THE INFLUENCE OF INTELLECTUAL CAPITAL ON FINANCIAL PERFORMANCE: EVIDENCE FROM LICENSED SPECIALIZED BANKS IN SRI LANKA

Kanishka, W. L.

Department of Banking and Finance, Faculty of Business Studies and Finance, Wayamba University of Sri Lanka

kanishkawithanage229@gmail.com

ABSTRACT

As the knowledge-based economy developed, businesses transformed their emphasis from physical to intellectual capital. Numerous studies have looked into how intellectual capital affects a company's value. The study's goal is to investigate, from 2010 to 2022, the connection between five licensed specialized banks' financial performance and their intellectual capital. The statements of comprehensive income and financial position for the pertinent years were the main sources of the data that were collected from the banks' annual reports available on their individual websites. The study's results were analysed and secondary quantitative data screened using EViews version 9 statistical software. The value-added intellectual coefficient method was used to measure the banks' performance based on their intellectual capital. The return on equity and return on assets are two indicators of the bank's performance. The value of intellectual capital was analysed in three categories: structural, intellectual, and physical. Both simple and multiple regression techniques were used to assess the effect of intellectual capital on equity and assets. The study found a significant correlation between the value-added intellectual coefficient, its components, and financial performance. In both multiple regression models, the structural capital efficiency was statistically insignificant but positively correlated. Both multiple regression models showed statistical insignificance and negative correlation for the capital employed efficiency. Human capital efficiency was statistically significant and positively correlated in both multiple regression models. The most crucial value-added intellectual coefficient factor for generating value in Sri Lankan specialty banks operating in the banking industry is human capital efficiency. Additionally, this study will give stakeholders and possible investors some information to evaluate the value-creating potential of particular banks. The findings of the study help to increase decision-makers' understanding of the importance of intellectual capital as a crucial element that can enhance a business's ability to maintain its competitive position. This study is the first to examine the impact of intellectual capital on the financial performance of Sri Lankan licensed specialized banks through 2023. The study emphasizes how critical it is to investigate the relationship between intellectual capital and the banking industry's financial performance in greater detail.

Keywords: ***Intellectual Capital, Human Capital, Structured Capital, Capital Employed, Relational Capital, Financial Performance***

1. INTRODUCTION

The collective knowledge and skills of all employees in consulting firms are referred to as Intellectual Capital (IC) (Huang and Hsueh, 2007). IC is critical for ensuring global competitiveness and corporate performance. In today's economy, wealth is derived from intangible assets rather than physical ones. Investing in new skills and technology is a key factor for organizational success. As per Latif and Aslam (2012) the survival and competitive advantage of a company are increasingly dependent on intangible assets, especially knowledge.

In the twenty-first century, the knowledge economy has taken center stage. Many companies are using Intellectual Capital (IC) instead of physical capital as they look for more efficient ways to use their resources in order to survive in the quickly changing business environment. As a result, many businesses have experienced a significant transition from the production to the knowledge era, and from production labor to knowledge workers (Lipunga, 2014). Efficiently managing IC is more important in creating competitive benefit and long-term value than tangible assets. Shih, Chang, and Lin (2010) found that knowledge-based industries, such as banks, rely heavily on non-tangible and intellectual resources. Ahuja and Ahuja (2012) contend that success in banking depends more on the effective use of Information and Communication Technology (ICT) than it does on success in other industries. A bank must invest in Information and Communication (IC), including systems, processes, branding, human resources, and brand building, in order to offer high-quality services. According to Chen, Cheng, and Hwang (2005) IC had a significant positive impact on the market value, return on equity, and return on assets of sample companies in Taiwan. Roos and Roos (1997) emphasized that intangible assets improve both firm performance and organizational value. The IC serves as the foundation for future strength and growth in corporations and nations. According to Choudhury (2010), production factors that are not visible on a company's conventional balance sheet influence its long-term profitability.

Moreover, while a lot of research has been done on IC in the developed world, not as much has been done on the implications of IC for particular industries, such as banks, in developing Sub-Saharan Africa and other emerging economies (Kamath, 2007). This has created a vacuum that needs to be filled because, as a result of the rapidly evolving environment full of innovation, information, and technology, businesses in both developed and developing economies are becoming more and more susceptible to the effects of global competition (Muhammad and Ismail, 2009). As a result, IC is becoming more and more critical to their long-term viability and competitiveness.

Any organization or company that has been granted permission by the central bank to operate as a licensed specialized bank in Sri Lanka under the Banking Act may accept deposits, invest in those deposits, and make loans with them. Licensed specialized banks in Sri Lanka play an important role that should not be overlooked, despite their relatively small size and impact on the financial system when compared to licensed commercial banks.

Further, while Western countries have conducted numerous empirical studies on IC, Asia, particularly Sri Lanka, has seen a lack of such research This study provides valuable insights for stakeholders in the banking industry and knowledge-based industries in Sri Lanka, enabling them to enhance their competitive advantage. Therefore, more research needs to be encouraged in developing nations with IC and financial performance. Even though there are plenty of human resources in the banking sector in Sri Lanka, very few studies about IC have been done in this sector till 2023. So, this study is the very first in Sri Lanka to study the impact of intellectual capital on the financial performance of licensed specialized banks. This study aims to examine the effect of IC using the VAIC method developed by Pulic (1998) on the financial performance of five out of six licensed specialized banks in Sri Lanka, namely Housing Development Finance Corporation Bank of Sri Lanka (HDFC), National Savings Bank (NSB), Regional Development Bank (RDB), Sanasa Development Bank PLC (SDB), State Mortgage & Investment Bank (SMIB), and the researcher has omitted Sri Lanka Savings Bank Ltd. (SLSBL) due to unavailability of financial reports for several years. The findings would provide licensed specialized banks in Sri Lanka with guidance on which IC component or components to invest in to improve their financial performance.

2. LITERATURE REVIEW

2.1 Intellectual Capital and Components of Intellectual Capital

A single definition of IC cannot adequately capture its meaning. On the other hand, IC can also be understood as intangible assets that improve a company's performance but aren't specifically mentioned on its balance sheets (Mondal and Ghosh, 2012). Though it isn't specifically mentioned on balance sheets, IC improves a company's performance because they make clear the connections between workers, concepts, and data, making it possible to measure the immeasurable (Edvinsson, 1997).

IC increases productivity and creates wealth for the companies. Lönnqvist, Kianto, and Sillanpää (2009) looked into the role of IC management in ensuring that the change content is in line with the strategic objectives of the company. Riahi-Belkaoui (2003) stated that the net value added created, a gauge of future firm performance, and IC have a positive correlation. The Value-Added Intellectual Coefficient (VAIC) model is a popular technique used in this study and by many researchers around the world in a variety of industries to determine the value of IC. The VAIC approach is a time-tested, reliable, and standard comparative analysis that can be used both domestically and globally. VAIC was created by Pulic (1998) and has been used in prior IC research as a gauge of IC performance. Pulic (1998) proposed the VAIC theory, which measures the efficiency with which IC and capital are used to add value. Two benefits of VAIC, as noted by Firer and Williams (2003), are that it offers a standardized, consistent, and straightforward basis of measurement that makes it possible to conduct efficient comparative analyses between businesses and nations. Furthermore, the data used to calculate VAIC comes from financial statements, which are usually audited by qualified public accountants. The theory considers three main

elements: structural capital, human capital, and capital employed. According to Saengchan (2007), Pulic's VAIC—which takes into account human, structural, and physical capital—is an effective way to gauge the amount of capital used and its impact on firm performance.

Numerous scholars have separated IC into three primary categories: relational capital, structural capital, and human capital. Human capital, according to Sveiby (1998), is the sum of an employee's personal experiences, knowledge, and technological know-how connected to the company's capabilities, which include its capacity for innovation and creativity to boost value creation.

2.1.1 Human Capital (HC)

According to Bontis (2001), the essence of IC is Human Capital (HC). This is where innovation and advancement come from, but it's a hard attribute to quantify. In a company and in relation to effective leadership, human capital is also a very helpful source of knowledge, skills, and competencies (Sidharta and Lusyana, 2015). Their efficiency and knowledge are also part of human capital. It includes people's abilities, experience, knowledge, and skills. When employees leave the organization, they will bring these with them. Also, when new employees are recruited, a new breed of aforementioned facts will come to the organization. A new breed of executives is needed in the financial sector, especially in banks. These executives must be tech-savvy, customer-focused, highly qualified, adaptable, and agile, with broader skill sets than previous generations. According to Muhammad and Ismail (2009), globalization has turned elite human capital into a need rather than an extravagance.

2.1.2 Structured Capital (SC)

Structural Capital (SC), or the supporting infrastructure that enhances human capital's performance, is a vital link between relational capital and human capital Bontis (2001) refers to all non-human knowledge repositories within an organization as structural capital, which includes databases, organizational charts, process manuals, strategies, routines, and anything else whose value to the business exceeds its material value. Structural capital is more valuable than material capital because it includes all non-human knowledge resources (Roos and Roos, 1997). This capital, which will remain with the company even after employees leave, is the result of the systems or products it has developed over time (Muhammad and Ismail, 2009).

2.1.3 Capital Employed (CE)

The term Capital Employed (CE) refers to the total amount of capital used in a company's current and fixed assets (Muhammad and Ismail, 2009). When viewed through the lens of funding, it is equal to the sum of long-term liabilities and stockholders' funds. However, from an asset perspective, it boils down to working capital plus fixed assets. As a result, capital employed represents the value of the assets that underpin a company's ability to generate revenue. Typically, this capital is funded through two sources: net debt and shareholder equity. It refers to the resources that are directly under the manager's control, which typically include plant and equipment, inventory, and accounts receivable (Muhammad and Ismail, 2009).

Banking is among the industries that make extensive use of IC. According to Saengchan (2007) employing IC as a performance indicator benefits the participating banks.

2.2 Financial Performance

Financial performance is critical for businesses. The primary sources of information are those used to evaluate the business's past performance. Despite the company's impressive past performance, many managers and analysts are more concerned with the future, as they want to use past financial statements to forecast future performance. It is essential that people who have a stake in a company's expansion are aware of its financial status. The financial statements of other companies as well as an organization's balance sheet-based financial statements can be used to determine its financial health. Financial performance refers to an organization's ability to use its resources, generate revenue, and repay debt. This is a subjective concept. To determine profitability, a company's financial performance is measured using specific metrics. Financial statements summarize a company's performance over a given time period. Indicators of success include company profitability, the development of new goods, services, procedures, or both.

To assess bank profitability, two accounting standard ratios are used as dependent variables. Return on Equity (ROE) and Return on Assets (ROA), which are frequently used in international studies, are used to measure financial performance. Whereas ROE solely calculates the return on an owner's investment, ROA concentrates on the business's capacity to generate revenue. ROA served as a gauge for assessing how well the business used its resources to generate revenue. Because of the higher rate of return, a higher ROA is a sign of better financial performance. An increase in ROA would indicate that the business was starting to turn a profit, which would eventually benefit the owners.

Management researchers should use a variety of accounting-based metrics for performance evaluation, according to a study by Pandya and Rao (1998). The variables that are most frequently used are ROE and ROA. By using ROE and ROA, management of all communication channels can assess a company's financial performance or how well its management spends its resources to produce accounting returns per dollar of sales, assets, or investment. Financial statements are a popular tool for evaluating a bank's overall health over a specific time period, claims Kwan, (2003). They can be combined to compare various industries or sectors, or they can be used to compare banks that are comparable within the same industry. Yes, there are a number of ways to assess financial performance. Numerous techniques, such as accounting-based techniques like return on equity (ROE) and return on asset (ROA), can be used to measure performance. These findings imply that overall data collection is necessary to determine the extent to which data can be used to assess banking performance. This measurement will take into account the income generated by each department and operational unit that the banks have available.

2.3 Intellectual Capital and Firm's Financial Performance

Gho (2005) examined the IC of Malaysian commercial banks using the VAIC model and found a significant correlation between VAIC performance and Human Capital Efficiency (HCE). Additionally, the study demonstrates that HCE, as opposed to Capital Employed Efficiency (CEE) and Structured Capital Efficiency (SCE), significantly contributes to measuring VAIC performance.

A study by Musyoka (2008) looked at the relationship between the performance of Kenyan commercial banks and how they handle human capital. The study emphasizes how critical it is to see IC as a valuable resource that needs to be investigated in order to determine how it impacts a company's financial performance. Along with employing a cross-sectional survey design, the researchers also carried out correlational research. The study's average conclusion was that most commercial banks use human capital management techniques. Gharoie Ahangar (2011) conducted a thirty-year investigation into one Iranian company. The results showed that IC had a significant impact on the company's productivity and profitability. In Malaysia, the insurance and brokerage industries also place a high priority on IC efficiency, as does the banking sector. Between 1999 and 2007, a survey on Malaysian financial institutions was carried out by Ting and Lean, (2009) in order to determine the performance of finance companies' internal control (IC) and how it influences their financial performance. The results of their investigation demonstrated a substantial and positive correlation between the profitability and return on assets of financial sector companies and IC, as determined by the VAIC index and all three of its components Joshi, Cahill and Sidhu (2010) also found similar results when they looked at real-world data from using the VAIC model to look into the link between IC and the performance of Australian-owned banks from 2005 to 2007. The study's findings indicate that Australian banks have relatively higher HC efficiency than SC and capital employed efficiency. The size, workforce, and total shareholder equity of banks have little to no effect on the sample banks' IC performance (Joshi, Cahill and Sidhu, 2010).

Numerous studies' findings indicate that IC has a favourable effect on banks' financial performance. Research on the banking sector in Thailand by Saengchan (2007) and Malaysian banking industry research by Ting and Lean (2009) both supported the beneficial effects of IC on financial performance. Studies using VAIC have yielded mixed results across countries, industries, and years. Chen, Cheng and Hwang (2005) found that IC increases firm value and financial performance, whereas some researchers found poor correlations among performance and VAIC. According to Firer and Williams (2003), firms and investors prioritize physical assets over intellectual property (IP). Iswati (2007) found no correlation between IC and bank performance on the Jakarta Stock Exchange, contradicting previous research. There is insufficient evidence to draw a strong conclusion about the connection between IC and firm performance.

Certain studies show no correlation between IC and financial performance, despite the majority showing one. Puntillo's (2009) multiple linear regression was used to analyse the data from the VAIC method and market-to-book value ratio studies of

Italian banks. The analysis found no evidence of a relationship between IC performance and financial performance as measured by ROA and ROE, as well as a negative market-to-book value ratio. Aruppala, Wickramasinghe and Mahakalanda (2015) examined only the Sri Lankan Licensed Commercial Banks performance from 2008 to 2017 using the VAIC method and found that there was a significant positive correlation between financial performance and IC. The study encourages bankers and other interested parties to use knowledge management techniques as a useful tool for figuring out how banks can create value.

Because the results of the aforementioned studies on the relationship between IC and bank financial performance have been inconsistent, the current researchers have undertaken an empirical investigation to determine the relationship when it comes to licensed specialized banks in Sri Lanka. The fact that most of the aforementioned research was conducted in developing economies illustrates how important it is to continue studying international banking practices and international corporate governance.

3. METHODOLOGY

3.1 Sample and Data Collection

This study focuses on five of Sri Lanka's six licensed specialized banks. Data for dependent and independent variables were taken from selected banks audited financial statements for the years 2010 through 2022. This research uses VAIC, a measurement developed by Pulic (1998). The VAIC method assesses an organization's internal communication capability and resource efficiency. A firm's ability to generate value-added with its resources increases with its VAIC value. The VAIC method serves as the independent foundation for this investigation.

Table 1: List of Sri Lankan Licensed Specialized Banks as of 2023

Institution	Website
HDFC	www.hdfc.lk
NSB	www.nsb.lk
RDB	www.rdb.lk
SDB	www.sdb.lk
SMIB	www.smib.lk

3.2 Measurement of Dependent Variables

The study's dependent variables are those that are used to evaluate the banks' financial performance. The study's dependent variable, Financial Performance, consists of two dimensions: ROE and ROA. These two dimensions are considered to be the primary indicators of a bank's profitability. Similar studies use this to gauge the organization's

financial performance (Ting and Lean, 2009; Yalama, 2013). The amount of profit the business makes in relation to its total assets is shown by the return on assets, or ROA. A high ratio value generally denotes a stronger position for the organization (Ting and Lean, 2009). The ROA provides relevant stakeholders with information about how well banks can use leadership and management to convert their entire asset base into profits. When calculating ROA, a company's earnings are compared to all of its available resources, such as shareholder capital and short- and long-term borrowing funds. The following is a representation of the formula:

$$\text{Return on Assets} = \frac{\text{Pre-tax Income}}{\text{Total Assets}}$$

ROE indicates how well an organization uses its resources to generate profit. Other businesses operating in a similar sector or area make payments to investors, determining the appropriate level of return on equity. Investors place more weight on this ratio than on ROA because it shows how well capital is being reinvested, and they are more likely to seek out and invest in businesses with high ROE because they will likely receive a high return on their investment. According to Ting and Lean, (2009), shareholder equity is an accounting concept that combines each shareholder's paid-in capital with the assets created by the company's retained earnings. Return on equity (ROE) is an alternative profitability metric that illustrates the return on owners' investment. The formula can be depicted as shown below:

$$\text{Return on Equity} = \frac{\text{Profit before Tax}}{\text{Total Equity}}$$

3.2 Measurement of Independent Variables

The independent variables in this study are elements of the VAIC methodology. First, these coefficient values were calculated for the total Valued Added (VA) using the method of VAIC calculation described by Pulic (1998). Although many methods have been developed to measure IC, there is ongoing discussion regarding the precise nature of this measurement. In this study, the VAIC method was used. It was created in 1997, 1998, 2001, 2002a, 2002b, and 2004 by Pulic.

3.3 Empirical Models

Simple linear regression was used by the researcher to produce results between the variables ROA-VAIC and ROE-VAIC. Below is a diagram of models X and Y for simple regression;

Model X

$ROA = \alpha + \beta 1\ VAIC + \varepsilon$ …… (1)

Where,

ROA = Return on Assets

α = Intercept coefficient

$\beta 1$ = Slope coefficient of the IC

ε = Error Term

VAIC = CEE+HCE+SCE

HCE = VA/HC

SCE = SC/VA

CEE = VA/CE

Note: Total Value Added to the bank (VA) = Operating profit of the bank (OP)+ Total Employment cost of the bank (EC)+ Amortization and depreciation of the bank (A)

Model Y

$ROE = \alpha + \beta 1\ VAIC + \varepsilon$ …….. (2)

Where,

ROE = Return on Equity

α = Intercept coefficient

$\beta 1$ = Slope coefficient of the IC

ε = Error Term

VAIC = CEE+HCE+SCE

HCE = VA/HC

SCE = SC/VA

CEE = VA/CE

Note: Total Value Added to the bank (VA) = Operating profit of the bank (OP)+ Total Employment cost of the bank (EC)+ Amortization and depreciation of the bank (A)

The results between ROA-CEE, HCE, and SCE and ROE-CEE, HCE, and SCE were obtained through multiple regression. To perform the multiple regression, the researcher took into account the overall mean value of each variable for the years 2010 to 2022.

The following shows the multiple regression models for models' X and Y;

$ROA = \alpha + \beta_1 HCE + \beta_2 SCE + \beta_3 CEE + \varepsilon$ …….. (3)

ROA = Return on Assets

α = Intercept coefficient

β1 = Slope coefficient of the HCE

β2 = Slope coefficient of the SCE

β3 = Slope coefficient of the CEE

ε = Error Term

$ROE = \alpha + \beta_1 HCE + \beta_2 SCE + \beta_3 CEE + \varepsilon$ …… (4)

ROE = Return on Equity

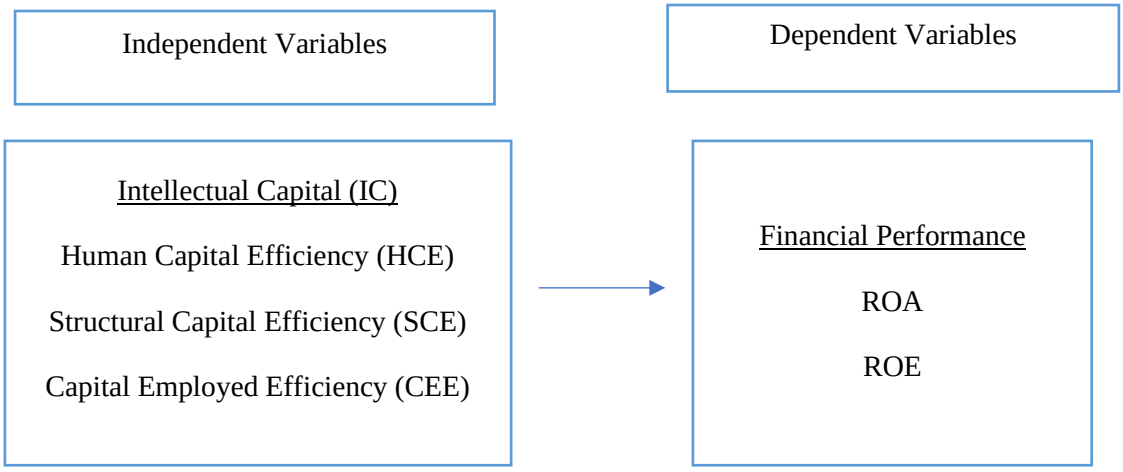
α = Intercept coefficient

β1 = Slope coefficient of the HCE

β2 = Slope coefficient of the SCE

β3 = Slope coefficient of the CEE

ε = Error Term



Source: Developed by the researcher

Figure 1: Conceptual Framework

Independent variable IC and its dimensions, HCE, SCE, and CEE, and dependent variable financial performance measured by ROA and ROE make up the conceptual framework. In light of this, the following hypothesis was created utilizing two models:

Model X based on ROA

H_1 – The ROA is significantly impacted by IC.

H_2 – The ROA is significantly impacted by the efficiency of human capital.

H_3 – The ROA is significantly impacted by the efficiency of structural capital.

H_4 – The ROA is significantly impacted by the efficiency of capital employed.

Model Y based on ROE

H_5 – The ROE is significantly impacted by IC.

H_6 – The ROE is significantly impacted by the efficiency of human capital.

H_7 – The ROE is significantly impacted by the efficiency of structural capital

H_8 – The ROE is significantly impacted by the efficiency of capital employed.

4. DATA ANALYSIS AND DISCUSSION

The study's results were analysed and secondary quantitative data was screened using the statistical program EViews version 9. The researcher used the mean value of each variable from 2010 to 2022 for the regression analysis.

4.1 Unit Root Test (Augmented Dickey-Fuller Method)

Before running the models, a unit root test is performed to ensure that all of the variables are stationary, barring the possibility of a spurious model. At both the level and the first difference, every variable was non-stationary. According to the results of the Augmented Dickey-Fuller Unit Root test, each variable is stationary at the second difference. This is because the probability values are less than 0.05, and the computed ADF statistics have absolute values greater than the tabulated ADF values of the variables at the 1%, 5%, and 10% levels of significance. This is based on the ADF unit root test that the investigator performed on the variables.

4.2 Correlation Analysis

Table 2: Correlation Outputs

	ROA	**HCE**	**SCE**	**CEE**
ROA	1	0.965	0.582	0.807
HCE	0.965	1	0.705	0.845
SCE	0.582	0.704	1	0.652
CEE	0.807	0.846	0.652	1

Source: EViews outcomes

Table 3: Correlation Outputs

	ROE	HCE	SCE	CEE
ROE	1	0.943	0.614	0.851
HCE	0.943	1	0.704	0.845
SCE	0.614	0.704	1	0.652
CEE	0.851	0.845	0.652	1

Source : EViews outcomes

Tables 2 and 3 illustrate the relationship between firm performance and different components of the employed capital (IC), including the efficiency of human, structural, and employed capital. The findings indicate a substantial positive correlation between HCE and CEE and financial performance (ROA and ROE). There is a somewhat positive correlation between structural capital efficiency and financial performance (ROA and ROE).

Table 4: Correlation Outputs

	ROE	ROA	VAIC
ROE	1	0.775	
ROA	-	1	0.891
VAIC	0.775	0.891	1

Source: EViews outcomes

There is a significant positive relationship between IC and financial performance (ROA and ROE), as indicated by table 4 results.

4.3 Regression Analysis

4.3.1 *Results of simple regression analysis*

The main objective is to find out how IC affects the financial performance of licensed specialized banks in Sri Lanka. To do this, the following simple linear regression model is created.

Table 5: Simple Regression Model X

Variable	Coefficient	Prob.
C	-0.012	0.879
DVAIC	0.760	0.001
R^2	0.795	
Adjusted R^2	0.774	

Source: E Views output

The findings in Table 5 show how IC has a negligible effect on financial performance (ROA). Table 5 displays the t-test significance of each individual variable, as well as the regression model's coefficient values. At the 5% significance level, the findings demonstrate that VIAC is statistically significant. Conversely, the model clarifies that a rise in IC will boost banks' financial performance.

The adjusted R square value, also called the adjusted coefficient of determination, is a measure of how well the regression line fits the data set. The regression equation explains how it determines the fraction or percentage of the dependent variable's overall variation. According to the results of the simple linear regression model X, which has an adjusted R square value of 0.78, variables other than VAIC account for only 22% of the financial performance (ROA) of the licensed specialized banks in Sri Lanka, whereas VAIC accounts for 78% of it. Table 5 indicates that the model as a whole is statistically significant. The regression equation can be developed using the regression analysis information as follows:

Model X Equation 1: Simple Regression Analysis

$$\text{ROA} \equiv -0.122 + 0.761\text{VAIC} + \varepsilon \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (5)$$

Table 6: Simple Regression Model Y

Variable	Coefficient	Prob.
C	0.583	0.535
DVAIC	5.516	0.003
R^2	0.602	
Adjusted R^2	0.562	

Source: EViews output

The findings in Table 6 show how IC has a negligible effect on financial performance (ROE). Table 6 displays the t-test significance of each individual variable, as well as the regression model's coefficient values. At the 5% significance level, the findings demonstrate that VIAC is statistically significant. Conversely, the model clarifies that a rise in IC will boost banks' financial performance.

According to the results of the simple linear regression model Y, which has an adjusted R square value of 0.56, it can be inferred that the variables other than VAIC account for only 44% of the financial performance (ROE) of the licensed specialized banks in Sri Lanka, whereas VAIC accounts for 56% of it. According to Table 6 the overall model is statistically significant. The regression equation can be developed using the regression analysis information as follows:

Model Y Equation 2: Simple Regression Analysis

$$ROE \equiv 0.584 + 5.517VAIC + \varepsilon \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (6)$$

4.3.2 *Results of Multiple Regression Analysis*

The following is the development of the multiple linear regression model with the primary objective of investigating the noteworthy influence of IC on the financial performance of the specialized banks in Sri Lanka:

Table 7: Multiple Regression for Model X

Variable	**Coefficient**	**Prob.**
C	-0.028822	0.5600
DHCE	1.365753	0.0003
DSCE	-0.712360	0.1428
DCEE	0.050097	0.9678
R^2	0.951422	
Adjusted R^2	0.930603	

Source: EViews output

The findings in Table 7 show how HCE, SCE, and CEE have a minor effect on financial performance (ROA). Table 7 shows the regression model's coefficient values, as well as the t-test significance for each individual variable. The findings indicate that HCE is statistically significant at the 5% significant level, but SCE and CEE are not. Conversely, the model clarifies that a rise in human capital or

intellectual capital will boost banks' financial performance, barring capital employed and structured capital.

The model accounts for 93% of the financial performance (ROA) of the licensed specialized banks in Sri Lanka, while variables other than these three account for just 7% of the financial performance (ROA) of the licensed specialized banks in Sri Lanka, according to the multiple linear regression model X, whose adjusted R square value is 0.93. Table indicates that the model as a whole is statistically significant. The regression equation can be created using the information from the regression analysis provided in Table 7.

Model X Equation 3: Multiple Regression Analysis

$$ROA \equiv -0.029 + 1.366\text{HCE} + \varepsilon \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (7)$$

Table 8: Multiple Regression for Model Y

Variable	Coefficient	Prob.
C	0.162	0.760
DHCE	8.379	0.008
DSCE	-3.546	0.474
DCEE	12.721	0.362
R^2	0.908	
Adjusted R^2	0.868	

Source: EViews output

Table 8 presents the results that show how HCE, SCE, and CEE have a marginal effect on financial performance (ROE). Table 8 displays the t-test significance of each individual variable, as well as the regression model's coefficient values. The findings indicate that HCE is statistically significant at the 5% significant level, but SCE and CEE are not. Conversely, the model clarifies that a rise in human capital or intellectual capital will boost banks' financial performance, barring capital employed and structured capital.

The model accounts for 87% of the financial performance (ROE) of the licensed specialized banks in Sri Lanka, while variables other than these three account for just 13% of the financial performance (ROE) of the licensed specialized banks in Sri Lanka, according to the multiple linear regression model Y, which has an adjusted R square value of 0.87. Table 8 indicates that the model as a whole is statistically

significant. The regression equation can be created using the data from the regression analysis provided in Table 8.

Model Y Equation 4: Multiple Regression Analysis

$$ROE \equiv 0.163 + 8.379\text{HCE} + \varepsilon \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (8)$$

4.4 Summary of Hypotheses Testing

Table 9: Summary of Hypotheses Testing

Model X	**Hypotheses**	**Accepted/Rejected**
H_1	The ROA is significantly impacted by IC.	Accepted
H_2	The RO is significantly impacted by the efficiency of human capital.	Accepted
H_3	The ROA is significantly impacted by the efficiency of structural capital.	Rejected
H_4	The ROA is significantly impacted by the efficiency of capital employed.	Rejected
Model Y	**Hypotheses**	**Accepted/Rejected**
H_5	The ROE is significantly impacted by IC.	Accepted
H_6	The ROE is significantly impacted by the efficiency of human capital.	Accepted
H_7	The ROE is significantly impacted by the efficiency of structural capital.	Rejected
H_8	The ROE is significantly impacted by the efficiency of capital employed.	Rejected

Source: Developed by the researcher

5. CONCLUSION AND FUTURE RESEARCH

5.1 Conclusion

The main goal of this study is to find out how Sri Lankan licensed specialized banks' financial performance is affected by their IC. The researcher computed and measured IC using the VAIC, and bank financial performance was analyzed using ROA and ROE ratios. For the study, every specialized bank was considered except the Sri Lankan Savings Bank Limited due to the unavailability of data from 2010 to 2012.

Therefore, researchers draw the following conclusions. The financial performance of Licensed Specialized Banks in Sri Lanka is primarily enhanced by the diverse contributions of individuals within the banking sector, known as human capital. Sri Lankan banks place a high priority on effective and efficient money management.

Numerous previous studies (Goh, 2005; Muhammad and Ismail, 2009) have demonstrated a strong positive correlation between a company's financial performance and its human capital efficiency. Researchers have validated their findings with evidence from the Sri Lankan banking sector. The financial performance of Sri Lankan banks is found to be more impacted by the efficiency of human capital than by the efficiency of capital employed and structural capital. A higher degree of financial performance is not always correlated with high levels of capital employed and structural capital efficiencies. The study's conclusions show that Sri Lankan banks' human capital affects their financial performance.

5.2 Suggestions for future research

To the best of the authors' knowledge, this is the first study to examine the IC performance of the nation's licensed specialized banks in the banking sector in Sri Lanka using VAIC. Thus, this ground-breaking study could serve as a basis for further research on IC in developing nations such as Sri Lanka and other Asian countries. Future investigations should also look into how IC affects the financial results of licensed lenders, insurance providers, and commercial banks both with and without the use of control variables.

Another is the application of VAIC to other Colombo Stock Exchange (CSE) sectors and, by extension, to the other economic sectors. To provide a comparative analysis of how it could be improved, the efficiency of Sri Lankan state commercial banks or local commercial banks could be compared to that of foreign banks or other private commercial banks. This would result in a more accurate assessment of IC in the banking sector. More research should be done to determine how IC affects market-based performance measures like the market-to-book ratio and economic value added, as the market-based measure was not used in this study to evaluate its performance.

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