverage	Fin. Leve.	Book value of total liabilities to total assets
CEO Duality	CEO Dual.	A dummy variable equals to 1 if the CEO holds board chair position, and 0 otherwise
Firm Age	Firm Age	Natural logarithm of firm age

#### 4. FINDINGS AND DISCUSSION

Table 2 shows that the large shareholder (familial or individual largest shareholder) is present at 8% of occasions in the sample. The audit of more than 90% of firms is carried out by one of the big-4 auditors. Though an average board consists of eight directors, it comprises nearly 40% of independent non-executive directors. Around in one-fourth of firms, the CEO also holds the board chair position. The sample firms

are less likely to be financially leveraged (about 35%). Return on assets and Tobin's Q of an average firm amount to 9% and 1.35, respectively.

**Table 2. Descriptive Statistics**

Variable	Obs.	Mean	S.D.	Min.	Max.
Largest shareholder (dummy)	910	0.081	0.274	0.000	1.000
Big-4 auditor (dummy)	910	0.904	0.294	0.000	1.000
Board size (number)	910	8.047	2.039	3.000	14.000
Board independence (ratio)	910	0.389	0.113	0.111	0.875
Firm size (number)	910	3.089	0.055	2.917	3.217
Financial leverage (ratio)	910	0.355	0.274	0.000	1.774
CEO duality (dummy)	910	0.236	0.236	0.000	1.000
Firm age (number)	910	3.117	0.716	0.000	4.511
Tobin's Q (ratio)	910	1.347	1.598	0.141	19.272
Return on assets (ratio)	910	0.094	0.272	-1.618	4.162

Source: Authors' Own, 2022

**Table 3. Correlation Matrix**

	1	2	3	4	5	6	7	8	9	10
Larg. Sha.	1.00									
Auditor	0.02	1.00								
Boar. Siz.	0.08	-0.02	1.00							
Boar. Ind.	0.06	-0.07	-0.12	1.00						
Firm Size	0.01	-0.04	0.22	-0.07	1.00					
Fin. Leve.	-0.11	0.20	0.13	-0.14	0.25	1.00				
CEO Dual.	0.07	0.01	-0.01	0.01	0.06	0.15	1.00			
Firm Age	-0.05	-0.10	0.02	-0.03	-0.01	-0.05	-0.15	1.00		
Tobin's Q	-0.06	0.03	-0.06	-0.06	-0.02	0.00	-0.07	0.15	1.00	
ROA	0.08	-0.04	-0.06	0.03	-0.04	-0.03	-0.07	0.06	0.31	1.00

Source: Authors' Own, 2022

In Table 3, we show how familial or individual largest shareholder, and other corporate governance and firm-specific characteristics correlate with corporate performance. While the familial or individual largest shareholder positively relates to accounting performance (ROA), it is negatively related to market-based performance measure (Tobin's Q). It indicates that firms having familial or individual shareholder as the largest shareholder tend to generate higher accounting return but worsen market performance. In terms of accounting performance, an opposite relation is observed on the presence of big-4 auditors. Large boards, boards dominated by a unitary leader as well as large firms seem to deteriorate corporate performance. Mature firms, however, show higher performance than younger ones.

The study uses fixed-effect model to test the impact of concentrated ownership to a family or an individual on corporate performance. The results of Hausman test were used to select the fixed-effect model ( $\chi^2(5) = 22.68, p < 0.05$ ) which was compared with random-effect model. Table 4 exhibits panel regression results against Tobin's Q and return on assets. In models (1) and (2), familial or individual largest shareholder negatively impacts on Tobin's Q, but ROA carries positive insignificant

coefficients. In relation to East Asia, Claessens et al. (1999) observe a negative relationship between concentrated control rights and share price valuation. Over all models, large firms generate lower corporate performance while mature firms earn higher market returns (model (2)). Unitary leadership structure deteriorates both market performance (model (2)) as well as accounting return (4)). According to the panel industry and time-fixed effects regression model (model 2),  $R^2$  stands at 11.81%. It indicates that regressors of the model explain 11.81% variation of the response variable; Tobin's Q.

**Table 4. Panel Regressions**

	Dependent variable			
	Tobin's Q		Return on Assets	
	(1)	(2)	(3)	(4)
Largest shareholder	-0.131 (0.126)	-0.368*** (0.099)	0.023 (0.079)	0.087 (0.070)
Firm size	-2.902 (4.119)	-3.195* (1.662)	-0.669 (2.221)	-0.177 (0.271)
Firm age	-0.574 (0.478)	0.5144*** (0.119)	-0.025 (0.050)	0.017 (0.012)
Financial leverage	0.229 (0.283)	0.079 (0.211)	-0.045 (0.084)	-0.033 (0.027)
CEO duality	-0.024 (0.094)	-0.135* (0.080)	-0.190 (0.150)	-0.059*** (0.017)
Constant	11.979 (12.563)	10.607** (5.280)	2.264 (6.798)	0.645 (0.844)
Year dummy	yes	yes	yes	yes
Industry dummy	no	yes	no	yes
$R^2$	0.0113	0.1181	0.0181	0.0627
Prob> F	0.0000	0.0000	0.0000	0.0000
Groups	130	130	130	130
Obs.	960	960	960	960

Source: Authors' Own, 2022

Notes: \*\*\*, \*\*, and \* denote statistical significance at 1%, 5%, and 10 levels, respectively.

Models (1) and (3) report firm and time-fixed effect regressions and Models (2) and (4) belong to industry and time-fixed effects regressions.

In Table 5, we implement a robustness analysis where familial or individual largest shareholder is allowed to interact with some firm and board characteristics. Accordingly, the negative impact of familial or individual largest shareholder on corporate performance disappears in the presence of one of the big-4 auditors (model (1)) and of independent boards (model (4)).

**Table 5. Panel Regressions (Interactions)**

	Dependent Variable					
	Tob. Q (1)	ROA (2)	Tob. Q (3)	ROA (4)	Tob. Q (5)	ROA (6)
Larg. Sha.	-0.791***	0.006	-0.772**	-0.330*	-0.172	0.319
Auditor	-0.149	-0.057				
Aud. Com.						
Boar. Ind.			-0.550	-0.058		
Boar. Siz.					-0.069**	-0.007**
Larg.Sha. * Auditor	0.353*	0.083				
Larg.Sha.* Boar.Ind.			0.764	0.979*		
Larg. Sha.*Boar.Siz.					0.030	-0.027
Firm Size	-0.164**	-0.007	-0.166**	-0.004	-0.152**	-0.006
Firm Age	0.038***	0.002**	0.037***	0.002**	0.038***	0.002**
Fin. Leve.	0.113	-0.039	0.097	-0.038	0.188	-0.023
CEO Dua.	-0.184	-0.062***	-0.183**	-0.063***	-0.175**	-0.058***
Intercept	5.246	0.330	10.657	0.221	5.262***	0.282
Industry dummy	yes	yes	yes	yes	yes	yes
R <sup>2</sup>	0.1650	0.070	0.1654	0.0845	0.1712	0.0734
Prob> F	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Obs.	910	910	910	910	910	910

Source: Authors' Own, 2022

## 5. CONCLUSION

This study investigated the impact of ownership concentration on the family or individuals on the corporate performance of a sample of listed firms in Sri Lanka. We conclude that the presence of the largest familial or individual shareholder deteriorates market-based performance, but not accounting-based performance. These results are more valid when we capture industry-wide differences. Inferior market performance could be due to the fact that concentrated ownership to families or individuals could worsen market liquidity. Remarkably, negative market outcomes of such large shareholders seem to be mitigated on the presence of one of the big-4 auditors and of an independent board. We propose that firms with concentrated ownership to families and individuals would not be attractive for growth investors as they expect to earn a higher return through more liquid stocks. The scope of this study is limited to an analysis of ownership concentration disregarding the status of ultimate ownership. Such concentrated owners may also expropriate corporate resources at the cost of minority shareholders, which could be an agenda for future research.

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

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### 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 9allgood 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**

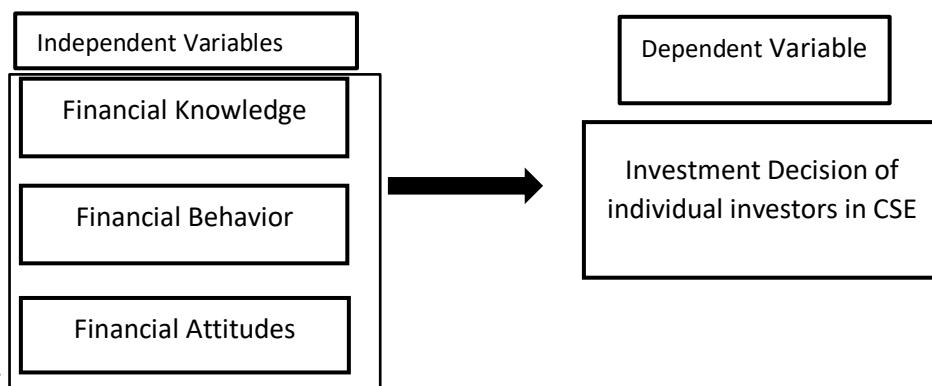
In the last couple of years, financial literacy received special attention from researchers, financial institutions, and policy makers (Kumari, 2017; Lusardi, 2019). The capability to manage personal finances has become increasingly important in today's world. People must plan for long-term investments 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. Therefore, 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.

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## IMPACT OF CAPITAL STRUCTURE ON FIRM'S FINANCIAL PERFORMANCE; EVIDENCE FROM COLOMBO STOCK EXCHANGE IN SRI LANKA

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### ABSTRACT

This research attempts to investigate the impact of capital structure on a firm's financial performance. This study selected 45 companies out of 285 companies as a sample of the study. The study mainly focused on 4 sectors within 19 sectors including consumer durables and apparel, health care and equipment, retailing, and real estate listed in the Colombo Stock Exchange in Sri Lanka from the period 10 years from 2011 to 2020. Capital structure is the independent variable and financial performance is the dependent variable. Short-term debt to total equity, long-term debt to total equity, short-term debt to total asset, and long-term debt to the total asset are the proxies of capital structure and the return on equity, return on asset and the earnings per share are the proxies of financial performance. Firm size and firm age are used as control variables in this study. The study found that there was a significant positive relationship between short-term debt to total asset, firm size, firm age, and return on equity while there was a significant negative relationship between short-term debt to total equity, long-term debt to total equity and return on equity. However, there was an insignificant positive relationship between long-term debt to total assets and return on equity. On the other hand, there was a significant negative relationship between short-term debt to total equity, long-term debt to total asset, firm age, and the return on asset while there was an insignificant positive relationship between long-term debt to total equity, short-term debt to total asset, firm size with return on asset. Furthermore, results also found that all the variables had having insignificant relationship with earnings per share. There was an insignificant negative relationship between short-term debt to total equity, long-term debt to total assets, short-term debt to total assets, and earnings per share, and an insignificant positive relationship between long-term debt to total equity and the control variables. This study provides valuable information to the stakeholders, shareholders, investors, entrepreneurs, students as well as potential researchers.

**Keywords:** *Firm Age, Firm size, Long-term Debt to Total Equity, Long-Term Debt to Total Asset, Return on Asset, Return on Equity, Short-term Debt to Total Asset, Short-term Debt to Total Equity*

### 1. INTRODUCTION

Capital structure is the major corporate decision of the company. According to, Horne & Wachowicz, (2009) "capital structure is the mix of a firm's permanent long-term

financing represented by debt, preferred stock, and common stock equity". Simply capital structure represents the debt and equity of the company. To maximize the firm's value, it is really important to make optimal decisions regarding the capital structure.

The relationship between capital structure and a firm's financial performance is a very argumentative topic in prior literature. Some researchers found that there is a significant relationship between capital structure and a firm's financial performance Yinusa et al, (2019) and some found that it has a negative relationship Salim and Yadav, (2012b) and also some literature revealed that there is no significant relationship between capital structure and firm performance Al-taani, (2013).

This research will address the question "Does capital structure impact on financial performance of the firm?" By addressing the question, research will be focused on examining the impact of capital structure on the firm's financial performance in selected companies under the selected sectors.

This study aims to reveal the impact of capital structure on a firm's financial performance in sectors of consumer durables and apparel, healthcare equipment and services, retailing and real estate listed in the Colombo Stock Exchange from 2011 to 2020. Previously, researchers did not investigate that relationship based on the selected sectors as research. The sectors that will be investigated in this research have different characteristics and are independent of each other. Therefore, in Sri Lanka, there is a lack of research regarding above mention topic and there is limited research conducted in Sri Lanka that analyzed selected sectors and selected variables within the selected time frame. Hence this research fills the gap in previous literature reviews. Also, this research gives a signal to maintain optimum capital structure and debt and asset ratio to boost the overall financial performance of the firm.

## **2. LITERATURE REVIEW**

### **Theoretical Literature Review**

#### **Modigliani and Miller (M & M) theory**

As per the past research, Franco Modigliani, (1958) was the first scholar who found the theoretical part of capital structure. He introduced the "M&M theory" to describe the capital structure based on several assumptions such as homogeneous expectations, no taxes, no transaction cost, no bankruptcy cost, no insider information, and no retained earnings. He said that capital structure is irrelevant to the firm's value. However, most scholars criticize his unrealistic assumptions because those assumptions are not practical for real-world companies. Further, he revised his theory Franco Modigliani; Merton H. Miller, (1963) and he suggested that firms should use more debt to gain the tax benefit on tax shield to increase the firm value.

**Agency theory**

According to the agency theory introduced by Smulowitz et al., (2019), one or more persons (the principal) engage another person (agent) to perform some service on their behalf which involves delegating some decision-making authority to the agent. Optimum capital structure decisions played a key role in agency problems. Simply it is the manner which the executives and managers act in the best interest of owners or the shareholders. He suggested that if the firm financed more from debt it would lead to reduced free cash flow to the managers and as a result that agency problem could be controlled. Also, he revealed that agency problems are also relative to debt in the shape of risk shifting. Therefore, agency theory suggests that the harshness of agency problems can be decreased by more leverage. Finally, agency theory indicates that using more debt in the company's capital structure can be caused to increase the firm performance.

**Trade-Off theory**

When referring to the trade-off theory introduced by Myers, (1984) the firms that follow the trade-off theory set the target debt-to-value ratio and then gradually move toward the target. While balancing the debt tax shield against the cost of bankruptcy, the target is determined. It can be concluded that as safe firms, firms should engage with more tangible assets and more taxable income while maintaining higher debt ratios. He revealed that the benefit gained by tax shield is equal to the cost of financial distress. Simply trade-off theory explains how much a company should choose debt finance or how much a firm should choose equity finance while balancing the costs and benefits. This theory suggests that a firm should maintain the optimum level of capital structure when determining the debt and equity ratio. By the theory, neither more debt nor more equity is good for the increase of the overall performance of the firm.

**Pecking Order Theory**

Based on the information asymmetric and no transaction cost, Majluf, (1984) introduced the pecking order theory. He revealed that the firm should use internal funds firstly to finance the firms, and if there is any deficit firm can finance from debt externally. Asymmetric information heavily affects the choices between internal and external financing as well as the issue of debt and equity. Theory believes that, if the firms issue debts, shareholders think that investment is more profitable and the current stock price is undervalued. In contrast, if the firm issues more equity, shareholders believe that, the investment is not profitable and share price is overvalued. Therefore, the pecking order theory explains the inverse relationship between debt and the profitability or the performance.

**Empirical Literature Review**

Tifow, (2015) investigated the relationship between capital structure and firm performance based on 130 manufacturing firms listed on Borsa Istanbul from 2008 to 2013 by using panel data analysis. The study revealed that short-term debt to total assets has a significant negative relationship with Return on Assets (ROA), Earnings Per Share (EPS), and Tobin's q ratio. Also, long-term debt to total assets has a

significant negative relationship with ROE, EPS and Tobin's q ratio, while it is positively and significantly correlated with ROA.

Also Hasan, (2014) studied the influence of capital structure on a firm's performance by using a sample of 36 Bangladeshi firms listed in the Dhaka Stock Exchange during the period 2007-2012. He found that EPS is significantly positively related to short-term debt while significantly negatively related to long-term debt. There is a significant negative relation between ROA and capital structure. On the other hand, there is no statistically significant relationship exists between capital structure and a firm's performance as measured by ROE and Tobin's q. He concluded that capital structure has a negative impact on a firm's performance. This research suggested that finance managers should use debt as the last alternative in their capital structure.

Cole & Hemley, (2015) studied the relationship between capital structure and the performance of United States firms in the industrial, healthcare, and energy sectors by using 10-year panel data (2004-2013) and using 300 observations per sector. The study revealed that the relationship between capital structure and firm performance can vary from sector to sector, as well as variable-to-variable

Pouraghajan, (2012) also examined the impact of the capital structure on a firm's performance of a sample of 400 companies listed on the Tehran Stock Exchange. Results suggested that there is a significant negative relationship between debt ratio and the financial performance of companies. Results show that by reducing the debt ratio, management can increase the company's profitability and thus the amount of the company's financial performance measures and can also increase shareholder wealth.

Soumadi & Hayajneh, (2012) investigated the effect of capital structure on the performance of the public Jordanian firms listed in the Amana Stock Market. Results concluded that capital structure was associated negatively with firm performance and also there was no significant difference in the impact of the financial leverage between high financial leverage firms and low financial leverage firms on their performance.

Nguyen & Nguyen, (2020) explore the impact of capital structure on a firm's performance in state-owned and non-state enterprises listed on the Vietnam Stock Market with a sample of 488 non-financial listed companies for a period of 6 years from 2013-2018. Results revealed that capital structure has a statistically significant negative effect on the firm performance.

Sorana, (2015) investigated the relationship between capital structure and financial performance in 196 Romanian companies listed on the Bucharest Stock Exchange and operating in the manufacturing sector, throughout eight years from 2003-2010. The study found that performance in Romanian companies is higher when they avoid debt and operate based on equity.

Muritala, (2012) examined the optimum level of capital structure in which the firm can increase its performance based on 10 listed non-financial firms in Nigeria

throughout 2006-2010. Results indicated that there was a negative relationship between ROA and ROE and financial performance.

Salim & Yadav, (2012b) also investigated the relationship between capital structure and firm performance by investigating the panel data for a sample of 237 Malaysian listed companies on the Bursa Malaysia Stock Exchange for the period from 1995 to 2011. Results revealed that capital structure impacts were negatively measured by ROE and there was a negative significant impact on capital structure and the ROA.

Ahmed Rafiuddin, (2020) examines the relationship between the capital structure and the firm performance of the service sector firms of the Australian Stock Market for the period of 11 years from 2009 to 2019 using 1001 firm-year observations. They revealed that there was a significant association between ROE and leverage levels, leverage affects performance at a statistically significant level.

In the Sri Lankan context, Pratheepkanth, (2011) studied the impact of capital structure on companies' performance over 5 years from 2005-2009 by using selected business companies listed in the Colombo Stock Exchange. Debt to equity ratio and debt to total funds ratio are used to measure the capital structure. Gross profit margin, net profit margin, return on and return on equity over return on capital employed are used to measure the financial performance. Results show that there was a negative relationship between capital structure and the firm's performance.

Furthermore, Manawaduge et al. (2011) investigated the impact of capital structure on a firm's performance by using 155 industrial companies excluding bank, finance, and insurance sectors listed in the Colombo Stock Exchange from 2002-2008. Return on asset and Tobin's q were used as the measure of performance as well as leverage ratio, growth of sales, total sales, risk, tax/earnings before interest and tax, and tangibility used as the measure of capital structure. They found that Sri Lankan firms were negatively affected by the use of debt capital against equity capital for performance.

### **3. METHODOLOGY**

This research was conducted in Sri Lanka in which a total of 45 companies out of 53 were involved from the 4 sectors out of 19 sectors listed in the Colombo Stock Exchange such as consumer durables and apparel, health care and equipment, retailing and real state for the 10 years from 2011-2020. Secondary data sources were used to gather the data such as financial reports of each company.

Financial performance is the dependent variable and capital structure is the independent variable. To determine the capital structure, short-term debt to equity ratio, long-term debt to equity ratio, short-term debt to total assets ratio, and long-term debt to total asset ratio were used. As well as to measure the financial performance, ROA, ROE, and EPS were used. Moreover, the control variable firm size and the firm age were used in this research.

While considering these variables, three models were developed to test the hypothesis in this research.



$$ROE = \pm\beta_0 \pm \beta_1 STDTE_{it} \pm \beta_2 LTDTE_{it} \pm \beta_3 STDTA_{it} \pm \beta_4 LTDTA_{it} \pm \beta_5 fz_{it} \pm \beta_6 fa_{it} + \varepsilon$$

(1)

$$ROA = \pm\beta_0 \pm \beta_1 STDTE_{it} \pm \beta_2 LTDTE_{it} \pm \beta_3 STDTA_{it} \pm \beta_4 LTDTA_{it} \pm \beta_5 fz_{it} \pm \beta_6 fa_{it} + \varepsilon$$

(2)

$$EPS = \pm\beta_0 \pm \beta_1 STDTE_{it} \pm \beta_2 LTDTE_{it} \pm \beta_3 STDTA_{it} \pm \beta_4 LTDTA_{it} \pm \beta_5 fz_{it} \pm \beta_6 fa_{it} + \varepsilon$$

(3)

Where,

ROE = return on equity

ROA = return on asset

EPS = earnings per share

STDTE = short-term debt to total equity ratio

LTDTE = long-term debt to total equity ratio

STDTA = short debt to total asset ratio

LTDTA = long debt to total asset ratio

fz = firm size

fa = firm age

$\varepsilon$  = error term

$\beta_0$  = constant

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6$  = co-efficient

By referring to this model it was supposed to achieve the ultimate goal of the research. In other words, results were measured by using this model to check whether there is a significant impact on the capital structure on a firm's financial performance. To achieve that, hypotheses were developed for each model.

H1: there is a significant impact of capital structure and firm's financial performance.

Model 1

H2: there is a significant impact of short-term debt to total equity ratio and ROE.

H3: there is a significant impact of long-term debt to total equity ratio and ROE.

H4: there is a significant impact of short-term debt to total asset ratio and ROE.

H5: there is a significant impact of long-term debt to total asset ratio and ROE.

Model 2

H6: there is a significant impact of short-term debt to total equity ratio and ROA.

H7: there is a significant impact of long-term debt to total equity ratio and ROA.

H8: there is a significant impact of short-term debt to total asset ratio and ROA.

H9: there is a significant impact of long-term debt to total asset ratio and ROA.

Model 3

H10: there is a significant impact of short-term debt to total equity ratio and EPS.

H11: there is a significant impact of long-term debt to total equity ratio and EPS.

H12: there is a significant impact of short-term debt to total asset ratio and EPS.

H13: there is a significant impact of long-term debt to total asset ratio and EPS.

#### 4. FINDINGS AND DISCUSSION

Analysis was done by using a descriptive statistic table and multiple regression analysis with a random effect GLS model. The research used mainly 3 variables to develop the model such as ROE, ROA and EPS.

##### Descriptive Statistics

The following table shows the summary of descriptive statistics for all the variables taken into the model. It mainly shows the mean, median, maximum, minimum, standard deviation, skewness, kurtosis and the count of observations.

**Table 1: Summary of Descriptive statistics**

Stats	ROE	ROA	EPS	STDTE	LTDTE	LTDTA	STDTA	fz	Fa
Mean	0.0669	0.0468	16.2962	0.7300	0.3294	0.1434	0.2463	19.7150	3.5640
Median	0.0708	0.0418	2.01	0.2708	0.1210	0.0809	0.1792	20.9859	3.5264
Maximum	2.514	1.246	775.97	24.800	5.7637	1.3743	1.3532	24.9896	4.7185
Minimum	-4.4217	-0.6534	-240.16	-7.871	-10.96	0	0	0	1.7918
Standard Deviation	0.3184	0.1103	66.4471	1.8224	0.863	0.1882	0.2409	3.6849	0.5382
Skewness	-5.2578	1.972	6.7548	5.8785	-3.472	2.7849	1.5472	-1.4365	-0.008
Kurtosis	99.9872	39.3653	62.9437	74.027	72.2939	12.5225	7.7871	6.3085	3.0343
N	450	450	450	450	450	449	449	450	450

As per the table, all the variables have a positive mean. Also, it revealed that there was a very poor return on performance on ROE, ROA and EPS. This means that on average the selected companies do not utilize well their asset to generate profit for their shareholders. Also, selected companies are highly leveraged within the sample period. It can be seen that selected companies used to have more short-term debt than equity financing. Furthermore, selected companies were also found to be highly financed by debts but not more than equity financing.

**Multiple Regression Analysis**

To analyze the results, this research used multiple regression analysis techniques. Using the panel root test of Levin Lin Chu, check whether those variables are stationary or not.

**Table 2: Unit root test on Levin Lin Chu**

Variables	Probability	Results
<b>ROE</b>	0.0000	Stationery
<b>ROA</b>	0.0000	Stationery
<b>EPS</b>	0.0000	Stationery
<b>LTDTE</b>	0.0286	Stationery
<b>STDTE</b>	0.0091	Stationery
<b>LTDTA</b>	0.0003	Stationery
<b>STDTA</b>	0.0001	Stationery
<b>Fz</b>	0.0000	Stationery
<b>Fa</b>	0.0000	Stationery

Then Hausman test and Breusch-Pagan Lagrangian Multiplier test were used to select the most appropriate model among the pooled Ordinary Least Square model, random effect model and fixed effect model. The below table shows the summarized test results.

**Table 3: Hausman test results and Breusch-Pagan Lagrangian Multiplier test results**

Variable	Hausman test results	Breusch-Pagan Lagrangian Multiplier test	Conclusion	
<b>ROE</b>	-	0.0000	Random model used	Effect
<b>ROA</b>	0.6944	0.0000	Random model used	Effect
<b>EPS</b>	0.9712	0.0000	Random model used	Effect

Based on the Hausman test results, it was suggested that research should apply a random effect model over the other model since the probability of Hausman test results greater than 0.05. Also after rejecting the fixed effect model Breusch-Pagan lagrangian multiplier test was also done to check whether the random effect model or pooled OLS model should be applied for this study. Also, the probability of the Breusch-Pagan lagrangian multiplier test was below 0.05. Therefore it was selected to apply all the regression results based on the random effect GLS model. Hausman test results were unable to apply for the ROE. So after running both the fixed effect and random effect model, the random effect GLS model selected for the ROE model was also compared with both results generated from each model. So while considering the goodness of the model and the significance of the variables, the random effect GLS model was selected to analyze the results.

**Summary of the Results**

By analyzing the three models, it was generated the different results of each model. The summary output of the results can be shown in the following table.

**Table 4: Summary of the beta coefficient of variables**

<b>Variables</b>	<b>ROE</b>	<b>ROA</b>	<b>EPS</b>
<b>STDTE</b>	-0.1149*	-0.0088*	-0.1073
<b>LTDTE</b>	-0.0659*	0.0127**	0.1805
<b>LTDTA</b>	0.1196	-0.1155*	-24.2217
<b>STDTA</b>	0.4211*	0.0173	-10.0805
<b>Fz</b>	0.0085*	0.0013	1.0438
<b>Fa</b>	-0.0842*	-0.0342*	19.1628

\*Significant under 5% significant level \*\*Significant under 10% significant level.

So, results indicated that the impact on capital structure on firm performance varied from the variables and indicators that are used to measure the capital structure and the firm performance. As per the results, it was clear that the STDTE ratio has a significant and negative impact on firm performance. But LTDTE ratio has a significant negative impact on ROE and a positive impact on ROA. However, there is an insignificant positive impact on LTDTE and the EPS. LTDTA has a negative impact on ROA and EPS while there is a positive impact on ROE. STDTA has a positive impact on firm performance except for EPS. Firm size positively impacts firm performance and the firm age negatively affects the firm performance except from EPS.

H1: there is a significant impact of capital structure and firm's financial performance.

So, it was clear that the relationship between the capital structure on firm performance depends on the variables taken to the model as well as the techniques that are used to analyze. Based on the results of the study, it can be said that there was a significant impact on capital structure on firm's financial performance. Further, it revealed that using more debt than equity causes to decrease in the financial performance of the firms. However, based on the model and variables, results can be different.

Furthermore, it was found that, an increase in short-term debt over equity caused to decrease in the firm's financial performance, and an increase of long-term debt over equity caused to boost in the performance of the firm. Moreover an increase in long-term debt over assets caused to decrease in the firm performance while an increase in short-term debt over assets caused to increase in the performance of the firm.

**5. CONCLUSION**

This research aims to examine the impact of capital structure on a firm's financial performance in selected companies under the selected sectors. To examine that, this study used 4 sectors listed in CSE in Sri Lanka such as consumer durables and apparel, health care and equipment, retail and real estate. The study used panel data

for the period of 10 years from 2011 to 2020 for a sample of 45 companies within the 4 sectors. To estimate the relationship between capital structures on a firm's financial performance, the study used the random effect GLS model.

The findings of the study revealed that selected companies used more short-term debt than equity as their main source of finance. Also based on the 95% confidence level, the estimated model explained that short-term debt to total equity and long-term debt to total equity have a significant negative relationship with return on equity. There is a significant positive relationship between short-term debt to total assets and control variables including firm size and firm age and the return on equity. Apart from that, there was an insignificant positive relationship between long-term debt to total assets and the return on equity. This model found that capital structure with more debt caused to decline in the firm's financial performance and these results are consistent with the Manawaduge et al. (2011) and Salim & Yadav, (2012b).

Furthermore second model explained that there was a negative significant relationship between short-term debt to total equity, long-term debt to total assets and the firm age and the return on assets. Also, there was an insignificant positive relationship between long-term debt to total equity, short-term debt to total asset and the firm size and return on asset. Even though these results were based on a 95% confidence level, there was a significant positive relationship between long-term debt to total equity and return on asset.

Moreover, the third model discussed the relationship between earnings per share and the proxies of capital structure under a 95% confidence level. Results indicated that there was an insignificant negative relationship between the short-term debt to total equity, long-term debt to total asset and the short-term debt to total asset. As well as there was also an insignificant positive relationship between long-term debt to total equity and the control variables such as firm size and the firm age.

Finally, it was concluded that depending on the variables and the indicators, the impact of capital structure on firm performance can be different. it consist of the result of Cole & Hemley,(2015) who indicated the same result. Long-term debt over equity on firm performance and short-term debt over equity have a negative impact on firm performance. It means that if the firm uses more debts in its capital structure, it can be caused to reduce its financial performance. These results were also founded by Pratheepkanth,(2011). As well as short-term debt over asset has a positive impact on firm performance while long-term debt over asset has a negative impact. So firm should maintain optimum debt and asset ratio to boost the overall financial performance of the company.

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**DETERMINANTS OF ADAPTION OF MOBILE MONEY USAGE IN SRI LANKA****Shifka, M.A.F.<sup>1</sup>, Ediriweera, E.A.I.N.<sup>2</sup>***<sup>1,2</sup>Department of Accountancy, Faculty of Business Studies and Finance, Wayamba University of Sri Lanka, Sri Lanka**<sup>1</sup>shifkakram98@gmail.com, <sup>2</sup>induniln@wyb.ac.lk***ABSTRACT**

The technology of transferring funds and performing banking services using mobile phones was first introduced in Kenya and is now widely spanned across the globe with more than 250 service providers. Albeit we observed a disparity in the popularity of using the mobile money facility within the Sri Lankan context. While integrating the Technology Acceptance Model with the Diffusion of Innovation theory we extended the Technology Acceptance Model expecting to identify the impact of the key attributes of the Technology Acceptance Model, (intention to use a system and usage of a system) on customers' adaption to use a system. This study especially focused on mobile money users and conducted the study by testing the theories using quantitative techniques. We collected 402 responses for the Likert scale questionnaire and analysed the data to unveil the findings. The results revealed that awareness, risk, trust, and knowledge are the determinants of the intention to use mobile money. Perceived usefulness, perceived ease of use, perceived network quality, and perceived costs determine the usage of mobile money while complexity and compatibility determine the adaption of mobile money. The study finally confirmed that the intention to use mobile money determines the usage of mobile money which then determines the adaption of mobile money. Accordingly, we can conclude that the usage of a system (Mobile Money) significantly influences the users' adaptation to the system. Accordingly, we reveal that the use of mobile money is a positive stimulus that motivates users to adapt to the facility. Since there is a disparity in the popularity of the Mobile Money facility in Sri Lanka, the service providers can develop loyal customers by promoting the Mobile Money facility among their users.

***Keywords: Adaption to a System, Intention to Use a System, Mobile Money, Technology Acceptance Model, Usage of a System,***

**1. INTRODUCTION**

Adaption to innovations is a key factor for the users to reap the benefits of technological advancements. Rogers described adaption as the decision to make full use of innovations (Rogers, 1995). The increasing penetration of technological advancements in the society we live in today has made many changes and requires users to adapt. Advancements such as the introduction of mobile money have accelerated the growth in the finance sector through its nature of facilitating financial



transactions in a quick, safe, and fast way. Spreading rapidly, mobile money has transformed the demography of financial inclusion and leapfrogged traditional banking services (Aron, 2018). Mobile money initially dominated domestic money transfers, but now it has expanded into a broader payment platform including the payment of utility bills, school fees, rent, taxes, and retail payments as well. The usage of mobile money has been increasingly used to overcome financial exclusion among the poor and has helped smoothen their economic activities. Even though the mobile money services offered by mobile networks provide advantages to their users, attracting the target group of customers towards the mobile money service has been a challenge so far. Motivated by this ongoing challenge, we designed this study to identify the determinants of adaption for mobile money usage among Sri Lankans.

Ample studies based around the Sub-Saharan region where mobile money originated but very few studies targeting to address issues based in the Sri Lankan context are found. Moreover, there is a noticeable gap in studies that have identified the intention to use mobile money and the usage of mobile money as the building blocks of its adaption. These problems paved the way for the construction of the research questions;

- a) How does the Intention to Use mobile money provoke the usage of mobile money eventually allowing users to adapt to it?
- b) What are the factors that have an impact on determining the intention to use mobile money, the usage of mobile money, and the adaption of mobile money in Sri Lanka?

To find answers to these questions, this study sought to identify how the adaption of mobile money eventually arises from the intention to use mobile money and the usage of mobile money and also to identify factors that have an impact in determining the intention to use mobile money, the usage of mobile money and the adaption of mobile money in Sri Lanka.

## **2. LITERATURE REVIEW**

### **The Technological Acceptance Model**

The Technological Acceptance Model explains how users come to decide how and when they will use new technology. The Technological Acceptance Model employs perceived ease of use and perceived usefulness as the determinants of the intention which in turn determines the usage (Silva, 2015). Numerous studies were conducted by Davis (1989) to emphasize that perceived usefulness and perceived ease of use are the key determinants of the usage of technological innovations. Two factors that affect the likelihood of an individual using new technology or “intention to use a system”; are perceived ease of use and perceived usefulness (Charness & Boot, 2016; Venkatesh & Davis, 2000). We define “perceived usefulness” as the user’s likelihood that the use of a certain system will improve his/her actions and “perceived ease of use” as the degree to which the potential user expects the target system to be effortless

(Davis, Bagozzi, & Warshaw, 1989). We could derive these two factors as determinants of the usage of mobile money for our study. Thereby, we also could articulate that the positive stimuli from the “intention to use mobile money” motivate an individual to turn his or her intention into action (usage of mobile money), ultimately leading to the adaption.

### **Diffusion of innovation**

Diffusion of Innovation is the theory that explains how, why, and at what rate new ideas and technology spread. Rogers (2003) defines diffusion as the process by which an innovation is communicated over time among members of a social system. This theory is often used to explain the behaviour of adaption. “Relative advantage” is the degree to which an innovation is considered to be better than the already existing ones, “complexity” which is the extent to which an innovation is difficult to be understood, “compatibility” is the degree to which an innovation is believed to adhere with existing values and norms, “trialability” which is the extent to which an innovation can experiment, and “observability” which is the degree to which the results of innovation can be observed by others, are the main influences of adaption behaviour according to the theory (Rogers, 1995). Therefore, as per the Diffusion of Innovation Theory, we measured the level of adaption for mobile money through relative advantage, complexity, compatibility, trialability, and observability.

### **Review of Literature**

To increase the adaption and usage of technological innovations, it is important to identify the factors that motivate and stimulate the intention to use (Tao, 2008). Several studies confirmed that “awareness” (Alkhunaizan & Love, 2012) or familiarity with the existence of a product or service, “knowledge” (Alkhunaizan & Love, 2012) or know-how of products or service usage and includes technology, complexity, and level of performance, “risk” (Sweeney, Soutar, & Johnson, 1999) or the absence of security during a transaction due to unexpected errors or dishonesty among the parties involved, and “trust” (Kim, Mirusmonov, & Lee, 2010) or the willingness to use new products or services with a sense of comfort, safety, and risk acceptance are the key proxies of “intention to use mobile money”. This evidence led us to identify awareness, risk, trust, and knowledge as the key determinants of intention to use mobile money. “Perceived network quality” (Njele & Phiri, 2021) also the quality of service of the telecommunication service provider, and “perceived cost” (Lema, 2017) also the unit cost a user thinks he undertakes for the consumption of a good or service, have a strong impact in the usage of mobile money (Lin, Li, & Ding, 2020). This evidence helped us identify perceived network quality and perceived cost as determinants of the usage of mobile money.

## **3. METHODOLOGY**

The study was conducted based on the deductive research approach using quantitative techniques. Accordingly, we derived a Likert scale questionnaire with 5 scales to measure the variables. The study focused on the conceptual model (Figure 1) derived

based on the literature review. The users of mobile money were the population of the study which is unknown and thereby we applied a non-probabilistic sampling technique for collected data. Accordingly, we used a convenient sampling technique and received 402 responses from the M-Cash and Easy Cash users. Although Morgan's table suggests a 385-sample size with a 0.05 level of significance (Krejcie & Morgan, 1970), we considered all the responses for the analysis.

The analysis initially derived the regression models to forecast the intention to use mobile money, usage of mobile money, and adaption for mobile money. Later, we tested the impact of intention to use mobile money on the usage of mobile money, and finally the impact of usage of mobile money on adaption for mobile money. The Conceptual Framework is built using evidence from previous empirical studies.

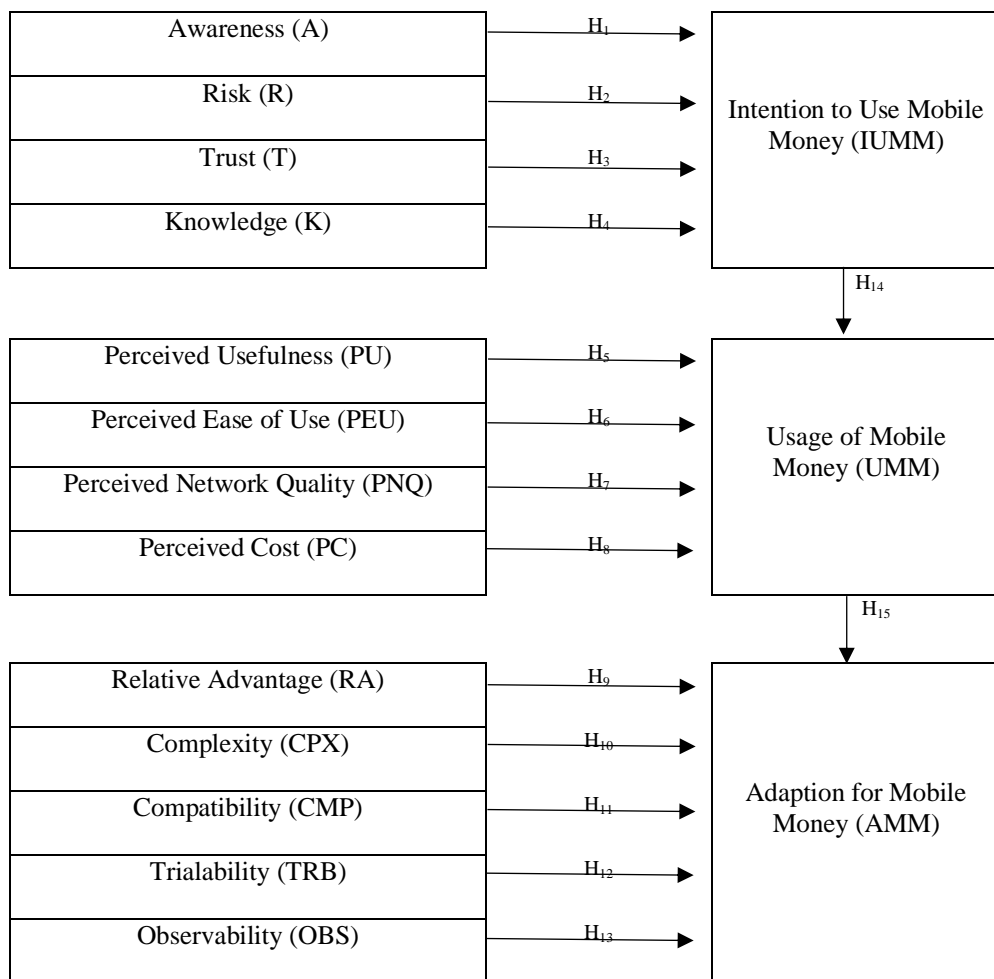


Figure 1: Conceptual Framework

#### 4. FINDINGS AND DISCUSSION

The study measured the reliability of the Likert items using Cronbach's Alpha statistic, convergent validity, discriminant validity, composite reliability, Wilks' Lambda, and Box's M test. Further, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was used to measure the adequacy of the sample size to test the variables.

**Table 1: Cronbach's Alpha Statistics**

Model 01			Model 02			Model 03		
Variable	Statistic*	N of Items	Variable	Statistic*	N of Items	Variable	Statistic*	N of Items
A	0.806	3	PU	0.831	3	RA	0.793	3
R	0.753	3	PEU	0.832	3	CPX	0.882	3
T	0.828	3	PNQ	0.599	3	CMP	0.790	2
K	0.838	3	PC	0.832	3	TRB	0.649	3
IUM	0.883	3	UMM	0.788	3	OBS	0.708	2
M						AMM	0.877	3
*Statistic: Cronbach's Alpha Value								

The reliability of all the Likert items in defining each variable can be summarized as follows. The Cronbach's Alpha statistics of all the variables are closer to or above 0.6. Thereby, we confirm the internal consistency of the Likert items in measuring the variables. The bivariate correlation analysis confirmed that all the values within the same construct range between 0.5 and 0.7 and are significant at 0.01 level, suggesting that there is a strong convergent validity. The majority of the correlations of the different constructs were below 0.3; confirming the existence of discriminant validity among Likert items in the different constructs. The P-values of Wilk's Lambda test also supported the discriminant validity results of the correlation analysis. The composite reliability of all variables is  $\geq 0.6$ , thus can be considered that the internal reliability of each latent variable is high. Since the significance value of the Box's M is less than 0.001, it is concluded that there is an unequal group variance. Finally, the KMO statistic is more than 0.7 for all the variables; therefore, the sample size is sufficient to conduct the analysis.

Accordingly using the desired Likert items, we measured the variables and derived the multiple regression to understand the relationship between the variables.

**Table 2: Summary of Regression Results**

Model 01				Model 02				Model 03			
B	t	P*	VIF	B	t	P*	VIF	B	t	P*	VIF
C	-	-	.029	C	.174	1.125	.261	C	1.303	4.597	.000
	.564	2.195									
A	.147	2.712	.007	PU	.170	3.251	.001	RA	.074	.848	.397
R	.135	3.077	.002	PEU	.350	6.542	.000	CPX	.647	9.636	.000
T	.395	6.441	.000	PNQ	.123	3.134	.002	CMP	-.256	-	.000
									3.714		
K	.432	6.978	.000	PC	.264	6.270	.000	TRB	.088	1.170	.243
									.016	.180	.857
								OBS			2.528

\*P value = 0.05 level of significance

As per the regression results of model 01, we confirm that the intention to use mobile money has been significantly and positively influenced by awareness (A), risk (R), trust (T), and knowledge (K). Accordingly, we accept hypotheses H<sub>1</sub>, H<sub>2</sub>, H<sub>3</sub>, and H<sub>4</sub>. Model 02 directs us to accept hypotheses H<sub>4</sub>, H<sub>5</sub>, H<sub>6</sub>, H<sub>7</sub>, and H<sub>8</sub>. Thus, we accept that perceived usefulness (PU), perceived ease of use (PEU), perceived network quality (PNQ), and perceived cost (PC) have a significant positive impact on determining the usage of mobile money. Finally, by accepting H<sub>10</sub> and H<sub>11</sub> we considered complexity (CPX) and compatibility (CMP) as the determinants of adaption to mobile money. Accordingly, we measured the intention to use mobile money, usage of mobile money, and adaption to mobile money only by using significant variables.

The summary of the derived hypotheses of this study and the decision made is as follows.

**Table 3: Summary of Hypotheses Testing**

<b>Hypotheses</b>	<b>Conclusion</b>
<b>H<sub>1</sub>: There is a significant positive impact of Awareness on the Intention to Use Mobile Money</b>	Accepted
<b>H<sub>2</sub>: There is a significant negative impact of Risk on the Intention to Use Mobile Money</b>	Accepted
<b>H<sub>3</sub>: There is a significant positive impact of Trust on the Intention to Use Mobile Money</b>	Accepted
<b>H<sub>4</sub>: There is a significant positive impact of Knowledge on the Intention to Use Mobile Money</b>	Accepted
<b>H<sub>5</sub>: Perceived Usefulness increases the Usage of Mobile Money</b>	Accepted
<b>H<sub>6</sub>: Perceived Ease of Use increases the Usage of Mobile Money</b>	Accepted
<b>H<sub>7</sub>: Perceived Network Quality increases the Usage of Mobile Money</b>	Accepted
<b>H<sub>8</sub>: Perceived Costs decrease the Usage of Mobile Money</b>	Accepted
<b>H<sub>9</sub>: Relative Advantage and the Adaption of Mobile Money are positively connected</b>	Rejected
<b>H<sub>10</sub>: Complexity and the Adaption to Mobile Money are negatively connected</b>	Accepted
<b>H<sub>11</sub>: Compatibility and the Adaption to Mobile Money are positively connected</b>	Accepted
<b>H<sub>12</sub>: Trialability and the Adaption to Mobile Money are positively connected</b>	Rejected
<b>H<sub>13</sub>: Observability and the Adaption to Mobile Money are positively connected</b>	Rejected
<b>H<sub>14</sub>: The Intention to Use Mobile Money determines the Usage of Mobile Money</b>	Accepted
<b>H<sub>15</sub>: The Usage of Mobile Money determines the Adaption of Mobile Money</b>	Accepted

To evaluate what we articulated earlier; the positive stimuli from the “intention to use mobile money” motivate an individual to turn his or her intention into action (usage of mobile money), ultimately leading to the adaption”, we initially tested the

relationship between intention to use mobile money and usage of mobile money. The findings confirmed a significant positive influence of intention to use mobile money on the mobile money usage decisions of customers (accept H<sub>14</sub>). Finally, we assessed the impact of the usage of mobile money on the adaption of mobile money which is also found to be positively significant (accept H<sub>15</sub>).

## **5.CONCLUSION(S)**

We aimed to identify the determinants of the adaption of mobile money among Sri Lankans through this study. Further to the findings of this study, we can conclude that complexity (CPX) and compatibility (CMP) directly impact determining the adaption of mobile money among Sri Lankans. Even though Rogers (1995), introduced five factors for adaption behaviour, the findings of this study confirmed that relative advantage, trialability, and observability are not influential factors when considering the mobile money market. Further, we found that awareness, risk, trust, and knowledge are the root causes that stimulate customers to use mobile money which ultimately leads to adaption through the motivation that they gather by using mobile money. After all, we confirm that as the motivators for usage, the customer perceptions such as perceived usefulness (PU), perceived ease of use (PEU), perceived network quality (PNQ), and perceived cost (PC) also motivate the users to adapt to mobile money.

Initially, we highlighted the challenge faced by mobile money service providers when attracting the target group of customers. While referring to the findings of the current study, the respective service providers can improve customer awareness, develop customer trust, ensure risk controls, and improve customer education on M-Cash or Easy Cash to popularize their products among customers. Successful attempts in these areas will ultimately improve the perceived behaviour of the customer. If the mobile money service providers expect to develop loyal customers, then they must focus on delivering their service at a low cost, with more access points to improve the usability among customers, while improving the network quality.

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## PERSONALITY TYPES AND INVESTMENT INTENTIONS OF THE SMALL & MEDIUM SCALE ENTREPRENEURS

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### ABSTRACT

The purpose of this study is to examine the impact of personality types of small and medium scale entrepreneurs on their investment intentions within the Sri Lankan context. The ongoing economic crisis within the country has critically affected all the business activities in general. Yet, it is noteworthy to assess the way the diverse personalities of the small business owners affect their intentions to invest. The study was designed as a quantitative study following the deductive approach. It was carried out by selecting a random sample of 234 small businesses from the Minuwangoda divisional secretariat of Gampaha district. A structured questionnaire was employed for collecting the primary data required. Following the big five factor model neuroticism, extraversion, conscientiousness, openness to experience and agreeableness were identified as the exogenous variables. In addition, risk aversion was also identified as an important dimension which affect the investment intentions based on prior scholarly work. Descriptive statistics, correlation analysis and regression analysis were the statistical techniques utilized for the data analysis. The outcomes of the statistical data analysis revealed that the extraversion, conscientiousness, openness to experience, agreeableness and risk aversion positively and significantly affect the investment intentions of the small and medium scale entrepreneurs. Further, the risk aversion exhibited the best predictive ability among others. In essence, the study unveils the significance of developing strong personalities having above attributes through the educational system of the country in order to find sustainable solutions for the current economic crisis. Finally, the future researchers are suggested to utilize qualitative research methodology to discover hidden attributes inherent to the business of our context. Further, it is suggested to study the potential moderating effects of age, gender etc.

**Keywords:** *Investment Intention, Personality Types, Small and Medium scale Entrepreneurs*

### 1.INTRODUCTION

Small and Medium Enterprises (SME) are recognized as the key driver of the economies (Wijayarathna & Perera, 2018; Yogendrarajah et al., 2017). They are playing a decisive role in each and every economy irrespective of the development status (Deyshappriya & Maduwanthi, 2020). And these businesses contribute in



generating employment opportunities, reducing uneven income distribution, abolishing poverty and enhancing the social wellbeing (Niranjala & Jiangue, 2017). Within the Sri Lankan context, SMEs were facing for numerous challenges within the recent past. Amidst such environmental turbulence the growth of SMEs is highly constrained. Nevertheless, investments facilitate the business entities in terms of developing and expanding the business operations to achieve the growth goals. However, the engagement in investments is a choice of the owners of the SMEs and their investment intention leads for such choice.

The investment intention means someone's intention to carry out an activity in the form of investing money or capital in a company or project for profit (Natsir, et al., 2021). Personality is defined as "the way an individual interacts, reacts and behaves with others and is often exhibited through measurable traits" (Crysel et al., 2013). Personality traits consisted of cognitive, motivational, and emotional characteristics that predisposed individuals to make several decisions (Dolan et al., 2012). And, investors' personalities are associated with their investment choices and outcomes (Durand et al., 2008).

The personality types of people highly influence on the investment intention of the individuals. Therefore, the horizon of investment intention can be predicted based on the dimensions of the personality of individuals. When we looked at the past, researchers have analyzed investor behavior and tried to better understand why people engage in investments differently. There is a plethora of previous studies that attempted to explain the investor behavior. The personal characteristics influence investors' perception of risk and their willingness to assume risk can be seen as the common outcome of those literature (Buccioli & Zarri, 2017; Mathur & Nathani, 2019). But there is an unanswered question, that is to which extent the individuals' personal characteristics influence their investment intentions. The limited research done within this area also have generated inconclusive results (Stewart & Roth, 2001). Thus, the present study was carried out with the objective of examining the impact of personality types of SME owners on the investment intentions within the Sri Lankan context.

## **2.LITERATURE REVIEW**

Investment intention is the focus of the present study. Without having an intention to invest, no one can start a business. Investment Intention means someone's intention to carry out an activity in the form of investing money or capital in a company or project for profit (Natsir et al., 2021). This definition suggest that the profit motive is a key concern in making investments. The small and medium scale business owners of the Sri Lankan context are struggling at the moment to secure their profit margins amidst the turbulent economic environment of the country.

Personality types of people make a great impact on the intention of investment of the individuals. Therefore, the horizon of the investment can be predicted based on the dimensions of the personality of the individuals. Studies which identify the personal traits of businessmen is a discipline which is admired from many scientific perspectives. The fields such as Psychology, Economics and Sociology can be taken as examples. Personality can be measured based upon the people's actions, reactions and behavioral patterns (Crysel et al., 2013).

Personality refers, characteristic way of thinking, feeling, and behaving. And, it embraces moods, attitudes, and opinions and is most clearly expressed in interactions with other people (Robbins & Judge, 2011). It influences risk attitudes in various fields of an individual's life, including social, gambling and investment intentions (Soan et al., 2010). Meanwhile, the Big Five factor (BFF) model is widely discussed and utilized in identifying the personality types. BFF model furnishes a classification of five personality types which include: neuroticism, extraversion, conscientiousness, openness to experience and agreeableness (Digman, 1990). We used big five factor (BFF) format in this study for explaining the variations of investments intentions of small and medium scale entrepreneurs during a tough and difficult period. A brief discussion on each of the above factors is followed.

The people with the neuroticism quality are considered to be lack of conceptual understanding, logical thinking, and analytical abilities. Neuroticism is lack of effective cognitive skills associated with poor analytical skills and poverty of critical thinking and conceptual understanding. It tends to freeze high-level cognition it causes people anxiety and fear about being active and failing. Because of the risk behavior is associated with neurological disorders and is more prevalent in people with low neuroticism anxiety in risk making (Young et al., 2012). Accordingly, it is proposed,

H<sub>1</sub>: There is an impact of neuroticism on investment intentions.

Extraversion can be defined as the active nature of the individuals. A person with the personality type of extraversion can be identified as energetic, sociable and as a person who always thinks positively. The people with this quality exchange idea on positive impact of oneself with the others. Therefore, they can be identified as the individuals who can attain success in decision making on financial matters (Pan & Statman, 2013). The individuals who possess the personality quality of extraversion, show an inclination and a tendency of achieving higher success as they are ideal risk-takers and ideal decision makers (Durant, 2008). They tend to be guided by external sensitive stimulators (Sadi et al., 2011). Hence, it is proposed,

H<sub>2</sub>: There is an impact of extraversion on investment intentions.

The people who have the personality quality of openness to experience can be identified as broad minded people. As well as, they are resourceful and creative people. They have novel and creative ideas (Martins, 2002). The people who have personal quality of openness show a higher interest to unconventional conditions of thumb guided in financial decision making. They have positive attitudes on withstanding risks (Gunkel et al., 2010). People with openness to experience are creative, adaptable, more intriguing and non-traditional and generally inclined to make new experiments and take more risks (Mayfield et al., 2008). Hence, following hypothesis is proposed.

H<sub>3</sub>: There is an impact of openness to experience on investment intentions

The personality quality of agreeableness is encircled with helpfulness, cooperation, sympathy and empathy towards the others (Mayfield et al., 2008). The people with this quality believe on monetary analyst's judgment and show a hostile attitude to make personal financial decisions. As well as, the people with this quality always try to avoid conflicts with others and take the information in a more optimistic manner without any critical complain (McCrae & Costa, 2008). People with disagreements are usually curious, considering more information than highly agreeable people, take less risk and make more calculated decisions (Sreedevi & Chitra, 2011). Accordingly, the following hypothesis is proposed.

H<sub>4</sub>: There is an impact of agreeableness on investment intentions

The people with the personal quality of conscientiousness possess the qualities such as punctuality, determined, trustworthy and well-planned. However, they cannot be identified as risk-takers (Mayfield et al., 2008). When people are conscientiousness, they get the opportunity to secure themselves on misconceptions and they get the chance of making their investment decisions sensibly (Gunkel et al., 2010). The investors who have the personality quality of conscientiousness do not tend to believe on delusions and take their investment decisions wisely. This opportunity makes them possible to be more particular regarding the option of investment and withstand of risks (Sadi et al., 2011). As well as, the people with conscientiousness personality keep favorable relationships within their trading behavior. Conscientiousness investors are determined as, well-organized, trustworthy, and consistent and work on time and take risks less impulsively. Thus, it is proposed,

H<sub>5</sub>: There is an impact of conscientiousness on investment intentions

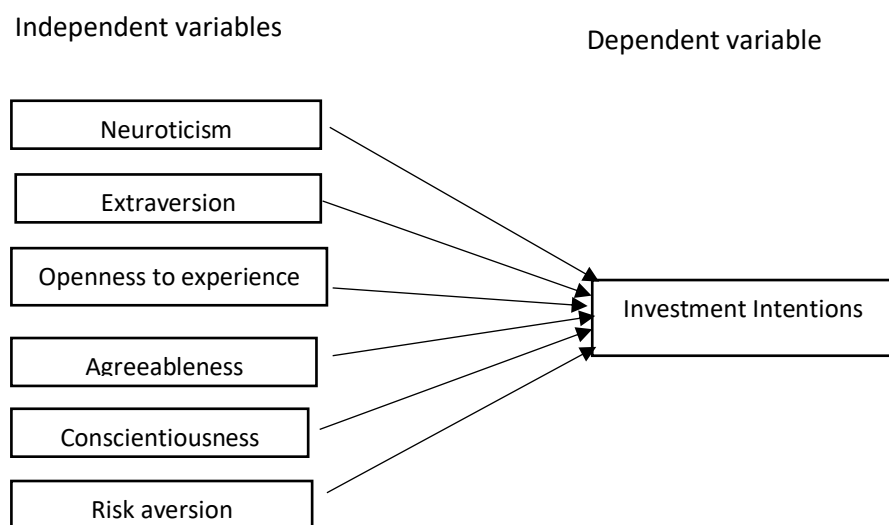
Risk aversion can be identified as well-thought important dimension of investment behavior (Kiev, 2003). And, it has a significant impact on investments intentions, as found by Kanton et al., (2018). The investors who have attitudes of low risks pay attention on holding money and investments (Wood & Zaichkowsky, 2004) Risk

aversion can be identified as a personality trait implies the willingness to carry out decisions or measures of mechanisms causing impossibility concerning success of failure outcomes (Jackson et al., 2015). Some scholars identify risk aversion as a distinct combination of scores towards the Big Five personality traits while some scholars identify it as sixth personality characteristic that affects towards the intention of the investor.

H<sub>6</sub>: There is an impact of risk aversion on investment intentions

### 3.METHODOLOGY

This section explains the methodology of the present study. The study was designed as a quantitative study following the deductive approach within the positivist philosophical stance. Neuroticism (NE), Extraversion (EX), Openness to Experience (OE), Agreeableness (AG), Conscientiousness (CO) and Risk Aversion (RA) served as the independent variables and Investment Intention (II) served as dependent variable of the study. The potential relationship among the independent and dependent variables are illustrated in the figure 01.



**Figure 1: Conceptual Framework**

As per the conceptual framework of the study following hypothesis were identified and tested.

The study employed a cross sectional survey in order to collect the primary data required for the analysis. The respondents were the owners of the SMEs within the

Minuwangoda divisional secretariat. The population of the study was identified using the records maintained by the divisional secretariat of Minuwangoda. The number of registered SMEs amounted to 600. Out of registered SMEs, randomly picked 234 businesses. The random selection ensures an identical probability for each element within the population for being picked up and included within the sample (Kothari, 2004). The sample size was determined following the Krejcie & Morgan (1970) with 95 percent confidence level (Sekaran & Bougie, 2016). The unit of analysis was identified as an individual. Accordingly, the owners of the sample firms were recognized as the respondents.

The survey instrument was developed referring to the prior scholarly work. It was designed to fit the conceptual framework of the study. The questionnaire consisted from closed ended questions. There were three (03) sections in the questionnaire as part (A), part (B) and part (C). The part (A) was designed to collect the personal information of the respondents such as gender, age, level of education and years of financial experience. In contrast, section (B) consisted of 27 statements to measure neuroticism, extraversion, and openness to experience, agreeableness, conscientiousness and risk aversion. Moreover, section (C) included 8 statements to measure investment intentions which was the dependent variable of the research. Hence, the questionnaire consisted of 40 questions in total.

The data analysis was accomplished with both descriptive and inferential statistics. Thus, the statistical techniques of descriptive analysis, correlation analysis and regression analysis were employed. The descriptive statistics provide information on the mean, standard deviation, skewness and kurtosis. Correlation is one of the popular analytical tool that is used to determine the degree of linear relationship between independent variable and dependent variable. The correlation coefficient (r) ranges from -1.00 to +1.00. The significance of each relationship was tested at 5% significance level.

The purpose of the regression analysis is to identify the impact of independent variables on the dependent variable. Multiple linear regression analysis was applied in this study. The multiple regression model is constructed with investment intention as the dependent variable and neuroticism, extraversion, openness to experience, agreeableness, conscientiousness and risk aversion as the independent variables.

According to the research model for this study, regression equation developed is,

$$II = \beta_0 + \beta_1 NE + \beta_2 EX + \beta_3 OE + \beta_4 AG + \beta_5 CO + \beta_6 RA + \epsilon$$

Where,

II = Investment Intention

NE - Neuroticism

EX – Extraversion

OE – Openness to experience

AG – Agreeableness

CO– Conscientiousness

RA – Risk aversion

#### **4.FINDINGS AND DISCUSSION**

The self-administrated survey instrument measured the responses using a five-point Likert scale (1- strongly disagree: 5 – strongly agree). The instrument was pre-tested to ensure reliability (N = 35). The pilot test carried out generated Cronbach's alpha values free from reliability issues. Hence, a mass survey was conducted. The researchers calculated the reliability of all the variables using Cronbach's Alpha. If Cronbach's alpha value is greater than 0.7 the questionnaire is acceptable (Glen, 2021). According to the results of reliability analysis (Table 01) Cronbach's Alpha for neuroticism, extraversion, and openness to experience, agreeableness, conscientiousness, and risk aversion were 0.837, 0.789, 0.844, 0.857, 0.712 and 0.810 respectively. Since all the alpha values obtained were well above the threshold (0.7), the reliability of the survey instrument was ensured.

**Table 1: Reliability Analysis**

Variables	Cronbach's alpha	Number of items
Neuroticism	0.837	5
Extraversion	0.789	4
Openness to experience	0.844	5
Agreeableness	0.857	4
Conscientiousness	0.712	5
Risk aversion	0.810	4
Investment Intention	0.823	8
Overall reliability	0.964	35

Thereafter, the demographic analysis (table 02) was carried out. As revealed by the demographic analysis majority of respondents (56%) were females and 79% of the respondents were within 41-50 years of age. Most of the respondents were qualified with GCE Advanced Level (51%). Moreover, nearly half of the respondents had 5-10 years of business experience.

**Table 2: Demographic Analysis**

		<b>Frequency</b>	<b>Percent</b>
<b>Gender</b>	Male	102	43.6
	Female	132	56.4
<b>Age</b>	19-30 Years	38	16.3
	31-40 Years	81	34.6
	41-50 Years	88	37.6
	More than 51 Years	27	11.5
<b>Edu. Qualifications</b>	O/L	68	29.1
	A/L	118	50.4
	Bachelors	19	8.1
	Masters	14	6
	Other	15	6.4
<b>Experience</b>	1-2 Years	6	2.6
	2-5 Years	88	37.6
	5-10 Years	118	50.4
	More than 10 years	22	9.4

Following the analysis of demographics, analysis of descriptive statistics was carried out. The outcomes are presented in table 03. As per the results obtained the mean values of the responses for the variables NE, EX, OE, AG and CO are indicating that on average the respondents are agreeing with the given statements. Comparatively, the mean values are slightly lower for RA and II. However, the tendency being agreed is high. In addition, normality of data can be tested by using skewness and kurtosis. According to the skewness and kurtosis values, the data lies between +1.96 and -1.96. This indicate that the data are normally distributed (Jain, 2018).

**Table 3: Descriptive statistics**

	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
NE	4.1632	0.48090	-0.245	0.159	-0.2	0.317
EX	4.2308	0.55168	-0.75	0.159	0.167	0.317
OE	4.2427	0.47951	-0.503	0.159	-0.118	0.317
AG	4.3088	0.45919	-0.087	0.159	-0.998	0.317
CO	4.2932	0.39269	-0.374	0.159	0.383	0.317
RA	3.8942	0.63201	-0.324	0.159	0.664	0.317
II	3.7612	0.59691	0.297	0.159	0.556	0.317

After the descriptive analysis, correlation analysis (table 04) was performed for uncovering the association between the independent variables and the dependent variable. This relationship is statistically significant too. All the independent variables are associated with investment intention. In particular, neuroticism, extraversion, openness to experience, conscientiousness and risk aversion demonstrated strong positive and significant associations (0.833, 0.796, 0.828, 0.789 and 0.828 respectively) with the dependent variable. But agreeableness (0.576) indicated a positive relationship with investment intention.

**Table 4: Correlation Analysis**

	II	NE	EX	OE	AG	CO	RA
<b>II</b>	1						
<b>NE</b>	.833**	1					
<b>EX</b>	.796**	.801**	1				
<b>OE</b>	.828**	.844**	.749**	1			
<b>AG</b>	.576**	.483**	.251**	.598**	1		
<b>CO</b>	.789**	.687**	.689**	.738**	.531**	1	
<b>RA</b>	.828**	.815**	.813**	.711**	.363**	.693**	1

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

A regression analysis was performed (Table 05) as an advanced analysis to assess the magnitude of the impact of the independent variables on the investment intention. The regression model developed was capable in predicting 85.2% ( $p = 0.000$ ) variation of the dependent variable. The independent variables showed up to be significant predictors of investment intention except for neuroticism.



**Table 5: Results of the regression analysis**

Variable	Investment intention	
	Coefficient	Sig.
Neuroticism	0.128	0.087
Extraversion	0.234	0.000
Openness to experience	0.167	0.021
Agreeableness	0.260	0.000
Conscientiousness	0.252	0.000
Risk aversion	0.270	0.000
R <sup>2</sup>	0.852	
Adjusted R <sup>2</sup>	0.848	
F value	217.459	0.000

Furthermore, the researchers used regression analysis for the purpose of testing hypothesis. According to the hypothesis testing, the most powerful predictor of investment intention was risk aversion ( $\beta = 0.270$ ), then agreeableness ( $\beta = 0.260$ ), conscientiousness ( $\beta = 0.252$ ), and extraversion ( $\beta = 0.234$ ) respectively while openness to experience was the least powerful predictor of investment intention. Moreover, the researchers identified that neuroticism wasn't affected the investment intention significantly. Accordingly, the hypothesis H<sub>2</sub>, H<sub>3</sub>, H<sub>4</sub>, H<sub>5</sub> and H<sub>6</sub> were accepted and H<sub>1</sub> was rejected. These results comply with the prior scholarly findings (Pan & Statman, 2013; Mayfield et al., 2008).

Consequently, the following research model was derived.

$$II = -1.723 + 0.234EX + 0.167OE + 0.260AG + 0.252CO + 0.270RA$$

II = Investment Intention

EX – Extraversion

OE – Openness to experience

AG – Agreeableness

CO – Conscientiousness

RA – Risk aversion

## 5.CONCLUSION

The present study inquired the impact of investors' personality types on their investment intention. A cross sectional survey was carried out by selecting a sample of small and medium scale entrepreneurs from Minuwangoda divisional secretariate region. Descriptive statistics, correlation and regression analysis were utilized to analyse the primary data gathered. The outcome of the data analysis unveiled a positive and significant impact of investor's personality types (Extraversion, openness to experience, agreeableness, conscientiousness and risk aversion) on the investment intention. Risk aversion has the best predictive ability. However, neuroticism exhibited an insignificant positive impact on the investment intentions. The positive impact may be due to the fact that, logical thinking and analytical capabilities are widening the insights of individuals on their investment intentions.

Practical implications call for implementing sound awareness programmes for SMEs who are in their early stage of business. And, it is essential to revisit the school curriculums in order to develop these personality attributes among the youngsters. Because, it is crucial for Sri Lankans to look ahead for futuristic and sustainable solutions to overcome the current economic struggle.

Future researchers are suggested to follow the qualitative methodology to identify any specific factors that affect the investment intentions of SMEs within the Sri Lankan context. Further, they are encouraged to investigate the potential moderating effects by the age and gender etc.

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## THE ROLE OF EARNED AND CONTRIBUTED CAPITAL MIX IN DETERMINING DIVIDEND POLICY: A LIFE CYCLE PERSPECTIVE IN THE SRI LANKAN CONTEXT

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### ABSTRACT

This study examines the influence of the mix of earned and contributed capital on dividend policy, utilizing empirical evidence from the Colombo Stock Exchange. A sample of 50 non-financial companies was collected for data analysis spanning from 2011 to 2020, resulting in 500 observations. Drawing from existing literature, earned/contributed capital mix was designated as the independent variable, while dividend payout served as the dependent variable. The earned/contributed capital mix was quantified using earned equity to total equity (RE/TE) and earned equity to total asset (RE/TA) ratios. Correlation analysis confirms the absence of multicollinearity among the independent variables. The regression analysis yields a significant negative association between RE/TA and dividend payout. However, the relationship between RE/TE and dividend payout is not statistically significant. These findings suggest that firms with a higher proportion of earned capital relative to total assets tend to distribute lower dividends. Conversely, the non-significant relationship with RE/TE implies that the overall earned capital to equity ratio may not be a strong determinant of dividend policy in this context. The negative association with RE/TA suggests that younger firms in the Sri Lankan market, with a higher proportion of earned capital relative to total assets, exhibit a greater propensity for dividend payouts. Consequently, the study's findings challenge the life cycle hypothesis of dividends, indicating its lack of support within the Sri Lankan setting. The study's scope is delimited to secondary data analysis, thus suggesting an extension of research using a triangulation approach to garner more comprehensive insights in future studies.

**Keywords:** *Dividend Policy, Earned/Contributed Capital Mix, Life Cycle Theory, Colombo Stock Exchange*

### 1.INTRODUCTION

The determination of dividend distribution stands as a pivotal and extensively scrutinized subject within managerial finance discourse in contemporary business realms. Upon realizing a profit, thereby prompting the potential disbursement of dividends to shareholders, a corporation is confronted with the strategic decision of allocating these earnings either towards dividend payments to shareholders or towards internal reinvestment endeavours.

Since cash is considered the company's lifeblood and oxygenated when derived from earnings, managers must now decide whether to distribute it as dividends or retain it for future growth. If the latter option is chosen, the company's health will deteriorate, and the company will contract the solvency disease. In reality, dividend distributions negatively impact the company's value because they eliminate future projects (Rafique and Javaid, 2017). Therefore, the debate arises about why companies pay dividends. Though several studies have tried to find an answer to this debate in different aspects, no definitive solution has been reached. Among those studies, the life cycle theory by Mueller (1972) is a pioneering study that highlights that mature and established companies pay higher dividends because they have more resources and undertake fewer investment projects, whereas new companies with limited resources pay lower dividends to finance their investment opportunities. The cost-benefit trade-off between dividend distribution expenses and benefits is implied or evident in life cycle explanations.

The lifecycle theory will be tested in this study by determining whether a firm's likelihood of paying dividends positively correlates with the mix of earned and contributed capital. Accordingly, the study focuses on whether companies with relatively large retained earnings as a percentage of total equity (RE/TE) and total assets (RE/TA) are more likely to pay dividends. According to DeAngelo et al. (2006), the ratio of earned capital to contributed capital is a plausible proxy for the stage of the lifecycle that a company is currently in because it gauges how dependent a company is on external capital or how self-sufficient it is. DeAngello (2006) explains that companies with low RE/TE (and RE/TA) ratios are typically in the early stages of their life cycles and require capital infusions since a low percentage of the capital is earned relative to the contributed capital. For such firms, retaining earnings dominates the distribution of dividends as raising external capital is fairly expensive, and these companies are less likely to become dividend payers despite their rapid development and enormous growth potential.

In contrast, companies with a high RE/TE (and RE/TA) become more likely to mature since they have considerable cumulative earnings and are largely self-reliant. It makes them suitable candidates for dividend payments since they have a restricted pool of investment opportunities and a declining cost of borrowing outside capital. This is consistent with Jensen (1986), who foregrounds that a significant portion of free cash flow that managers control might exacerbate the agency problem since managers give managers incentives to grow the organization larger than it should be. One way to lessen the agency issue is by paying dividends. As a result, dividend payments are more likely for companies with high RE/TE (and RE/TA). Researchers worldwide have delved into the lifecycle theory since Mueller's (1972) study and have come to a variety of results. According to some researchers (DeAngelo and Stulz, 2006; Denis and Osobov, 2008; Brockman and Unlu, 2009; Yusra et al., 2018), the life cycle of a company has an impact on the dividend decision. However, some researchers have contradicting evidence against the life cycle hypothesis (Ishikawa, 2011). On the other hand, others discovered inconsistent outcomes for various circumstances (Trotz, 2013). While researchers in Sri Lanka have mainly concentrated on various

dividend policy theories (Dewasiri et al., 2019; Baker et al., 2019), they have not given the lifecycle theory their entire attention. In light of the lifecycle theory of dividends, this research investigates the effect of the mix of earned and contributed capital on the dividend policy of firms listed on the Colombo Stock Exchange (CSE). Our study contributes to the existing literature, providing further empirical results for the life cycle theory from Sri Lanka, an emerging context.

The remainder of this paper is organized as follows: section two discusses the literature, section three describes the methodology, and section four presents the results and analysis. Finally, section five offers the conclusion of the study.

## **2.LITERATURE REVIEW**

### **Theoretical Literature**

Berle and Means (1932) introduced agency theory to elucidate the impact of the ownership-control gap on modern businesses. Within the context of agency problems between managers and owners, dividend payments serve as a mechanism to mitigate agency conflicts and reduce associated costs. Easterbrook (1984) further emphasizes that cash dividends diminish monitoring costs and mitigate managerial risk aversion. Investment banks and market observers also scrutinize firms issuing additional shares or debt securities to fund business opportunities, ensuring alignment with shareholder interests. Transaction cost theory, as proposed by Manos (2001), posits that firms and investors incur transaction costs when external capital must be raised due to dividend payments. This theory underscores that financing business activities with internal funds is less costly than issuing new securities. Consequently, firms facing high transaction costs may retain earnings to finance investment opportunities, while those paying higher dividends incur elevated external financing transaction costs (Higgins, 1972; Rozeff, 1982).

According to residual theory, firms distribute dividends only after fully funding all feasible investment options (Weston & Brigham, 1979). This perspective suggests that dividends should be considered residual since investment decisions aim to maximize owners' wealth in the context of varying taxes and transaction costs. Thus, firms with a high number of positive net present value projects exhibit a propensity for dividend distribution (Ghosh & Woolridge, 1989).

Mueller's (1972) lifecycle theory posits that mature firms pay higher dividends due to ample resources and fewer investment projects, while new firms with limited resources offer lower dividends to fund investment opportunities. This theory highlights the cost-benefit trade-off between dividend distribution expenses and benefits, suggesting that more established firms with higher profits and fewer investment opportunities exhibit higher dividend payouts.

### **Empirical Literature**

Empirical evidence surrounding the relationship between the earned and contributed capital mix and dividend policy, based on lifecycle theory, has been extensively investigated globally.

DeAngelo and Stulz (2006) examined US firms from 1973 to 2002, utilizing the earned/contributed capital ratio (RE/TE or RE/TA) as a proxy for firm maturity. Their findings revealed a positive association between the ratio and dividend payments. This aligns with the life cycle theory, suggesting that mature firms with a higher proportion of retained earnings are more inclined to pay dividends.

Similar findings emerged from Denis and Osobov's (2008) study encompassing six developed nations (1989-2002). Firms with a higher RE/TE ratio exhibited a greater propensity for dividend payouts, further supporting the life cycle theory. Expanding the analysis to a broader global context, Brockman and Unlu (2009) analyzed data from 52 countries. They observed a positive correlation between the retained earnings to book value of assets ratio and both the likelihood of dividend payments and the dividend payout ratio. These findings provide additional evidence for the life cycle theory's validity.

While substantial research supports the life cycle theory, some studies present contrasting findings. Ishikawa (2011) examined Japanese data, revealing that growing firms prioritize dividend increases, potentially contradicting the theory's prediction of higher dividends from mature firms. Similarly, Aigbovo (2022) found no significant impact of earned/contributed capital mix on dividend payouts, while firm age exhibited a negative effect. These findings deviate from the life cycle theory's core proposition.

Despite these discrepancies, recent research continues to support the life cycle theory. Rafique et al. (2017) suggest that mature firms with limited investment opportunities but high profitability pay dividends while dividend-reducing firms retain earnings for future growth. These observations align with the life cycle theory. Furthermore, Yusra et al. (2018) analyzed Indonesian firms (2012-2016) and found the RE/TE ratio to be the most significant factor influencing dividend payments, further supporting the theory. Similarly, AL Sawalqa (2022) obtained results consistent with the life cycle theory when investigating Jordanian firms (2015-2019).

In conclusion, the life cycle theory remains a valuable framework for understanding the relationship between firm maturity and dividend policy. The earned/contributed capital mix serves as a useful proxy for firm maturity, with a positive association observed between a higher ratio and a greater propensity for dividend payouts. While some studies offer contrasting viewpoints, a significant body of research supports the core tenets of the life cycle theory.

### **3.METHODOLOGY**

The study population consisted of 297 listed companies on the Colombo Stock Exchange (CSE) as of February 18, 2022. However, for the purpose of this study, only non-financial companies listed on the CSE were considered due to structural reporting differences between financial and non-financial entities. Consequently, a stratified random sampling approach was adopted to select a sample of 50 companies



representing various non-financial sectors. Secondary data spanning from 2011 to 2020 were collected from the annual reports of the selected companies, resulting in a total of 500 observations. Panel data regression was employed as the analytical method for the study.

The study's variables, both dependent and independent, as well as control variables, were chosen in accordance with the framework proposed by DeAngelo et al. (2006). The independent variable, the Earned/Contributed Capital Mix, was proxied using two measures: Earned Equity to Total Equity (RE/TE) and Earned Equity to Total Assets (RE/TA). The dependent variable, Dividend Payout, was represented by the dividend payout ratio. Additionally, profitability, sales growth, asset growth, level of capital ownership, and firm size were selected as control variables.

The research model is delineated as follows.

$$DP = \beta_0 + \beta_1 RE/TE + \beta_2 RE/TA + \beta_4 PR + \beta_5 SG + \beta_6 AG + \beta_7 LCO + \beta_8 FS + \epsilon_i$$

Where; DP is the dividend payout, RE/TE indicates earned equity to total equity, RE/TA indicates earned equity to total asset, PR is the profitability (return on asset), SG represents the sales growth (sales growth rate), AG is the asset growth (asset growth rate), LCO indicates the level of capital ownership (ratio of total common equity to total assets), FS is firm size (logarithm of total assets) and the  $\epsilon_i$  is the error term.

The hypotheses of the study are derived from previous literature as follows.

H<sub>1</sub> = Earned equity to total equity has a significant impact on the dividend policy

H<sub>2</sub> = Earned equity to the total asset has a significant effect on the dividend policy

#### 4.FINDINGS AND DISCUSSION

Table 01 presents descriptive statistics, including the mean, standard deviation, maximum, and minimum values of the study variables.

**Table 1: Descriptive Statistics**

	DP	RE_TE	RE_TA	PR	SG	AG	LCO	FS
Mean	0.124	0.443	0.235	0.074	0.168	0.156	0.556	20.76
Median	0.204	0.446	0.172	0.049	0.081	0.101	0.533	21.67
Maximum	17.35	1.23	1.282	1	20.17	7.46	7.807	28.95
Minimum	-58.27	-1.322	-0.182	-1	-0.992	-0.9	0.07	13.10
Std. Dev.	3.439	0.292	0.216	0.139	1.021	0.434	0.446	3.542
Skewness	-13.99	0.442	1.346	1.835	15.74	10.97	9.159	-0.50
Kurtosis	226.1	4.701	4.991	19.85	299.3	170.8	144.6	2.075

The descriptive statistics reveal that the minimum and maximum dividend payout values are -58.278 and 17.357, respectively. On average, companies have maintained a dividend payout ratio of 0.124. The standard deviation of 3.439 indicates a moderate degree of dispersion in dividend distribution. The mean values of RE/TE and RE/TA suggest that companies have retained approximately 44.3% of earnings as a proportion of total equity and 23.5% as a percentage of total assets. Moreover, the standard deviations of RE/TE (0.292) and RE/TA (0.216) suggest that the values are only marginally deviated from the mean.

### Correlation Analysis

Table 02 presents the results of the correlation analysis. The findings indicate the absence of multicollinearity issues. Additionally, the analysis reveals a positive relationship between profitability, asset growth, and firm size with dividend payout. Conversely, a negative relationship is observed between sales growth and the level of capital ownership with dividend payout.

**Table 2: Correlation Analysis**

	DP	RE_TE	RE_TA	PR	SG	AG	LCO	FS
DP	1							
RE_TE	-0.016**	1						
RE_TA	-0.047**	0.368	1					
PR	0.053**	0.111	0.229	1				
SG	-0.005	-0.044	0.010	0.106	1			
AG	0.023	-0.081	-0.073	0.036	0.022	1		
LCO	-0.026	-0.120	0.330	0.056	0.035	-0.065	1	
FS	0.021*	0.074	-0.104	-0.006	-0.019	0.090	-0.212	1

### Regression Analysis

The results of the panel data regression analysis are depicted in Table 3.

**Table 3. Results of the Regression Analysis**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.130	1.028	-0.126	0.900
RE_TE	0.419	0.831	0.504	0.615
RE_TA	-1.342**	1.198	-1.120	0.026
PR	1.465**	1.178	1.243	0.021
SG	-0.047	0.154	-0.307	0.759
AG	0.088	0.365	0.241	0.809
LCO	0.011	0.426	0.025	0.980
FS	0.013	0.045	0.280	0.780

The research model can be estimated based on the regression outcomes.

$$DP = -0.130 + 0.419 RE/TE - 1.342 RE/TA + 1.465 PR - 0.047 SG + 0.088 AG + 0.011 LCO + 0.013 FS$$

The Hausman test (P value: 0.7629) was employed to choose between the fixed effect model and the random effect model, determining the fixed effect model as the most suitable for analyzing the data. The regression analysis findings indicate support only for H1b, while H1a is not supported. This outcome suggests that, in contrast to Earned Equity to Total Equity, Earned Equity to Total Assets exerts a significant negative influence on dividend policy. Specifically, a higher Earned Equity to Total Equity ratio correlates with a notably lower dividend payout. This finding aligns with Ishikawa's (2011) research, which indicates that newer companies in Sri Lanka tend to increase dividends more than established ones. In a surprising turn of events, this study's results upend the prevailing notion of the dividend life cycle, as presented in DeAngelo (2006), by directly contradicting the primary literature in this field.

## **5.CONCLUSION**

This study investigated the influence of the earned and contributed capital mix on the dividend policy of companies listed on the Colombo Stock Exchange (CSE), with a particular focus on the applicability of the life cycle theory of dividends in this context. The analysis employed a 10-year panel dataset encompassing 50 companies and 500 observations from 2011 to 2020.

The results provide compelling evidence for a significant negative association between the ratio of earned equity to total assets and dividend payout policy. This implies that, in line with the life cycle theory's prediction of higher dividend payouts in mature firms, companies with a greater proportion of retained earnings (earned equity) exhibited a lower propensity for dividend distribution. However, this relationship was statistically negative, suggesting a potential deviation from the life cycle theory within the Sri Lankan market. This challenge throws open the door for a reevaluation of longstanding assumptions about dividend policy, potentially paving the way for a new era of financial theory while highlighting the need for further exploration of alternative dividend policy determinants that may be more relevant to the specific economic and regulatory environment of Sri Lanka.

These insights hold potential value for various stakeholders. Investors and potential investors, for instance, can leverage this knowledge to incorporate the earned and contributed capital mix into their decision-making processes when evaluating dividend-paying prospects of listed companies on the CSE.

It is essential to acknowledge the limitations of this study. The reliance on secondary data analysis from a sample of 50 companies over a 10-year timeframe necessitates further research. Future studies could benefit from employing a triangulation approach, potentially combining quantitative data with qualitative interviews with industry experts or company management, to gain a more comprehensive understanding of dividend policy decision-making within the Sri Lankan context.

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