THE RELATIONSHIP BETWEEN BUSINESS MODEL DESCRIPTION AND FINANCIAL PERFORMANCE OF SELECTED SOUTH AFRICAN BANKS

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DECLARATION

I, Thabe Mothabine, hereby declare that the work contained in this thesis is my original work and has not previously, in its entirety or in part, been submitted at any university for a degree.

---	23 June 2021
Signature	Date

ABSTRACT

The aim of this study was to explore the relationship between South Africa's top seven bank's business model description and their financial performance. Research has highlighted that there is a relationship between business models and performance, however, a limited amount of studies have provided empirical evidence to this effect.

The study followed a deductive approach by firstly assessing and analysing the components of the banks business model according to the IIRC's International <IR> Framework, and then comparing the components focus of each bank for every year of this study; followed by an assessment, analyses and evaluation of each banks financial performance using the CAMELS Rating System model. Once these analyses were done for both business model description and financial performance, the study attempted to assess if the banks with the richest business model description yielded the best financial performance. The findings revealed that the banks with the richest business model description were not necessarily the best performing banks, in actual fact, these banks had low ratings for their performance, and the banks with the lowest rating for their business model description had the highest financial performance rating. However, other factors contributed to these ratings, such as some banks had low ratings for their business model description due to their business models not following the <IR> Framework.

Conversely, for a more detailed and an in depth analysis and to distinguish whether there is a relationship between business model description and financial performance, the study applied correlation coefficient by using the business model description scores and financial performance components scores for each bank for the three years. The results revealed that there was a strong positive correlation between 2017 and 2018, and a weak positive correlation in 2019. This meant that indeed there was a relationship between the business model description and the bank's financial performance.

While the limitations of this study have been acknowledged, the study has contributed to the knowledge of understanding the relationship between business models and financial performance in a South African context. However, further research could be conducted on more banks in order to deduct a broader view on the relationship between business model description and financial performance of South African banks. Moreover, it would be of greater significance to conduct the various analyses over a longer period of time, because with a broader scope of data, for a longer period, more conclusive findings could be possible.

DEDICATION AND ACKNOWLEDGEMENTS

This thesis is dedicated to both my remarkable parents. My father, the late Mr. Alpheus Ngwako "Tommy" Mothabine, who did not only raise and nurture me, but also overstretched himself dearly over the years for my education and intellectual development- words alone cannot express how eternally grateful I am for everything you have done for me papa, continue to rest in peace. My mother, Mrs. Stokie Mothabine, who has continued to be a source of motivation and strength during my moments of despair and discouragement. I love you with every fiber of my being mama, and I will continue to make you proud.

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LIST OF ABBREVIATIONS

A: ABSA Bank Limited

AF: African Bank Limited

C: Capitec Bank

F: FirstRand Bank/ FNB

I: Investec Bank Limited

N: Nedbank

S: Standard Bank/ SBSA

IN: Input

AC: Activity

OP: Output

OT: Outcome

T: Total

NP: Net Profit

TC: Total Capital

CR: Capital Ratio

EA: Earning Ability: Return On Equity/ Return on Assets

CY: Cost-Income Ratio

AD: Acceptance of Deposits

LF: Lending of Funds

OB: Online Banking

I: Investments

ND: Number of deposits and loan transactions processed

V: Real value of deposit and loan balances

S: Number of deposit and loan accounts serviced

TP: Taxes paid

D: Dividends paid out

IIT: Investment in Technology

AC: No. of Active Internet/Mobile Banking Clients

ATM: No. of ATMs/Touchpoints

NB: No. of Branches

NE: No. of enquiries and transactions on online platforms

PC: Processing capacity

AIT: Active IT systems

ICB: Increased customer base

IP: Improved productivity

WCS: Offer World-Class Services

SPS: Safe Proficient Banking

IIIT: Investment in IT

DNT: Development of New Technologies

BV: Brand Value (Ranking/ Awards)

PBS: Proficient Banking Service

ACO: Active Consumers

CS: Convenient Service

PCF: Protection of Clients Funds

VAC: Value Added for Clients

RCS: Responsive Customer Service

EL&D: No. of Employees Who Attended Learning & Development

ML&D: Money Spent on Learning & Development

ED: Employee Diversity

NWC: New Ways of Communicating with Clients

SSC: Steadfast Employees Supporting Clients

BCE: Better Customer Experience Reported

FMC: Offer Clients Frictionless Movement Between All Channels

MSE: More Skilled Employees

GCB: Gains for Both Consumers and the Bank

CSC: Contribution to Society/ Community

BR: Building Relationships

SSP: Supplier Selection Process (Qualitative)

EI: Ethical Investments

PPC: Promotion of Profile in Communities They Serve

CG: Customer Growth

ISR: Increase in Service Rendered

IBR: Increased Brand Recognition

VC: Value Creation

GI: Green Investing

EC: Energy Consumption

GE: Greenhouse Emissions

RNR: Regenerate Natural Resources

IEC: Integrate Environmental Costs and Risks into Capital Markets

KNC: Knowledge on How Natural Capital Can Benefit Them

NCID: Considering Natural Capital Information in Decisions

DEU: Decrease in Energy Usage

DCE: Decrease in Carbon Emissions

CHAPTER 1: INTRODUCTION

1.1. Introduction

This chapter opens the research with a brief background and motivation for the choice of the research topic. The researcher then discusses the problem statement, followed by the research's aim and objectives, and concludes this beginning chapter with the study outline.

1.2. Background to the Study

According to the Banking Association South Africa (2017), South Africa has a well developed and proactively regulated banking system which is equal to or greater than those of industrialised countries. As a result, the sector has attracted international interest, with numerous foreign banks establishing offices in South Africa and international banking organisations acquiring shares in major local banks. The South African Reserve Bank (SARB) is responsible for bank regulation and supervision in South Africa and is the primary regulator. Its purpose is to achieve a sound, efficient banking system in the interest of banks' depositors and the economy as a whole (South African Reserve Bank, 2020).

South Africa's banking sector is dominated by the five largest banks, namely, Absa, FirstRand, Investec, Nedbank and Standard Bank; which collectively held 90.5% of the total banking sector assets as at March 2019 and 89.4% in March 2020 (SARB, 2020). A study conducted by Deloitte (2019) highlight that banking is undergoing a significant change and all current business models are under scrutiny. Deloitte (2019) adds that banks' business models have evolved progressively with the help of technology, and in response to changes in the economic and financial environment, as well as to new rules and regulations. Osterwalder and Pigneur (2003), state that business models have proven to be a vital tool to understand the mechanisms through which an organisation captures value. According to Zott, Amit and Massa (2011), the business model concept has received substantial attention from researchers in the fields of entrepreneurship and strategy. Numerous research done has confirmed that an organisation's business model plays a substantial role in determining their performance (Zott and Amit, 2005; Aziz and Mahmood, 2011; Malone, Weill, D'Urso, Herman, Apel, and Woerner, 2016; and Mergaerts and Vennet, 2016).

Roengpitya, Tarashev, Tsatsaronis and Villegas (2017), state that just like any other organisation, a bank seeks a competitive edge by exploiting its competitive advantages in terms of access to specialised resources, available market opportunities and managerial skill. The result of this effort is a business model that emphasises some activities as opposed to others. Ultimately, business models may be associated with differences in bank performance (Roengpitya et al., 2017).

Since there is evidence signifying that the design of the business model is important to an organisation's performance, and the performance of banks is essential to the country's economy, it will be advantageous to study businesses' performance based on their business model. Using a methodology for capturing the business model and performance, and drawing comparisons across South Africa's top seven banks, namely Absa, African Bank, Capitec, FirstRand, Investec, Nedbank, and Standard Bank - selected on the basis of their asset size, this study will investigate the relationship between these banks business model description and their financial performance. Table 1.1 below provides an overview of the selected banks for this study.

Table 1.1.: Overview of the Selected Banks

BANKS	ESTABLISHED	ASSETS WORTH	MARKET CAPITALISATION (2020)	CLIENTS	EMPLOYEES	REFERENCE
ABSA	1991	1.4 Trillion (Rands)	89.3 Billion (Rands)	9.7 Million	40 000	Absa (2020)
African Bank	2016 (**in curatorship*)	28 221 Billion (Rands)	546.2 Million (Rands)	1.2 Million	3000	African Bank (2020)
Capitec	2001	62 900 Billion (Rands)	111.2 Billion (Rands)	14.5 Million	11 440	Capitec (2020)
First Rand Limited	1838	1.9 Trillion (Rands)	230 Billion (Rands)	8.2 Million	45 000	First Rand Limited (2020)
Investec Bank	1974	57 Billion (Pounds)	43 Billion (Rands)	100 Thousand	9700	Investec (2020)
Nedbank	1888	1.1 Trillion (Rands)	50.6 Billion (Rands)	7.5 Million	32 000	Nedbank (2020)
Standard Bank	1862	160 Billion (US Dollars)	185.7 Billion (Rands)	9.2 Million	48 000	Standard Bank (2020)

Source: Researchers compilation based on data from each bank's corporate website

1.3. Problem Statement

South Africa's economy has grown by 1.3% in 2017 and 0.8% in 2018 (The World Bank, 2020). The World Bank has predicted that the country's economy was expected to grow by 1.3% in 2019 and 1.7% in 2020, however, due to COVID-19, the country's economy suffered a significant contraction when the country operated under widespread lockdown restrictions (The World Bank, 2020). The

financial sector has been one of the most affected, reporting significantly reduced earnings because of the impact of the crisis. Banks play an important role in the financial system and the economy. According to Parker (2020), the South African banking sectors' total assets are calculated to be 116% of the GDP of the country. Conversely, Deloitte (2019) states that just like any other business, these South African banks compete for market power, by predominantly choosing to be different from one another. In a competitive pursuit of growth opportunities, these banks choose a business model to leverage the strengths of their organisation (Deloitte, 2019).

This study will explore the link between a bank's business model description and financial performance. Literature has suggested that there is a possible linkage between business model description and firm performance (Zott and Amit, 2007). However, very few studies have provided empirical evidence to this effect (Pucci, Nosi and Zanni, 2017). Researching this context has the potential to contribute to the body of knowledge currently available.

1.4. Research Aim and Objectives

The aim of this study is to analyse the business model description of South Africa's biggest banks (Absa, African Bank, Capitec, First Rand Limited, Investec Bank, Nedbank and Standard Bank Group), over three consecutive years (2017, 2018 and 2019), and if there is a relationship to their financial performance. The supporting objectives are to:

- Assess, evaluate and analyse the components of the bank's business model according to the IIRC's *International <IR> Framework*;
- compare each bank's business model components against each other over the three years, and also highlight the pattern of change, using tables and graphs;
- assess, analyse and evaluate the banks financial performance using the CAMELS Rating System model;
- evaluate whether the business model description according to the IIRC's *International <IR> Framework,* has an effect on bank's financial performance;
- lastly, contribute to existing literature by providing new perspectives on business models and performance.

1.5. Study Outline

This study comprises of six chapters. Chapter one begins with a brief introduction and the background of the study. The chapter also gives an overview of the research aim and objectives. Chapter two focuses on the literature review and will provide a more detailed discussion of the concepts defined in chapter one. Chapter three describes the methodology utilised to undertake the study. Chapter four presents the findings of the study in accordance with the objectives. Chapter five is a discussion of the findings from the data analysed. Finally, chapter six provides the conclusion of the study and gives recommendations for management practice and further research.

1.6. Conclusion

This study proposed to investigate and evaluate the relationship between business model description and performance of South Africa's biggest seven banks. The next chapter will highlight the key research in this study area with a review of the pertinent literature.

CHAPTER 2: LITERATURE REVIEW

2.1. Introduction

This chapter provides an overview of the literature and forms the theoretical base of this study, with the aim to add value to the current state of knowledge. This will be done by critically evaluating the existing literature on how business models has an effect on performance, particularly in the banking sector of South Africa, by providing a reflective stance on existing debates and findings.

This study follows a deductive approach, which involves beginning the study with theory, followed by developing hypotheses from that theory, and then collecting and analysing the data to test those hypotheses. The chapter commences with literature on the Resource Based Theory, as this is the theoretical underpinning for both business models and performance. This is followed by extensive literature on business models, and then literature on integrated reporting, predominantly focusing on the South African financial services industry's integrated reporting compliance, since the business models for this study will be extracted from integrated reports of these banks, which are found in their corporate websites; this is followed by in-depth literature on performance and its measures; and then finally, literature highlighting the link between business models and firm performance is outlined.

2.2. Resource Based Theory

The resource based theory outlines the ability of an organisation to obtain sustained competitive advantage through the use of resources in the value-adding process. The underlying notion of the theory is that instead of looking at the competitive business environment to get an edge over competition and threats, or a niche in the market, the organisation should instead look within at the resources and potential it already has available. The sustained competitive advantage of a firm is dependent on the firm's resources and capabilities (Barney, Ketchen and Wright, 2011). The resource based theory (also referred to as RBT) states that there are two main types of resources (assets), which are commonly referred to as tangible and intangible assets.

- **Tangible assets** – According to Barney (1991), these resources or assets are usually physical items that an organisation has acquired like capital equipment or macinery, land, products and

property. Barney (1991) adds that these resources can largely be bought and thus offer little competitive advantage, as other organisations can also attain identical assets.

- **Intangible assets** – Barney (1991) states that these resources or assets are items and concepts that have no value that can be physically seen but can still be claimed to be owned by the organisation. This may refer to things like intellectual property, the organisation's reputation, or their trademarks. Intangible assets as opposed to tangible assets cannot be easily attainable by competitors and are usually their main source of competitive advantage.

Barney, Ketchen and Wright (2011) state that there are two significant, critical assumptions of the resource based theory - that resources must also be **Heterogenous** and **Immobile**. With heterogenous, the assumption is that resources, skills and capabilities must vary significantly from one organisation to another. In relation to immobile, the assumption is that resources should be unable to move freely from one organisation to the other. Although the possession of heterogeneous and immobile resources is essential to organisational success, it is not alone if they wish to sustain this competitive advantage (Barney, Ketchen and Wright, 2011).

Barney (1991) identified a framework for examining the crucial properties of resources and organisations (VRIN), which stands for valuable, rare, inimitable and non-substitutable (also referred to as the VRIN principle) (Barney, 1991).

- **Valuable** – According to the RBT, resources are seen as valuable when they enable an organisation to implement strategies that improves the organisation's efficiency and effectiveness by exploiting opportunities or by mitigating threats (Barney, Ketchen and Wright, 2011).

- **Rare** – To be considered of value, a resource must be rare by definition. In a perfectly competitive strategic factor market for a resource, the price of the resource will reflect expected future above-average returns (Barney, Ketchen and Wright, 2011).

- **Inimitable** – Although valuable and rare resources may help organisations to engage in strategies that other organisations cannot pursue since the other organisations lack the relevant resources, it is no guarantee for long-term competitive advantage. Resources need to be so good or unusual as to be impossible to copy, or unique, to be considered inimitable, which results in an organisation gaining a competitive advantage over other organisations (Barney, Ketchen and Wright, 2011).

- **Non-substitutable** – Even if a resource is rare, potentially value-creating and imperfectly imitable, of equal importance is a lack of substitutability. If competitors are able to counter an organisation's value-creating strategy with a substitute, prices are driven down to the point that the price equals the discounted future rents, resulting in zero economic profits (Barney, Ketchen and Wright, 2011).

The VRIN characteristics mentioned are individually necessary, but it is said that each is insufficient on its own to sustain competitive advantage. When all four resource attributes are present, an organisation is safe to assume it has sustainable competitive advantage, and would result in improved organisational performance (Barney, 1991). Mason and Brown (2010) acknowledge the resource based theory and the VRIN characteristics to attain competitive advantage, however, they state that over and above the resource based theory and the VRIN characteristics, competitive advantage is increasingly achieved through focused and innovative business models.

According to Mason and Brown (2010), a business model is a conceptual framework that summarises how an organisation creates, delivers, and extracts value while doing business, through the utilisation of their resources. The resources within a business model describes the most important assets required to make a business model work. Fundamentally, every business model requires resources. These resources allow the enterprise to create and offer a value proposition, reach markets, maintain relationships with customer segments, and earn revenues (Mason and Brown, 2010).

There has been research conducted, which has suggested that business models are a determinant of performance, however the field is understudied (Pucci, Nosi and Zanni, 2017). More so, that Sohl, Vroom and Fitza (2020) reiterate that even though emerging literature has described the phenomenon of business models, little is known about how much business models matter in explaining business performance.

Newbert (2007), on the other hand, states that over the last two decades, the resource based theory (RBT) has emerged as a very popular theoretical perspective for explaining performance. It is stated that the resource based theory is a critical tool from which to boost overall performance of an organisation. Newbert (2007) adds that the resources can provide the foundation to develop firm capabilities that can lead to superior performance over time.

With that said, it is evident that the resource based theory provides the theoretical underpinning for both business models; and the performance of an organisation. However, it would be beneficial to

clarify and delve deeper into the concept of business models, its usage, how it can contribute to the firm's value creation, and if there is a link to an organisation's overall performance.

2.3. Business Models

Despite being a widespread and prevalent concept, no clear definition of the term business model exists. Demil and Lecocq (2010) state that business models are a strategic tool that gained massive popularity in the 1990's as a result of developments in the technological space. Business models can be described as frameworks that demonstrate how inputs such as technological characteristics and potentials can translate into value creation for customers and markets, and result in economic outputs (Chesbrough and Rosenbloom, 2002). Mahadevan (2000) states that a business model is a unique blend of three streams that are critical to the business. These include the value stream for the business partners and the buyers, the revenue stream, and the logistical stream.

Amit and Zott (2001) state that a business model depicts the content, structure, and governance of transactions designed so as to create value through the exploitation of business opportunities. Osterwalder and Pigneur (2014) adds that a business model describes the rationale of how an organization creates, delivers, and captures value. The International Integrated Reporting Council (IIRC) define a business model as the organisation's chosen system of inputs, business activities, outputs and outcomes that aims to create value over the short, medium and long term (IIRC, 2011). Noticeably, many researchers have failed to reach an agreement on a common model and few organisations have attempted to resolve this issue, however, as evidenced, there is a strong agreement that the business model concept puts great emphasis on value creation.

Chesbrough and Rosenbloom (2002) have stated that an adequately designed business model should have the ability to serve the following functions:

- Articulate the value proposition, in other words, show the value created for users by the offerings put in place;
- Identify a market segment, which is a group of people who share one or more common characteristics, and specify the revenue generation mechanism(s) for the organisation;
- Define the structure of the value chain within the organisation required to create and distribute the offering, and determine the complementary assets needed to support the organisation's position in this chain;

- Estimate the cost structure and profit potential of producing the offering, given the value proposition and value chain structure chosen;
- Describe the position of the organisation within the value network linking suppliers and customers, including identification of potential complementors and competitors;
- Formulate the competitive strategy by which the innovating organisation will gain and hold advantage over rivals.

These six attributes also serve as justifications for the financial capital required to realise the model and delineate the mechanisms that will be applied to scale up the business in future (Chesbrough and Rosenbloom, 2002). Chesbrough (2010) argues that a business has as much to gain from continuously innovating their business model as they do from developing new technological innovations.

Osterwalder and Pigneur (2014) express that any organisation no matter its nature, has a business model, as long as it creates and delivers value and generates revenue. Roengpitya, Tarashev, Tsatsaronis and Villegas (2017), state that the business models banks choose are of interest to policymakers. They add that, for the most part, business models of banks are usually based upon generating revenues via interest received from their diverse product offerings, by predominantly offering lower interest rate to the depositor and higher interest rate to the borrower; and of course, other transactional fees.

Closely interrelated to the business model definitions are the compositional elements, or sometimes referred to as resources, as highlighted in the resource based theory, which describes what a business model is made of, and their interrelations. This is usually presented in a framework (Fielt, 2013). There are a number of frameworks identified in literature, however the two most well-known and widely used frameworks are the Business Model Canvas, and the IIRC's <IR> Framework.

2.3.1. Business Model Canvas

The Business Model Canvas is a graphic representation of a number of variables that show the values of an organisation– commonly known as the nine building blocks. The Canvas shows different business types and provides a holistic view of the business as a whole. Together Osterwalder and Pigneur (2014), define nine building blocks for the Business Model Canvas, these being: Key

Partnerships, Key Activities, Value Proposition, Customer Relationships, Customer Segments, Key Resources, Channels, Cost Structure and Revenue Streams. Each building block has a set of questions an organisation needs to answer to highlight their values.

Interestingly, Sinkovics, Sinkovics and Yamin (2014) criticise the Business Model Canvas as being static, because it does not capture changes in strategy or the evolution of the model, nor does it give much detail about the interaction between the nine building blocks and how this makes the model work. Kraaijenbrink (2013) states that the building blocks that the Business Model Canvas is based upon are not all on the same level of abstraction. He believes that these contrasting levels in the detailed description of components within the Business Model Canvas result in an imbalance. A study by Maurya (2012) highlights that the Business Model Canvas had overlooked areas which he considered to be very high risk, while other building blocks like Key Partners, Key Activities, Customer Relationships and Key Resources, which had been included did not register as high enough risk. The IIRC (2013) acknowledges that the Business Model Canvas is reputed, however, they state that this framework does not highlight elements which are important, especially for listed organisations; such as the distinction between the information suggested by the business model and other essentials such as external factors or context; capital; governance; governance systems for stakeholder relationships; strategy and resource allocation; opportunities and risks; performance; and future prospects, of which the <IR> Framework does. For these reasons, this study will follow the IIRC's <IR> Framework to describe the seven selected South African banks business models.

2.3.2. IIRC <IR> Framework

Another well-known and the most accustomed framework by most South African organisations is the IIRC's <IR> Framework, predominantly due to the fact that that these organisation's discerned that that the framework displays the myriad of resources and relationships that impact on the organisation's success and longevity. The <IR> Framework is a reporting system that highlights the need for companies to report their strategic, governance, performance and prospects in a way that is reflective of their economic, social and environmental footprints within their respective context (IIRC, 2011). This makes it the most ideal framework to be followed in this study.

In the <IR> Framework, the business model deals with the six capitals, which form are drawn on as inputs and then converted into outputs (products, services, sub-products, waste materials) through corporate activities. Both activities and outputs lead to outcomes in terms of effects on capitals. By

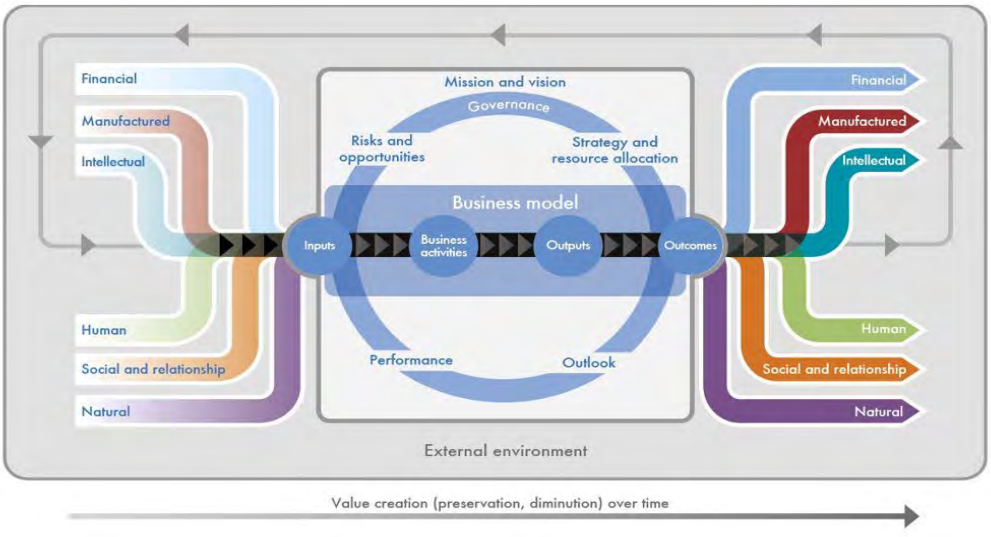
listing and analysing them, the organisation discloses the most important inputs provided by the capitals relevant to its business model (IIRC, 2011).

The resource based theory speaks of resources, the business model canvas calls them components, or the nine building blocks, while the <IR> Framework identifies them as six capitals. The six forms of capital, as referred to by the International Integrated Reporting (herein referred to as the IIRC) Framework are: financial, manufactured, intellectual, human, social, and natural capitals (IIRC, 2011).

Together these six capitals represent stores of value that are the basis of an organisation's value creation, and are affected or transformed by the activities and outputs of an organisation (IIRC, 2011). Moreover, these capitals have been selected because they reflect the resources required for an organisation to achieve financial stability and sustainable development through the application of integrated reporting and thinking (Coulson et al., 2015). The IIRC <IR> Framework promotes the shift from the financial capital market system to a more inclusive capital market system, more cognisant of the impacts of business on non-financial resources (Coulson et al., 2015).

Figure 2.1. highlights how these capitals fit together. By taking these into account when reporting on performance, an organisation provides a fuller picture of the way in which it creates value.

Figure 2.1.: Positioning Business Model into the value creation model of <IR> Framework



Source: International Integrated Reporting Council (2011)

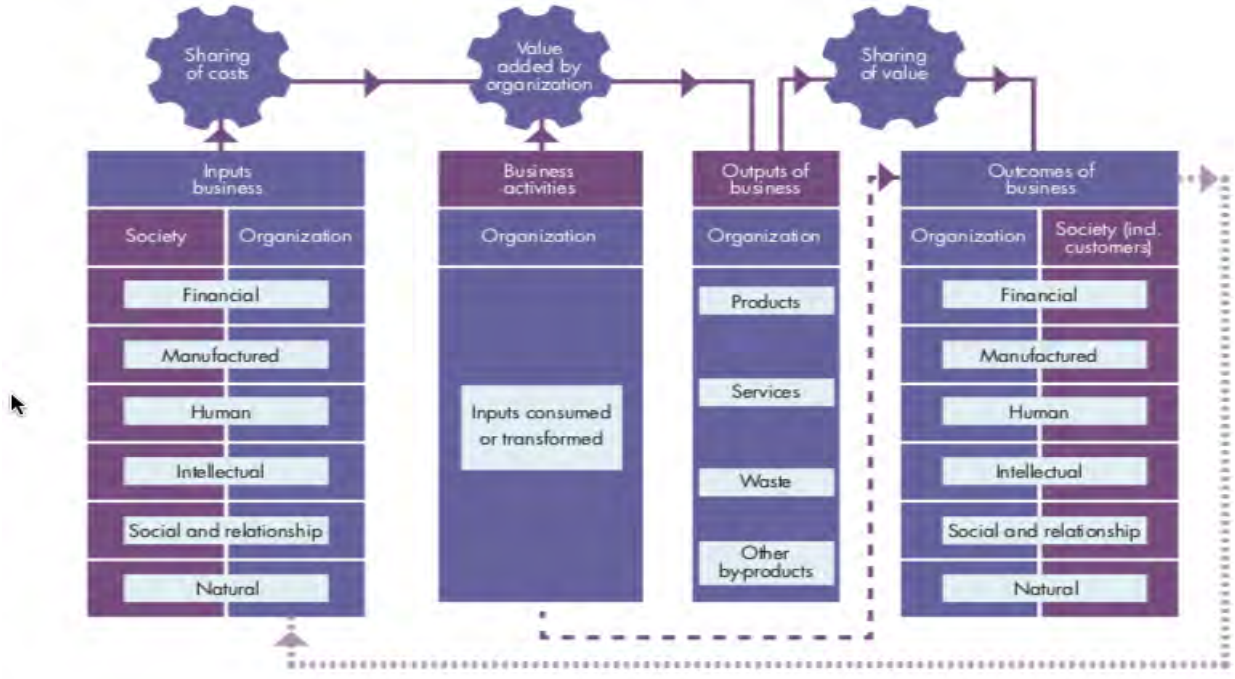
Essentially, every organisation needs one or more of the capitals to its business model. These capitals are then consumed or transformed through various activities that produce a range of outputs. The extent to which these capital products are used depends on the outcomes and the perspective taken (IIRC, 2013).

The conceptual flow of organisation's interaction with its external and internal capital is shown in Figure 2.2. The six capitals represent potential inputs to the business model, with each being a direct or indirect input. At the center of the business model are the activities that are, through the consumption and / or transformation of inputs into outputs, aim to generate valuable outcomes. These business activities are represented in Figure 2.2 by the central gear. Business activities that are part of a business model can also affect the outcome of that model (IIRC, 2013).

Outputs are recognised to be the products and services that are designed to generate income for the organisation. As with inputs, outputs can be internal or external to the organisation (IIRC, 2013).

Assessing desired or expected outcomes against strategic objectives and actual performance can lead to changes to the business activities and possibly the strategy of the organisation. In addition, considering the entire value chain and not just what is currently owned or directly controlled by the organisation can highlight that current performance and strategy cannot be sustained for an extended period of time without a change in the business model, since value creation is a cycle in which the stock of capitals at the end of a period is converted into capital available for use by the business model in the following period, which is represented by the dotted line (IIRC, 2013).

Figure 2.2.: The Interaction of the Business Model



Source: International Integrated Reporting Council (2013)

Below is an explanation of each of the six capitals which also highlights the various components for their inputs, activities, outputs and outcomes.

1. **Financial Capital**: Financial capital is largely understood as the pool of funds available to an organisation. This includes both debt and equity finance. This description of financial capital focuses on the source of funds, rather than its application which results in the acquisition of manufactured or other forms of capital (IIRC, 2011). The components identified as financial capital inputs, activities, outputs and outcome for banks according to the <IR> Banking Network (2015) include:
    - Inputs: Net profit, total capital, capital ratio and earning ability.
    - Activities: Lending of funds, acceptance of deposits, online banking, and investments.
    - Outputs: Number of deposits and loan transactions processed; real value of deposits and loan balances; and the number of deposit and loan accounts serviced.
    - Outcomes: Taxes paid, and dividends paid out.

These are expanded on in table 2.1 below.

Table 2.1.: Components of Financial Capital

INPUTS	ACTIVITIES	OUTPUTS	OUTCOME
• **Net profit** refers to an organisation's total earning after expenses have been subtracted from the total revenue. • **Total capital** commonly refers to the sum of long-term debt and total shareholder equity; each of these items can be observed on the company's balance sheet. • The **capital ratio** is the percentage of a bank's capital to its risk-weighted assets. • **Earning ability** is highlighted through profitability ratios which essentially indicates the level of profit generated by an organisation.	• Banks **lend funds** as they are a traditional source of funds for individuals or organisations looking to borrow. • A bank **accepts deposits** in the form of current, saving and fixed deposits. • Banks offer **online banking** services where one can bank whenever they choose from wherever they are as banking online has no business hours. • Banks also offer **investment** services where one can invest their funds for short, medium or long term with a wide range of accounts they offer.	• Bank **deposits** are a common occurrence where customers deposit money into their accounts. The bank must provide cash to the customer every time the money is withdrawn. However, if they are not withdrawn, banks typically use the funds as investments or **loans** to other customers until the depositor makes a withdrawal. This process is important to the money supply of the bank, and their overall performance.	• The **taxes paid** component just highlights that banks are required to pay taxes on income just like any other corporations operating in South Africa. • **Paying dividends** allows organisations to share their profits with shareholders; it also sends a clear message about the organisation's future prospects and performance, and its willingness and capacity to pay steady dividends over time.

Source: <IR> Banking Network (2015)

2. **Manufactured Capital**: Manufactured capital is seen as human-created, production-oriented equipment to material goods and infrastructure owned, leased or controlled by an organisation that contribute to production or service provision (IIRC, 2011). The components identified as manufactured capital inputs, activities, outputs and outcome for banks according to the <IR> Banking Network (2015) include:
    - Inputs: Investment in technology; number of active internet or mobile banking clients; the number of ATMs; and the number of branches.
    - Activities: Number of enquiries and transactions on online platforms; processing capacity; and active IT systems.
    - Outputs: Increased customer base; and improved productivity.
    - Outcomes: Offer world-class services, and safe proficient banking.

These are expanded on in table 2.2 below.

Table 2.2.: Components of Manufactured Capital

INPUTS	ACTIVITIES	OUTPUTS	OUTCOME
• The banking industry is **investing extensively on technological advances** mainly due to the changes in customer behaviour, increased competition from fintech startups and growing cybersecurity concerns. Electronic banking offerings which include internet banking provides the banks customer's significant advantages over conventional banking channels. • Although internet banking has been around for a number of years, growing the **number of active internet clients** remains a priority for the bank. • The **number of ATMs** are important to banks, mainly due to the fact that they want to improve customer engagement and to create new opportunities and services. • There are many reasons for the continuing need for **branches**, including concerns about internet security, ease of use, and lack of knowledge of online and mobile banking features, however, the most powerful aspect that keeps physical branches alive is the instinctual human desire to meet the people they trust with their money.	• The reason why banks focus on the **number of enquiries and transactions on online platforms** is mainly due to the fact that they want to map the customer's journey with the bank. This is important because it aids the banks to better understand customer expectations and is crucial for optimising the customer experience. • **Processing capacity** refers to the ability and speed of a banks processor, and how many operations it can carry out in a given amount of time. • **Active IT systems** are not only implemented to increase productivity and efficiency, but also because technology forms the backbone of the banks management and processes.	• Banks are constantly trying to find new ways to build, retain and **increase their customer base**. • **Increased productivity** motivates the work culture and increases work morale, which creates an even better business environment.	• The <IR> Banking Network highlights that banks seek to develop a **world-class** banking system that can better serve the nation and thus contribute to economic growth in an environment of financial stability. Moreover, banks strive to offer **safe proficient banking** to their clients.

Source: <IR> Banking Network (2015)

3. **Intellectual Capital**: Intellectual capital is the intangible value of a business, which covers the people hired inside the organisation, the value regarding its relationships, and the organisations intellectual property (IP) (IIRC, 2011). The components identified as intellectual capital inputs, activities, outputs and outcome for banks according to the <IR> Banking Network (2015) include:

- Inputs: Investment in IT; development of new technologies; and brand value.
- Activities: Proficient banking service; and active consumers.
- Outputs: Convenient service; and protection of client's funds.
- Outcomes: Value added for clients; and responsive customer service.

These are expanded on in table 2.3 below.

Table 2.3.: Components of Intellectual Capital

INPUTS	ACTIVITIES	OUTPUTS	OUTCOME
• Banks are **investing heavily in IT** and **developing new technologies** as the customers banking needs are changing rapidly- these customers are increasingly demanding digital, app-based banking services that can match their on-the-go lifestyles. • Banks also strive to maintain and build their **brand value**, as this helps propel their organisation towards the pinnacle of success.	• Banks make every effort to offer **proficient banking services** to their customers, in turn keeping their **active consumers** happy and drive growth.	• Several factors contribute to the customer experience and how **convenient** it is perceived to be- the amount of work done by the customer, ease of access to the product, and the way the bank uses the data for the benefit of its customers are all factors that contribute to the convenience of banking with a specific organisation. • Customers trust that their banks not only **keep their money safe**, but also protect any other information they have about them.	• **Value creation** is one of the most important qualities required to build meaningful, trustworthy and long-term relationships with customers. • **Responsive customer service** refers to the bank's ability to respond to and fulfill service requests in a timely manner, including the speed agents need to initiate engagement and the time it takes to respond to customer requests.

Source: <IR> Banking Network (2015)

4. **Human Capital**: Is normally understood to encompass the individual's capabilities, and the knowledge, talents and experience of the company's personnel and managers, as they're applicable to the task at hand, as well as the capacity to add to this reservoir of knowledge, talents, and experience through individual learning (Dess and Picken, 2000). The components identified as human capital inputs, activities, outputs and outcome for banks according to the <IR> Banking Network (2015) include:
    - Inputs: Number of employees who attended learning and development; money spent on learning and development; and employee diversity.
    - Activities: New ways of communicating with clients; and steadfast employees supporting clients.
    - Outputs: Better customer experience reported; and offering clients frictionless movement between all channels.

- Outcomes: More skilled employees; and gains for both consumers and the bank.

These are expanded on in table 2.4 below.

Table 2.4.: Components of Human Capital

INPUTS	ACTIVITIES	OUTPUTS	OUTCOME
• **Training and development** provide benefits for both individuals and organisations that make cost and time a valuable investment. • Organisations with more **diversity** in the workplace outperform their competitors, increase employee engagement and generate higher profits.	• Finding **new and modern means of business communication** offer banks more opportunities to find and retain customers. Banks recognise that no matter how good their product is or how talented their employees are; customers are most likely to remember the bank when they interact directly with an employee of the bank. That is why they have to have **steadfast employees who support the clients**.	• The **better the customer experience**, the more repeat customers and positive reviews they will receive, while reducing the **friction** with customer complaints and returns.	• Banks that use effective multi-skilling will improve their efficiency, competitiveness, quality, production and capabilities. In general, with **more skilled employees**, the bank can adapt to changing market conditions and increased demand; and enables them to take a consistent business approach that has a **positive impact on both consumers and the bank**.

Source: <IR> Banking Network (2015)

5. **Social and Relationship Capital**: Social and relationship capital is said to be an integral component of the value of the business. It involves the business itself, the formal and informal entities and institutions associated with it, as well as the relationships with and between employees, communities and other stakeholders (IIRC, 2011). The components identified as social and relationship capital inputs, activities, outputs and outcome for banks according to the <IR> Banking Network (2015) include:
    - Inputs: Contribution to society; building relationships; and supplier selection process.
    - Activities: Ethical investments; and promotion of profile in communities they serve.
    - Outputs: Customer growth; and increase in service rendered.
    - Outcomes: Increased brand recognition; and value creation.

These are expanded on in table 2.5 below.

Table 2.5.: Components of Social and Relationship Capital

INPUTS	ACTIVITIES	OUTPUTS	OUTCOME
• While the traditional view is that the primary role of banks in the **contribution to society** and sustainable development, is to provide the funding needed to move the development agenda forward, however they also play a role in **networking/building relationships**, innovation, influence and the ability to drive change in meaningful ways. • Fundamentally, **the right choice of suppliers** for the banks ultimately leads to high profitability and quality. In this strategic partnership, the supplier is seen as an integral part of the organisation.	• Banks are increasingly focusing on **ethical investing**, which means investing according to their principles, supporting businesses that benefit the community, and avoiding those whose products and services or business practices they find morally objectionable. • Banks know that **promoting their business in the community in which they operate** increases awareness and enthusiasm for their product offerings.	• **Customer growth** is an entirely new way of looking at the business model that reflects the shift in power from the buyer journey to the customer journey. • **Increasing the service rendered** will help the bank provide the highest level of customer service, which is essential in order to compete with other banks that offer similar products and services.	• **Building brand awareness** and loyalty is a critical component in increasing revenue. • The most successful organisations understand that the purpose of a business is to **create value** for customers, employees, and investors, and that the interests of these three groups are inextricably linked.

Source: <IR> Banking Network (2015)

6. **Natural capital**: The idea of natural capital, frequently understood as any stock of natural resources or environmental assets that offers a flow of beneficial goods or services, now and in the future (Brand, 2009). The components identified as natural capital inputs, activities, outputs and outcome for banks according to the <IR> Banking Network (2015) include:
    - Inputs: Green investing; energy consumption; and greenhouse emissions.
    - Activities: Regenerate natural resources; and integrate environmental costs and risks into capital markets.
    - Outputs: Knowledge on how natural capital can benefit them; and considering natural capital information in decisions.
    - Outcomes: Decrease in energy usage; and decrease in carbon emissions.

These are expanded on in table 2.6 below.

Table 2.6.: Natural Capital

INPUTS	ACTIVITIES	OUTPUTS	OUTCOME
• **Green investing** is a form of socially responsible investment that involves investing in companies that promote or offer environmentally friendly products and practices. • Many banks are striving for **greater energy efficiency**, which means lowering their overall energy demand and switching to more efficient energy sources such as renewable energy. • The financial sector has already made great strides in addressing environmental issues, whether it be a shift towards ethical banking or even the increase in mobile payments, reducing the need to create physical currencies, which in turn reduces **greenhouse gas emissions.**	• More and more banks are assessing their balance sheet risk for natural risks by channeling funds to companies and projects that restore and **regenerate natural resources**. • Many banks incorporate environmental risk and cost into their overall credit risk management, with some of them reporting on this in their integrated reports.	• Banks promote the concept of natural capital because they see it as a means of properly acknowledging the environmental concerns and they know how it supports all economic activity.	• Banks are finding ways to **improve their energy efficiency** and reduce their energy demand, which is highlighted in their integrated reports. • Banks' sustainability awareness is also increasing. As a result, most of them monitor and report on their **reduction of greenhouse gas emissions**, and their negative impact on the environment.

Source: <IR> Banking Network (2015)

Fundamentally, an organisation discloses the most important inputs provided by the capitals relevant to its business model, by listing and analysing them. In the business model proposed in the IIRC's <IR> framework above, business activities are centrally located and usually involve the process of transforming inputs into outputs. The outputs are the third value creation component in the business model. The fourth and final component contemplated in the IIRC framework is the outcomes, i.e. the impact of the consumption of inputs, in the accomplishment of business activities and the achievement of outputs. Essentially, outcomes are a measure of performance and highlight the actual value an organisation is creating. Through the value chain, the organisation can show the outcomes, according to the following classification:

1. internal (e.g. turnover, employee satisfaction, corporate image, etc.);
2. external (e.g. customer satisfaction, levels of supplier confidence, credits /debts tax, etc.);
3. positive (e.g. increase in capital as a result of value creation);
4. negative (e.g. decrease of capital following the destruction of value) (IIRC, 2011).

Contrastingly, Freeman and Gilbert (1992) state that the recent increase in concern over the impacts of business on social and environmental aspects has led to a shift away from the focus on financial outputs only (Freeman and Gilbert, Jr., 1992). Where previously, economic value creation was prioritised over social and environmental value creation, the mindset has shifted to prioritising all three as equals (Stubbs and Cocklin, 2008). This has given rise to the "sustainability business model", where the conventional business model is defined with its social and environmental impact clearly indicated through every process (Stubbs and Cocklin, 2008:103).

Business models can serve the purpose of demonstrating the linkages between the organisation and their external stakeholders, as well as the mechanisms that they use to create value for all exchange partners (Zott and Amit, 2007). While most authors are not very explicit about what they mean with value, most definitions seem to refer to customer value (i.e. value for the customer) (Dubosson-Torbay et al., 2002; Osterwalder and Pigneur, 2010; Tapscott, 2001; Teece, 2010). The current literature on customer value and value creation does not provide straightforward answers, in view of the fact that the value notion has been studied in several disciplines like human resources, marketing, entrepreneurship, strategic management, psychology, and sociology. However, Teece and Linden (2017) state that a well-designed business model balances the provision of value to customers with the capture of value by the provider, in turn increasing an organisation's performance.

2.4. The South African financial services industry's integrated reporting compliance

The business models for this study were extracted from integrated reports. Integrated reporting is the dominant form of corporate reporting in South Africa, and all banks selected for this study produced these reports. Before integrated reporting, many organisations were reporting primarily on their financial statements, as this was used to evaluate the firm's financial performance and for stakeholders to make investment decisions, however, financial reporting is no longer seen as the sole source of information on corporate performance, hence the introduction of integrated reporting (The World Business Council for Sustainable Development, 2014). Integrated reporting (IR) focuses on the integration of financial and non-financial information into one report, to provide a single report telling stakeholders how the organisation is impacted by the environment and community, and how the organisation impacts on the environment and community in which it operates. South Africa's Integrated Reporting expedition dates back to 1994, when the country became a full democracy. Mervyn King was appointed to head a committee that created a code on corporate governance and to provide periodic updates on guidance. The first King report was published in 1994. King I, advocated for

corporations to disclose non-financial information and take a balanced approach to business involving all stakeholders. King II followed in 2002, which urged corporations to adopt an inclusive approach involving relevant stakeholders, and broaden the responsibility of a company beyond financial results to include social and environmental dimensions (IoDSA, 2016).

Following King II, the Johannesburg Stock Exchange (JSE) required listed companies to include in their annual report a narrative statement of how they complied with the principles in the Code (comply or explain). King III, published in 2010, made it mandatory that JSE listed companies either adopt IR as defined in King III or explain why they are not doing so (apply or explain). Moreover, South African companies were expected, according to the King III on corporate governance, to report their sustainability. Initially, some organisations followed the GRI guidelines. The GRI guidelines enable all companies and organisations to report their economic, environmental, social and governance performance. Though the GRI guidelines have been favoured by sustainability reporters over other guidelines, they have been criticised for their ambiguity, in other words, lacking clarity with respect to the reporting scope (Font et al., 2012).

The most recent version of integrated reporting is the model outlined in the <IR> Framework (IIRC, 2013). According to the IIRC (2016), the <IR> Framework is now an integral part of the new King IV, which was introduced in 2016, corporate governance guidelines (IoDSA, 2016). King IV entails that the listed companies apply and explain IR as defined in the code, however, as with the King III Report, using the current <IR> Framework is not a requirement. The <IR> Framework states that at the core of the organisation is its business model, which draws on various capitals as inputs and, through its business activities, converts them to outputs (products, services, by-products and waste). The organisation's activities and its outputs lead to outcomes in terms of effects on the capitals. Interestingly, The Integrated Reporting Committee of South Africa has only endorsed the <IR> Framework as "guidance on good practice on how to prepare an integrated report" (IIRC, 2016:4).

According to Matemane and Wentzel (2019), South African banks for the period 2005–2009, only disclosed their financial statements, since integrated reporting was not yet mandatory, however from 2010-2014, the banks adopted the GRI reporting guidelines to guide content for their sustainability reports, and as of late, most banks have adopted the <IR> Framework, which necessitates companies to clearly articulate their business model. The study by Matemane and Wentzel (2019) also revealed that even though integrated reporting is important, however, there are no significant differences in the financial performance of the listed banks before and after the introduction of integrated reporting.

According to Burke and Clark (2016), the benefits of integrated reporting occur both internally and

externally, in which, for the internal benefit, integrated reporting can ensure a better understanding of value creation. Barnabè, Giorgino, and Kunc (2019) state that integrated reporting's external benefit is to maintain the long-term value and relationship with stakeholders. However, this reporting type is said to be voluntary in most countries, with South Africa being one of the few countries who have made integrated reporting mandatory for companies listed in the Johannesburg Stock Exchange (JSE) (Du Toit, Van Zyl, and Schütte, 2017).

2.5. Performance

Peterson, Gijsbers and Wilks (2003) characterise organisational performance as the capability and ability of a firm to utilise its available resources efficiently in order to achieve accomplishments consistent with the set objectives of the company, and considering their relevance to its users. Organisational performance is a multi-faceted element that can be measured by financial and non-financial metrics (Chin, Pun and Lau, 2003).

There has been a long standing debate on the conceptualisation, dimensionality and measurement of firm performance in the literature (Rumelt, Schendel and Teece, 1994; Franco-Santos et al., 2007). The generally accepted view on performance is that it is a multi-faceted construct comprising of financial and business performance, and organisational effectiveness (Kaplan and Norton, 1996; Morgan and Strong, 2003; Simpson, Padmore and Newman, 2012). Santos and Brito (2012) state that based on resource based theory, firm performance is dependent on resources, however, performance can also be extended to include other aspects such profitability, growth, customer and employee satisfaction, social and environmental responsibility, as well as market value (Santos and Brito, 2012).

Business or organisation performance is part of an organisation's effectiveness and efficiency, which includes operational and financial results. Fatoki (2019) states that financial measures are important, however these measures are usually lagging measures of performance, while non-financial measures are leading measures of performance that provide insight about future performance. These non-financial or subjective performance measures include employee satisfaction (employee turnover, investments in employees development and training, and organisational climate), customer satisfaction (number of complaints, repurchase rate, customer retention), environmental performance (recycling, material usage, energy consumption, pollution, and waste), and social performance (employment of minorities, contribution to social causes) (Fatoki, 2019).

Fatoki (2019) adds that in order for an organisation to increase their performance, each business function must operate collectively, considering both financial and non-financial measures, to produce an output in excess of the input. The International Integrated Reporting Council (IIRC) (2013), state that performance can be identified in the <IR> Framework, in the form of the six capitals as outcomes, as opposed to highlighting just the financial outcomes.

A performance measure often applied to the banking sector, which will be utilised in this study to measure financial performance, is the CAMELS rating system model, given that banks play an important role in the mediation of finances and the functioning of the economy, highlighting their financial performance is timely and necessary. The CAMELS rating system model was originally developed by the Uniform Financial Institutions Rating System (UFIRS), and is used in banking sectors throughout the world to evaluate the financial performance and risk (Desta, 2016). Effinger (2017) states that even though the financial system has undergone astonishing changes, the CAMELS rating system model has remained relatively unchanged for almost 40 years. In recent years, the framework has become one of the most widely-used approaches to examine the financial stability of commercial banks throughout the world (Roman and Sargu, 2013; Rose and Hudgins, 2010). CAMELS stands for: C: Capital Adequacy, A: Asset Quality, M: Management Quality, E: Earnings, L: Liquidity, and S: Sensitivity to Market Risk. These are also known as the six components of the CAMELS rating system model.

- **Capital Adequacy**: According to Dang (2011), this parameter seeks to analyse how solvent a financial institution is. Solvency of financial institutions refers to their ability to pay their debts or possession of assets that can aid in debt offset.

- **Asset Quality**: Desta (2016), states that asset quality indicates the quality of the financial institution's loans, which form part of the key assets that generates the major portion of its income. The assessment of the quality of assets is important to determine the component of non-performing assets as a percentage of total assets.

- **Management Quality**: Effinger (2017) states that the quality of management warrants that financial institutions/banks follow regulatory requirements and have extensive risk management practices in place.

- **Earnings**: Dang (2011) states that in evaluating the earnings of the financial institution and how it contributes to its performance, two quantitative indices are applicable, these are:

- Return on Equity (ROE)- this evaluates how the financial institution realises profits through operational processes, thereby increasing its net value.
- Return on Assets (ROA) - this indices checks how adequately the assets of the financial institution generates profits.

- **Liquidity**: Liquidity determines an organisation's ability to pay its short-term debt obligations (Dang, 2011).

- **Sensitivity to Market Risk**: According to Desta (2016), sensitivity to market risk denotes the degree of change in commodity prices, equity prices, foreign exchange rates or interest rates that can have an undesirable bearing on a financial institution's earnings or economic capital.

Table 2.7. below provides a summary of the components of the CAMELS rating system, the formula for each component, and the criteria.

Table 2.7.: Summary of the CAMELS Composite Rating System

COMPONENTS OF CAMELS RATING SYSTEM	INDICATOR	FORMULA	RATIOS RATING				
			1	2	3	4	5
Capital adequacy	Capital adequacy ratio	(Tier I + Tier II)/Total risk weighted assets	>15%	12 - 14.99%	8 - 11.99%	7 - 7.99%	<6.99%
Asset quality	Asset quality ratio	Non-performing loans/Total loans	<1.25%	2.5 - 1.26%	3.5 - 2.6%	5.5 - 3.6%	>5.6%
Management quality	Cost/income ratio	Operating cost/Operating income	<25%	30 - 26%	38 - 31%	45 - 39%	>46%
Earning ability	Return on assets	Net profit/Total assets	>1%	0.9 - 0.8%	0.35 - 0.7%	0.25 - 0.34%	<0.24%
	Return on equity	Net profit/Own capital	>22%	17- 21.99%	10 - 16.99%	7 - 9.99%	<6.99%
Liquidity	Total loans to total deposits	Total loans/Total deposits	≤55%	62 - 56%	68 - 63%	80 - 69%	≥81%
Sensitivity to market risk	Total securities to total assets	Total securities/Total assets	≤25%	30- 26%	37- 31%	42- 38%	≥43%

Source: Adapted from Manga (2019)

Wachira (2010) states that each of the six components are awarded a component rating whereby the assessment is relative to the financial institution's size, the nature of its business, complexity of activities, and risk profile. The CAMELS rating system evaluates financial institutions, and assigns a rating of 1-5 depending on their performance. In line with the Federal Deposit Insurance Corporation (2014), a rating of 1 indicates the strongest performance, highest level of risk management practices and least concern for supervision, a while a rating of 5 indicates the weakest performance, poor risk

management practices and highest level of concern for supervision. Table 2.8. highlights each composite rating in detail; shows the rating analysis and gives an interpretation of each.

Table 2.8.: The CAMELS Composite Rating Interpretation

RATING	RATING RANGE	RATING ANALYSIS	INTERPRETATION
1	1.0 – 1.49	Strong	The financial institution is strong in every aspect.
2	1.5 – 2.49	Adequate	The financial institution is primarily adequate but has some identified weaknesses.
3	2.5 – 3.49	Fair, with improvement needed	The financial institution has some financial, operational or compliance weaknesses that will raise concern for supervision.
4	3.5 - 4.49	Marginal, with some level of exposure to risk of failure	The financial institution has serious weaknesses that will raise concern for supervision.
5	4.5 – 5	Inadequate, with high level of exposure to risk of failure	The financial institution has critical weaknesses that will exhibit a high probability of failure in the near future.

Source: Adapted from Manga (2019)

The data is then evaluated according to each ratio within the six components (capital adequacy, asset quality, management quality, earnings, liquidity and sensitivity to market risk), where each component is subjected to a rating, which is then combined to establish the overall composite rating. The bank with the lowest rating indicates the best performing bank, and the bank with the highest score indicates the worst performing bank according to their financial performance.

2.6. The link between business models and firm performance

If we consider that business models can be described as a manifestation of a firm's adopted strategy (Casadesus-Masanell and Ricart, 2010) and that it is a demonstration of a firm's value creation and capturing process (Brink and Holmen, 2009), there seems to be a clear linkage or relationship between a firm's selected business model description and their performance (Zott and Amit, 2007). However, few studies have sought to empirically define the relationship between business model description and firm performance (Pucci, Nosi and Zanni, 2017).

A study by Aziz and Mahmood (2011) attempted to explain the performance of manufacturing small and medium-sized enterprises (SMEs) in Malaysia through their business model. The main objective of this study was to assess the relationship between the size of the business model and changes in SMEs performance. The findings suggest that "skill" is the only dimension of the business model that determines SMEs performance and success. If an organisation or a person possesses a certain skill, this could be that organisation's competitive advantage, as it would be of value, rare, inimitable and

non-substitutable. Skill could also fall under human, intellectual and manufactured capitals if we look at through the IIRC's <IR> framework (IIRC, 2011).

To date, studies such as Brettel, Strese and Flatten (2012) have highlighted the importance and need for research which is aimed specifically at understanding the relationship between business model description and firm performance, in order to allow for other business to develop their own business models on the basis of the available empirical evidence. Furthermore, there is currently literature available that suggests that business model description can be a source for a firm's competitive advantage (Zott and Amit, 2007).

As such, understanding this relationship is one of the keys to understanding how the firm performance of South African banks can be improved and subsequently have positive impacts on the greater South African economy.

2.7. Conclusion

In this chapter, the background literature was provided for the rationale of this study. The following chapter will describe the research methodology used to address the aims and objectives.

CHAPTER 3: RESEARCH METHODOLOGY

3.1. Introduction

The following chapter describes the data collection and analysis process for this study. The chapter clearly sets out the research method that was used as well as the reasons behind the research design and sampling strategy used.

3.2. Research Aim and Objectives

The aim of this study was to analyse the business model description of South Africa's biggest banks (Absa, African Bank, Capitec, First Rand Limited, Investec Bank, Nedbank and Standard Bank Group), over three consecutive years (2017, 2018 and 2019), and if there was a relationship to their performance. The supporting objectives were to:

- Assess, evaluate and analyse the components of the banks business model according to the IIRC's *International <IR> Framework*;
- compare each banks business model components against each other over the three years, and also highlight the pattern of change, using tables and graphs;
- assess, analyse and evaluate the banks financial performance using the CAMELS Rating System model;
- evaluate whether the business model description according to IIRC's *International <IR> Framework,* has an effect on bank's financial performance. This was done by testing the following hypothesis:

  H_0: There is no relationship between the business model description and the bank's financial performance.

  H_a: There is a relationship between the business model description and the bank's financial performance.
- lastly, contribute to existing literature by providing new perspectives on business models and performance.

3.3. Research design

Research design is defined as being a plan or structure for an investigation, or a list specifying the procedures that will be used to conduct and control a research project (Heppner, Kivlighan and Wampold, 1992). A research design serves as a master plan of the methods and procedures that should be used to collect and analyse data needed by the decision maker. Essentially, a research design is used to structure the research and to show how all of the major parts of the research project, including the sample, measures, and methods of assignment, work together to address the central research questions in the study (Heppner, Kivlighan and Wampold, 1992).

3.4. Research paradigm

TerreBlanche and Durrheim (1999), state that the research process has three major dimensions: ontology, epistemology and methodology. A research paradigm is a set of commonly held beliefs and assumptions within a research community about ontological, epistemological, and methodological concerns. Ontology relates to whether we believe there is one verifiable reality or whether there exist multiple, socially constructed realities. Epistemology is concerned with all aspects of the validity, scope and methods of acquiring knowledge, such as understanding what constitutes a knowledge claim; how can knowledge be acquired or produced; and how the extent of its transferability can be assessed. Methodology looks at how a researcher systematically designs a study to ensure valid and reliable results that address the research aims and objectives (Patton, 2002).

This study follows a positivistic paradigm in an attempt to substantiate whether there is a relationship between business model description and financial performance. According to Ponterotto (2005), positivism relies on the hypothetico-deductive method to verify a priori hypotheses that are often stated quantitatively or at times both qualitatively and quantitatively, where functional relationships can be derived between causal and explanatory factors and outcomes.

3.5. Research method

For the purpose of this study, a mixed methods research design was used. Mixed methods' is a research approach whereby researchers collect and analyse both quantitative and qualitative data within the same study. Quantitative data is numeric data, while qualitative data is usually text data. A

mixed methods design's emergence was in response to the limitations of the sole use of quantitative or qualitative methods and is now considered by many as a legitimate alternative to these two traditions, which is appropriate for answering research questions that neither quantitative nor qualitative methods could answer alone. Furthermore, through theoretical generation, the outcomes tend to be rich, deep and meaningful (Amaratunga et al., 2002).

Fundamentally, the purpose of the study was to understand and describe the business model description both quantitatively and qualitatively in order to deduce whether there are particular mechanisms that lead to increased performance (Chilisa and Kawulich, 2012).

3.6. Sampling strategy

In accordance with Sidhu (2003), a group in a research study from which information is obtained is referred to as a sample. The sample is a representative sub-group that is selected from a population in order to generate hypotheses (Sidhu, 2003). In cases where the population is large, the use of a representative sample allows the researcher to make inferences about the population (Sidhu, 2003). In this particular study, the population and the population size is the top seven South African banks, namely, Absa, African Bank, Capitec, First Rand Limited, Investec Bank, Nedbank and Standard Bank Group, selected on the basis of asset size. All seven banks published Annual Integrated Reports, as all publicly listed organisations in South Africa are required by regulation to publish annual reports.

3.7. Data collection

In order to conduct this study, data was collected from two places, namely publicly available Annual Integrated Reports, which were accessed via the seven selected banks corporate website; and The Banker Database, after which data collection was managed in a number of stages. Firstly, a Microsoft Excel spreadsheet was created to document each banks business model and performance for each year selected. The business models were captured in accordance to the IIRC's <IR> Framework. The data collected to measure financial performance of each bank was applied to the CAMELS Rating System model.

Through the initial data collection process, it became apparent that not all banks explicitly state their business models according to the IIRC's <IR> Framework in the form of capitals, however, all make

mention of resources and relationships used. These resources were categorised according to the IIRC's definition of the six capitals, namely financial, manufactured, intellectual, human, social and relationship, and natural capital (IIRC, 2013). These resources which were now identified as capitals, formed part of the inputs. By listing and analysing them, the organisation discloses the most important inputs provided by the capitals relevant to its business model. These inputs were then converted into outputs (products, services, sub-products, waste materials) through their corporate activities. Both activities and outputs lead to outcomes in terms of effects on capitals, which are also a measure of performance.

In order to measure financial performance, the Banker Database provided key data that enabled analysis of the selected banks, in accordance to the indictors of the CAMELS Rating System model.

All data collected in Microsoft Excel was stored electronically in order to allow access and review of the data upon request. The data will be stored for five years post completion of the study.

3.8. Data analysis

As noted, a deductive approach has informed this study and has provided a framework for the analyses done, in pursuit of answering whether there is a link or relationship between business model description and financial performance. The first step was to differentiate and highlight each bank's positioning strategy, this was done by stating their purpose, mission and/or vision statement and how they indicate their business model. The next step was to analyse the business model descriptions using the **<IR> Framework**, where each bank was given a score for the various components identified for each capital. The scores per component were then added to give a total score per capital. This was followed by calculating the percentage per capital. The banks' capital focus were then compared against each other for the three consecutive years using those percentages calculated, with the aim to highlight the business model description changes over the years; these comparisons and changes were displayed in tables and graphs. Essentially, these analyses highlighted the capitals that the banks focused on the most, and also highlighted which bank had the best business model description- the higher the score, the richer the business model description. Once the various analyses for business model description were done, an analysis on each banks financial performance was done following the **CAMELS rating system model**. This resulted in each bank being allocated a composite rating for each year, however in this case, the lower the score/rating, the better the financial performance of each bank.

The business model description ratings/scores and the financial performance ratings for all the years, were then put up against each other, to test the hypothesis- this was done using **correlation coefficient**, which was calculated using Microsoft Excel. Essentially, one tests the correlation coefficient to determine whether the linear relationship in the sample data effectively models the relationship in the population.

3.8.1. <IR> Framework

The study followed the <IR> Framework to describe business models, which was done by firstly consolidating all the business models of the seven banks, attained from their integrated reports, from 2017 to 2019. This was followed by a detailed comparison of all the banks capitals, with each capital focusing on the inputs, activities, outputs, and outcomes for every year, and giving a rating for each component of every capital. The components for each capital's inputs, activities, outputs and outcomes were attained and derived from literature, which are also defined and explained in more detail in chapter 2. A maximum rating of 3 was given to each bank per component of every capital, however, only if the bank gave a comprehensive depiction of the component in their business model. A rating of 2 was given if the bank only made mention of the component in their business model without giving much detail surrounding it. And a rating of 1 was given if the bank made no mention of the component in their business model. Table 3.1 and 3.2 gives a breakdown of the business model and highlights all the components considered and the rating per component. The maximum overall score per capital is also highlighted in these tables.

Table 3.1.: Breakdown of the Business Model and Ratings per Component

CAPITALS	LOGIC MODEL	COMPONENTS	MAXIMUM RATING PER COMPONENT	TOTAL	TOTAL SCORE PER CAPITAL
FINANCIAL	INPUTS	Net Profit	3	15	42
		Total Capital	3		
		Capital Ratio	3		
		Earning Ability: Return On Equity/ Return on Assets	3		
		Cost-Income Ratio	3		
	ACTIVITIES	Acceptance of Deposits	3	12	
		Lending of Funds	3		
		Online Banking	3		
		Investments	3		
	OUTPUTS	Number of deposits and loan transactions processed	3	9	
		Real value of deposit and loan balances	3		
		Number of deposit and loan accounts serviced	3		
	OUTCOME	Taxes paid	3	6	
		Dividends paid out	3		
MANUFACTURED	INPUTS	Investment In Technology	3	12	33
		No. of Active Internet/Mobile Banking Clients	3		
		No. of ATMs/Touchpoints	3		
		No. of Branches	3		
	ACTIVITIES	No. of enquiries and transactions on online platforms	3	9	
		Processing capacity	3		
		Active IT systems	3		
	OUTPUTS	Increased customer base	3	6	
		Improved productivity	3		
	OUTCOME	Offer World-Class Services	3	6	
		Safe Proficient Banking	3		
INTELLECTUAL	INPUTS	Investment In IT	3	9	27
		Development of New Technologies	3		
		Brand Value (Ranking/ Awards)	3		
	ACTIVITIES	Proficient Banking Service	3	6	
		Active Consumers	3		
	OUTPUTS	Convenient Service	3	6	
		Protection of Clients Funds	3		
	OUTCOME	Value Added For Clients	3	6	
		Responsive Customer Service	3		

Source: Researchers compilation based on <IR> Framework

Table 3.2.: Breakdown of the Business Model and Ratings per Component

CAPITALS	LOGIC MODEL	COMPONENTS	MAXIMUM RATING PER COMPONENT	TOTAL	TOTAL SCORE PER CAPITAL
HUMAN	INPUTS	No. of Employees Who Attended Learning & Development	3	9	27
		Money Spent on Learning & Development	3		
		Employee Diversity	3		
	ACTIVITIES	New Ways of Communicating With Clients	3	6	
		Steadfast Employees Supporting Clients	3		
	OUTPUTS	Better Customer Experience Reported	3	6	
		Offer Clients Frictionless Movement Between All Channels	3		
	OUTCOME	More Skilled Employees	3	6	
		Gains for Both Consumers and the Bank	3		
SOCIAL	INPUTS	Contribution To Society/ Community	3	9	27
		Building Relationships	3		
		Supplier Selection Process (Qualitative)	3		
	ACTIVITIES	Ethical Investments	3	6	
		Promotion of Profile In Communities They Serve	3		
	OUTPUTS	Customer Growth	3	6	
		Increase In Service Rendered	3		
	OUTCOMES	Increased Brand Recognition	3	6	
		Value Creation	3		
NATURAL	INPUTS	Green Investing	3	9	27
		Energy Consumption	3		
		Greenhouse Emissions	3		
	ACTIVITIES	Regenerate Natural Resources	3	6	
		Integrate Environmental Costs and Risks Into Capital Markets	3		
	OUTPUTS	Knowledge on How Natural Capital Can Benefit Them	3	6	
		Considering Natural Capital Information In Decisions	3		
	OUTCOME	Decrease in Energy Usage	3	6	
		Decrease in Carbon Emissions	3		

Source: Researchers compilation based on <IR> Framework

Tables and graphs were used in order to compare and to call attention to the various changes in business model description, if there was any identified. The study then classified the business model descriptions, of all the banks, from 2017 until 2019, into three categories, either rich, moderate or poor, from scores and percentages attained from all the capitals. Bailey (2005) states that classification is critical to the understanding of objective reality. It involves the ordering of objects into groups or classes on the basis of their similarity and ordering of objects into classes provides meaning to reality. To be classified as rich, the business model description has a high score (123 – 183) from the analysis done, is of broad scope, it covers or involves all important points, articulates the logic, the data, and other evidence that support a value proposition for the stakeholders. A moderate business model description, has a moderate score (62 – 122), it covers some components, while some are not highlighted. For a business model to be classified as poor, the business model description has a low score (0 – 61), is not extensive- it is limited; lacking some or all important components. The classifications and rating interpretations are shown in table 3.3.

Table 3.3.: Business Model Description Rating Interpretation

	RICHNESS OF BUSINESS MODEL DESCRIPTION	
RATING RANGE	**CLASSIFICATION**	**DEFINITION**
0 – 61 (0 – 33.33%)	**Poor/ Bad Business Model Description**	Poor or Bad is defined as being of a low or inferior standard or quality (Merriam-Webster Dictionary, 2021). A poor or bad business model description is not extensive- it is limited; lacking some or all important components.
62 – 122 (34 – 66.66%)	**Moderate Business Model Description**	The dictionary definition of moderate is keeping within reasonable or proper limits, equally distant from the extremes- in the middle (Merriam-Webster Dictionary, 2021). In this case, the business model description covers some components, while some are not highlighted.
123 – 183 (67 – 100%)	**Rich/ Good Business Model Description**	Rich or Good is defined as having the required qualities, or of a high standard (Merriam-Webster Dictionary, 2021). Magretta (2002) states that a rich business model description is of broad scope, covering or involving all important points, articulates the logic, the data, and other evidence that support a value proposition for the stakeholders.

Source: Researchers own construct

If there was a relationship between business models and financial performance, one could assume that the business models with a rich description would possibly yield the highest financial performance. Financial performance was calculated using CAMELS rating system model.

3.8.2. CAMELS rating system model

To evaluate the banks financial performance, the CAMELS rating system model was selected, due to its simplicity and reliability for measuring performance in the financial sector. The CAMELS rating system model examines six components of each bank, mainly the capital adequacy, asset quality, management efficiency, earnings ability, liquidity and sensitivity to market risk. Table 3.3 highlights the indicators used to assess each component of the CAMELS rating system model, and the ratio rating- displaying the criteria for each score, which is between 1 and 5.

Table 3.4.: Breakdown of the CAMELS model

COMPONENTS OF CAMELS RATING SYSTEM	INDICATOR	FORMULA	RATIOS RATING				
			1	2	3	4	5
Capital adequacy	Capital adequacy ratio	(Tier I + Tier II)/Total risk weighted assets	>15%	12 - 14.99%	8 - 11.99%	7 - 7.99%	<6.99%
Asset quality	Asset quality ratio	Non-performing loans/Total loans	<1.25%	2.5 - 1.26%	3.5 - 2.6%	5.5 - 3.6%	>5.6%
Management quality	Cost/income ratio	Operating cost/Operating income	<25%	30 - 26%	38 - 31%	45 - 39%	>46%
Earning ability	Return on assets	Net profit/Total assets	>1%	0.9 - 0.8%	0.35 - 0.7%	0.25 - 0.34%	<0.24%
	Return on equity	Net profit/Own capital	>22%	17- 21.99%	10 - 16.99%	7 - 9.99%	<6.99%
Liquidity	Total loans to total deposits	Total loans/Total deposits	≤55%	62 - 56%	68 - 63%	80 - 69%	≥81%
Sensitivity to market risk	Total securities to total assets	Total securities/Total assets	≤25%	30- 26%	37- 31%	42- 38%	≥43%

Source: Adapted from Manga (2019)

The data was then evaluated according to each ratio within the six components (capital adequacy, asset quality, management quality, earnings, liquidity and sensitivity to market risk), where each component is subjected to a rating, which is then combined to form the overall composite rating. The bank with the lowest rating indicates the best performing bank, and the bank with the highest score indicates the worst performing bank. The results and the findings are quantifiable, and were then displayed in graphical representations to better elucidate the findings.

3.8.3. Correlation Coefficient

The correlation coefficient is a statistical estimate that measures the strength of the relationship between the relative movements of two variables. In this case, it will be the business model description and financial performance. The values range between -1.0 and 1.0. A correlation of -1.0 shows a perfect negative correlation, while a correlation of 1.0 shows a perfect positive correlation. 0 indicates no correlation. Values between 0 and 0.3 (0 and -0.3) indicate a weak positive (negative) correlation. Values between 0.3 and 0.6 (-0.3 and -0.6) indicate a moderate positive (negative) correlation. Values between 0.7 and 1.0 (-0.7 and -1.0) indicate a strong positive (negative) correlation. Essentially, one performs a hypothesis test of the “significance of the correlation coefficient” to decide whether the linear relationship in the sample data is strong enough to conclude that there is or isn’t a relationship between the two variables (Bujang and Baharum, 2017).

As previously highlighted, the scores gathered for each year for both business model description and financial performance, was the data used to calculate the correlation coefficient. The correlation coefficient analysis was calculated using Microsoft Excel.

3.9. Confirmability, Credibility, Transferability and Dependability

Riege (2003) states that there are four tests for establishing quality in research design, namely: confirmability, credibility, transferability and dependability.

Confirmability

According to Lincoln and Guba (1985), confirmability is the degree to which the findings of the research study could be confirmed by other researchers. Confirmability is concerned with establishing that data and interpretations of the findings are not figments of the inquirer's imagination, but clearly derived from the data. In order to achieve confirmability for this study, the researcher provided background and contextual information to the study; gave detailed explanations of the methods and procedures utilised; used multiple sources of data; and has retained all relevant documentation for the study.

Credibility

According to Riege (2003), credibility reflects whether the research was undertaken in a credible manner, usually through 'the approval of research by interviewees or peers'. This study has not been reviewed by peers, however, the aim of the study was to be as credible as possible.

Transferability

According to Lincoln and Guba (1985), transferability is the degree to which the results of either qualitative, quantitative or mixed methods research can be transferred to other contexts or settings with other respondents. The researcher facilitates the transferability judgment by a potential user through thick description. This study provided a 'thick description' of the research process, in order to enable the reader to assess whether the findings are transferable to their own setting.

Dependability

According to Moon, Brewer, Januchowski-Hartley, Adams, and Blackman (2016), dependability refers to the consistency and reliability of the research findings and the degree to which research procedures are documented, allowing for someone outside the research to follow, audit, and critique

the research process. To address this aspect, the researcher has provided a full description of the research design, the process of the research, and has highlighted how the findings came about.

3.10. Ethical consideration

All of the data required to conduct this study was available online. As such, no ethical clearance was required to conduct this research.

3.11. Conclusion

In this chapter, the research design and methodology has been discussed thoroughly. The following chapter will describe the results that have emerged from the data analysis, followed by a discussion on the results obtained from the data analysis.

CHAPTER 4: FINDINGS

4.1. Introduction

Chapter Three provided the research design and research method that was identified to analyse the relationship between business model description and financial performance of the selected South African banks. Chapter Four firstly highlights each banks' differentiators and positioning strategy. These are usually their purpose, mission and/or vision statement and how they articulate their business model. The chapter then incorporates the application of the <IR> Framework to the banks business model description, by doing numerous analyses and plotting graphs, in order to compare the banks against each other on the focus of each capital, and to highlight the changes identified for all the banks business model descriptions through the years (2017 until 2019). The CAMELS rating system model was then applied, which entailed a detailed analysis of ratios from financial statements, so as to evaluate the financial performance of each bank and to determine their strengths and weaknesses. This was then followed by testing the hypothesis of this study by using correlation coefficient.

4.2. The banks differentiators and positioning strategy

A differentiator is an organisation's distinct and unique value that sets them apart from their competitors within the market. An organisation usually highlights their key differentiators and positioning strategy through their purpose statement, their mission and vision statements; and how they articulate or present their business model. A purpose statement, is a sentence that describes an organisation's focus as it pertains to its audience, whether that is their clients, customers, stakeholder or any other group or demographic. A mission statement focuses on the organisation and their big picture beliefs and goals, while a vision statement serves as a strategic plan for success, essentially highlighting what the future looks like if the organisation is successful (Chun and Davies, 2001). As highlighted in the literature, a business model serves as a framework for how an organisation creates value. It answers the fundamental questions about how an organisation will solve a given problem, how they will solve it successfully, and the growth opportunity within their given market (IIRC, 2013).

Each bank's purpose, mission and/or vision statement, and how they express their business model is highlighted in table 4.1.

Table 4.1.: Banks' Purpose, Mission and/or Vision Statement, and Business Model

	PURPOSE	MISSION / VISION STATEMENT	BUSINESS MODEL
ABSA	Our purpose is to bring your possibility to life. Possibilities are abundant. Possibilities are generous. Possibilities connect those with the passion to create a shared future.	We are a forward-looking business, rooted in Africa and fiercely proud of our heritage. Our goal is to be a financial services group that is globally respected and that Africa can be proud of.	A purpose-led ethos and customer centric business model where our focus is on ensuring that our propositions, distribution channels, market footprint, capabilities, mindsets and behaviours deliver on the needs of our customers.
AFRICAN BANK	Our purpose is to 'advance lives through financial and related services'. Encapsulated in the phrase 'advancing lives', our purpose extends beyond generating profit for a narrow set of stakeholders. We strive to create tangible value for all our current and future stakeholders, within the context of creating a successful retail bank.	Our mission is to be a successful Retail Bank offering a wide range of products and services to the consumers of South Africa. We seek to provide value - more than our consumers expect of us. We promise to live our purpose 'humanity through banking' in all that we do and we are confident that we can, because 'We are You'.	Our business model seeks to create value and deliver on our strategy by transforming the stocks of capital through our business activities. We seek to operate and grow inclusively, responsibly and sustainably, thereby maximising value creation and minimising any negative impacts.
CAPITEC	Our purpose is to improve the financial lives of our clients. By striving for this goal we improve the lives of all South Africans and make a meaningful contribution to the growth and prosperity of our country. We guide and assist our clients to interact with the world financially as it evolves.	Our mission is to make banking simple and transparent to help clients – regardless of their financial lives through a single solution, called Global One.	We behave according to the 4 fundamentals (Simplicity, Affordability, Accessibility and Personalised experience) in using and transforming our core resources.
FIRSTRAND	Our purpose is to build long-term franchise value and deliver superior and sustainable returns within acceptable levels of volatility.	To help our customers achieve economic success and financial security by building enduring, mutually beneficial relationships based on trust and integrity To build a diverse workforce where employees can learn, grow and prosper as contributing members of a winning team.	We can provide our customers with differentiated and competitive value propositions due to our unique and highly flexible business model of leveraging the most appropriate brand, distribution channel, licence and operating platform available within the portfolio.
INVESTEC	Our purpose is to create enduring worth, living in society, not off it.	We aspire to be one of the world's great specialist banking groups, driven by commitment to our core philosophies and values.	We have a defensive business model which supports a stable recurring income base and earnings through varying market conditions.
NEDBANK	Our purpose is to use our financial expertise to do good for individuals, families, businesses and society. This purpose guides our strategy, behaviours and actions towards delivery of long-term value.	Our vision is to be the most admired financial services provider in Africa by our staff, clients, shareholders, regulators and society.	We are South Africa's 'green' bank, recognised for our sustainability leadership, that continues to invest in data and platform-related activities, as we evolve our business model continually to underpin future growth, and a few of these include APIs, data and AI, as well as ecosystems.
STANDARD BANK	Our purpose is to drive Africa's growth, we are a catalyst for inclusive and sustainable economic growth in the countries we operate and we make life better for our fellow Africans by doing business the right way.	Our vision is to be the leading financial services organisation in, for and across Africa, delivering exceptional client experiences and superior value.	Our business model enables us to respond dynamically to our operating environment while executing our strategic priorities.

Source: Researchers compilation based on each banks' corporate website

The findings reveal that all banks distinctly state their purpose, making it clear what their organisations are about. When it came to mission and vision statements, contrastingly some financial institutions had mission statements, some had vision statements, and others had both. However, the common thread in the mission and vision statements were that all banks made mention of their products or services, the geographic location they operate in or plan to infiltrate, and their customers. The business models on the other hand were articulated differently, yet all the banks somehow outlined how they delivered value to their customers. Nedbank stood out, because in addition to value creation, they also highlighted how equipped they are to navigate and embrace change, disruption and rising expectations from employees, clients, stakeholders and their communities.

4.3. <IR> Framework

The business models of the seven selected banks, from 2017 to 2019, attained from their integrated reports, were consolidated following the <IR> Framework. A detailed comparison of all the bank's capitals was provided, with each capital focusing on the inputs, activities, outputs, and outcomes for every year, and then giving a rating for each component of every capital, with one (1) being the minimum rating each bank would get, and three (3) being the maximum. After that, all the components ratings were added and percentages calculated for each bank for every year. Table 4.2 displays the complete business model and total scores attained per capital, which is followed by a discussion highlighting key findings from the table. Tables and graphs are then constructed using the percentages attained from the components for the three years in order to highlight the changes identified per capital for all three years. With the data gathered, the ratings and percentages will determine which bank has a poor, moderate or rich business model description- this is presented in Table 4.4, 4.5 and 4.6.

Table 4.2.: Complete Business Model and ratings per component

		FINANCIAL						MANUFACTURED						INTELLECTUAL						HUMAN						SOCIAL						NATURAL							
		IN/ 15	AC/ 12	OP/ 9	OT/ 6	T/ 42	%	IN/ 12	AC/ 9	OP/ 6	OT/ 6	T/ 33	%	IN/ 9	AC/ 6	OP/ 6	OT/ 6	T/ 27	%	IN/ 9	AC/ 6	OP/ 6	OT/ 6	T/ 27	%	IN/ 9	AC/ 6	OP/ 6	OT/ 6	T/ 27	%	IN/ 9	AC/ 6	OP/ 6	OT/ 6	T/ 27	%	TOTAL/ 183	TOTAL %
A	**2017**	15	4	3	4	26	**62**	8	4	3	2	17	**52**	7	5	4	2	18	**67**	5	3	2	2	12	**44**	7	3	4	2	16	**59**	6	2	2	4	14	**52**	**103**	**56**
	2018	15	12	6	6	39	**93**	8	4	3	4	19	**58**	7	5	4	5	21	**78**	5	3	4	4	16	**59**	7	3	4	3	17	**63**	6	2	2	4	14	**52**	**126**	**69**
	2019	15	12	6	6	39	**93**	8	4	4	6	22	**67**	7	6	4	5	22	**81**	5	3	4	4	16	**59**	7	3	4	3	17	**63**	6	2	2	5	15	**56**	**131**	**72**
AF	**2017**	15	4	3	6	28	**67**	11	3	2	5	21	**64**	6	2	2	5	15	**56**	5	2	2	6	15	**56**	9	2	2	6	19	**70**	8	2	2	6	18	**67**	**116**	**63**
	2018	15	4	3	6	28	**67**	12	3	2	5	22	**67**	6	2	2	5	15	**56**	4	2	2	6	14	**52**	9	2	2	6	19	**70**	6	2	2	6	16	**59**	**114**	**62**
	2019	15	11	5	6	37	**88**	12	3	3	5	22	**67**	6	3	4	5	18	**67**	5	2	4	6	17	**63**	9	2	4	6	21	**78**	6	2	4	2	14	**52**	**129**	**70**
C	**2017**	12	4	3	2	21	**50**	4	3	2	2	11	**33**	3	2	2	2	9	**33**	3	2	2	2	9	**33**	3	2	2	2	9	**33**	3	2	2	2	9	**33**	**68**	**37**
	2018	13	4	3	2	21	**50**	4	3	2	2	11	**33**	3	2	2	2	9	**33**	3	2	2	2	9	**33**	3	2	2	2	9	**33**	3	2	2	2	9	**33**	**68**	**37**
	2019	13	4	3	2	21	**50**	4	3	2	2	11	**33**	3	2	2	2	9	**33**	3	2	2	2	9	**33**	3	2	2	2	9	**33**	3	2	2	2	9	**33**	**68**	**37**
F	**2017**	12	11	3	2	28	**67**	4	3	2	2	11	**33**	3	3	2	2	10	**37**	3	2	2	2	9	**33**	3	2	2	2	9	**33**	3	2	2	2	9	**33**	**76**	**42**
	2018	14	10	3	2	29	**69**	4	3	2	2	11	**33**	3	3	2	2	10	**37**	3	2	2	2	9	**33**	3	2	2	2	9	**33**	3	2	2	2	9	**33**	**77**	**42**
	2019	14	10	3	2	29	**69**	4	3	2	2	11	**33**	3	3	2	2	10	**37**	3	2	2	2	9	**33**	3	2	2	2	9	**33**	3	2	2	2	9	**33**	**77**	**42**
I	**2017**	12	4	3	2	21	**50**	4	3	2	2	11	**33**	3	2	2	2	9	**33**	3	2	2	2	9	**33**	3	2	2	2	9	**33**	3	2	2	2	9	**33**	**68**	**37**
	2018	15	4	3	6	28	**67**	4	3	3	3	13	**39**	4	2	2	5	13	**48**	4	2	2	6	14	**52**	7	2	2	6	17	**63**	8	2	2	6	18	**67**	**103**	**56**
	2019	15	4	3	4	26	**62**	4	3	3	3	13	**39**	4	2	2	5	13	**48**	6	2	2	6	16	**59**	7	2	2	6	17	**63**	8	2	2	6	18	**67**	**103**	**56**
N	**2017**	15	4	3	4	26	**62**	9	3	4	6	22	**67**	6	2	4	6	18	**67**	3	2	4	6	15	**56**	5	2	4	4	15	**56**	8	2	2	3	15	**56**	**111**	**61**
	2018	14	4	5	6	29	**69**	10	3	4	2	19	**58**	6	2	5	6	19	**70**	3	2	3	4	12	**44**	6	2	4	4	16	**59**	9	2	2	3	16	**59**	**111**	**61**
	2019	14	9	7	6	36	**86**	10	3	5	6	24	**73**	9	4	5	5	23	**85**	8	2	4	4	18	**67**	7	2	4	5	18	**67**	9	2	2	4	17	**63**	**136**	**74**
S	**2017**	15	8	3	5	31	**74**	4	3	3	2	12	**36**	3	3	5	2	13	**48**	3	2	3	2	10	**37**	3	2	3	2	10	**37**	3	2	2	2	9	**33**	**85**	**46**
	2018	15	11	3	4	33	**79**	4	3	3	2	12	**36**	3	3	5	2	13	**48**	3	2	3	2	10	**37**	6	2	3	2	13	**48**	5	2	2	2	11	**41**	**92**	**50**
	2019	15	11	6	2	34	**81**	4	3	4	2	13	**39**	5	3	5	2	15	**56**	3	2	4	2	11	**41**	3	2	4	2	11	**41**	5	2	2	2	11	**41**	**95**	**52**

Source: Researchers compilation based on data from each banks Integrated Report

Below is the explanation of the table, focusing on each capital, and highlighting key findings per input, activities, outputs and outcomes.

***Please note that a list of abbreviations is provided at the beginning of the study and how each component was rated is provided in the annexure section, in order for one to better understand the table above.*

Financial Capital

When it came to financial capital, a common trend across all the banks in 2017, 2018 and 2019 was that their focus was mainly on their **inputs**; they all did very well, with the majority of them attaining the maximum score. On the other hand, for business **activities**, table 4.2 highlights that the majority of the banks put little focus on this component in 2017, with the exception of FirstRand and Standard Bank, who were the only two banks explicit enough about the activities that they undertook for the purpose of earning a profit. However, Absa's description on their financial capital activities improved in 2018, and then in 2019, African Bank and Nedbank also improved. Capitec and Investec were the only two banks that showed no improvement for their financial capital activities through the years, both attaining a score of four (4) out of twelve (12) for 2017, 2018 and 2019. The financial capital **outputs** for 2017 fared the worst as all the banks failed to highlight these, which is rather strange as the outputs usually indicate the products produced or services rendered in a specific time period, though there was a slight improvement for Absa and Nedbank in 2018; and then in 2019 African Bank and Standard Bank showed some improvement. Yet again, Capitec and Investec had low scores for this component, and showed no improvement through the years. For the financial capital **outcomes**, Absa, African Bank, Nedbank and Standard Bank did well in 2017, all highlighting some level of performance or achievement that occurred due to the business activities or services they provided. Investec displayed some improvement in 2018, with Standard Bank's score oddly declining the same year, and declining further in 2019, primarily due to the fact that their focus on financial capital outcomes seemed to lessen. Capitec and FirstRand both received the minimum score for this component in all three years. Nonetheless, overall, no bank fared badly for financial capital for all three years, in actual fact, the majority of them all showed some improvement in their scores from 2017 till 2019. Capitec was the only bank that displayed no improvement for all three years.

Manufactured Capital

For manufactured capital **inputs**, Absa, African Bank and Nedbank were the only three banks in 2017 that fared well for this component. The three banks also did well in 2018 and 2019. Capitec, FirstRand, Investec and Standard Bank achieved the minimum score of four (4) out of twelve (12) for all three years, meaning that their business models made little or no mention of investing in technology, the number of internet or mobile banking clients they have; the number of ATM's they had; and the number of branches they had. All seven banks did badly when it came to highlighting their manufactured capital **activities** for all three years (2017, 2018 and 2019), with Absa attaining a slightly higher score for all three years compared to all the other banks. For their manufactured capital **outputs**, African Bank, Capitec, FirstRand and Investec did the worst in 2017. Nedbank attained the best score in 2017, with Absa and Standard Bank both achieving an average score of three (3) out of six (6) for the same year.

Investec was the only bank that showed some improvement in 2018, whilst the other banks displayed no change. In 2019, Absa, African Bank, Nedbank and Standard Bank all showed an improvement for this component, with Nedbank attaining the best overall score again for that year. Capitec and FirstRand remained stagnant for all three years, both achieving the minimum score of two (2) out of six (6). For manufactured capital **outcomes** in 2017, African Bank and Nedbank were the only two banks that did very well, while the others all achieved a minimum score of 2. In 2018, Absa and Investec were the only two banks that showed some improvement, while ironically, Nedbank moved from having the best score in 2017, to attaining the minimum score of 2 in 2018. This was due to the fact that the bank didn't highlight their manufactured capital outcomes in 2018, as compared to the previous year. Absa showed improvement again in 2019, with Nedbank also going back to achieving the best overall score for the year. Not only did Capitec, FirstRand and Standard Bank have the lowest scores, they remained stagnant for all three years. In general, for manufactured capital, Absa, African Bank and Nedbank were the three banks that prospered very well for all three years. The banks that scored the worst for all three years were Capitec and FirstRand, which were closely followed by Investec and Standard Bank.

Intellectual Capital

For intellectual capital **inputs** in 2017, Absa, African Bank and Nedbank were the three banks that did well for that component, with Capitec, FirstRand, Investec and Standard Bank all attaining the minimum score, meaning that these banks made little or no mention of intellectual capital inputs in their business models. Absa maintained their lead in 2018, closely followed by African Bank and Nedbank. Capitec, FirstRand and Standard Bank's scores for inputs remained unchanged, while Investec improved by 1 point. In 2019, Nedbank showed the most change, attaining the highest and maximum score for their input, followed by Absa, then African Bank and then Standard Bank. Capitec, FirstRand and Investec attained the lowest scores respectively. African Bank, Capitec, Investec and Nedbank all scored the lowest in 2017 for intellectual capital **activities**. Absa attained the highest score for all three years, followed by FirstRand and Standard Bank who attained average scores of three (3) out of six (6) for 2017, 2018 and 2019. Nedbank's intellectual capital activities score also improved in 2019. For the **outputs**, in 2017 Standard Bank had the highest score, followed by Absa and Nedbank. The banks with the lowest scores were African Bank, Capitec, FirstRand and Investec. In 2018 Nedbank and Standard bank had the highest scores, and then followed by Absa. African Bank, Capitec, FirstRand and Investec's scores remained unchanged in 2018, however, in 2019 African Bank displayed some improvement. Nedbank and Standard Bank maintained their lead in 2019 for their intellectual capital outputs, followed by Absa. Capitec, FirstRand and Investec had the lowest scores yet again. For intellectual capital **outcomes**, Nedbank had the highest score for 2017, followed

by African Bank. Absa, Capitec, FirstRand, Investec and Standard Bank all attained the lowest score. Nedbank maintained the lead in 2018, with Absa displaying the greatest change. The scores in 2019 remained unchanged for the most part for all the banks except Nedbank, as their score dropped by 1 point, compared to the previous two years. Overall Absa and Nedbank displayed the highest scores for all three years, followed by African Bank and then Standard Bank. Capitec and FirstRand had the lowest scores for this capital too.

Human Capital

For human capital **inputs**, Absa and African Bank had the best scores in 2017, with Absa maintaining the lead again in 2018, however African Bank dropped by 1 point that year. Capitec, FirstRand, Investec, Nedbank and Standard Bank all scored the minimum score for 2017, signifying that these banks did not put much effort on their human capital inputs. Investec improved their score in 2018, and again in 2019, but the bank which showed the most improvement was Investec in 2019. Capitec, FirstRand and Standard Bank inputs score remained unchanged for all three years. The scores for human capital **activities** did not change for all banks for all three years, with Absa being the only bank that attained at least 50% for this component, and all the other banks attaining a two (2) out of six (6). For human capital **outputs**, Nedbank had the best score for 2017, followed by Standard Bank, while the other banks attained a minimum score of (2). Absa improved their score in 2018, however Nedbank showed a decrease in scores from the previous year. African Bank showed the greatest change in 2019, placing the bank on top with Absa, Nedbank and Standard Bank. Scores remained unchanged for Capitec, FirstRand and Investec for all three years. When it came to human capital **outcomes**, African Bank attained the highest scores for all three years, with Investec attaining the same score in 2018 and 2019. Capitec, Investec and Standard Bank scores were stagnant for the three years. Generally, it can be said that the banks did not put much emphasis on this capital as opposed to other capitals.

Social Capital

African Bank attained the highest score for social capital **inputs** for all three years, which was followed by Absa. Investec displayed the most significant change in 2018, with Standard Bank's score declining in 2019, meaning that their business model's focus on the social capital inputs was significantly reduced. Capitec and FirstRand achieved the lowest scores for all three years. The focus on social capital **activities** was low for all the banks for all three years, with Absa being the exception, as they scored the highest amongst all banks for all three years. Absa and Nedbank had the best scores for all three years for social capital **outputs**, with African Bank and Standard Bank attaining the same score in 2019. The lowest scores for all three years was attained by Capitec and FirstRand Bank.

African Bank had the best score for social capital **outcomes** for all three years, with Investec displaying the greatest change in 2018. Once again Capitec, FirstRand and Standard Bank attained the lowest score for social capital outcomes for all three years. African Bank attained the best overall score for this capital, followed by Absa and then Nedbank.

Natural Capital

For natural capital **inputs**, table 4.2 highlights that Nedbank attained the highest score for all three years, with Investec showing the greatest change from 2018. All seven banks attained the same minimum score for all three years for natural capital **activities**, which meant that all banks put no emphasis on this component. Little focus was also put on natural capital **outputs** by all banks for all three years, all attaining a score of two (2) out of six (6), except for African Bank in 2019, which attained a score of four (4) out of six (6). African Bank had the best score for natural capital **outcomes** in 2017 and 2018, however dropped significantly in 2019. Investec displayed the greatest change in 2018 and 2019, whilst Capitec, FirstRand and Standard Bank had the lowest scores for all three years. Generally, Absa, African Bank and Nedbank had the most consistent scores for this capital, with Investec surpassing all the banks in 2018 and 2019 to attain the best overall score. Capitec and FirstRand attained the lowest scores for all three years.

Below is a table (table 4.3), followed by bar graphs highlighting each bank's total capital percentage for the three years (2017, 2018 and 2019), which were derived from the scores attained for their business model description, highlighted in table 4.2, and then summarised in table 4.3. It is important to note that in 2017, of the selected banks in this study, four, namely Absa, African Bank, Nedbank and Standard Bank applied the <IR> 'capitals' terminology as outlined in the Framework, and the remaining three banks (Capitec, Investec and FirstRand) did not follow or apply the Framework, however applied a similar concept using alternative terms like "resources". Investec only adopted the <IR> Framework from 2018, hence the drastic improvement in the scores.

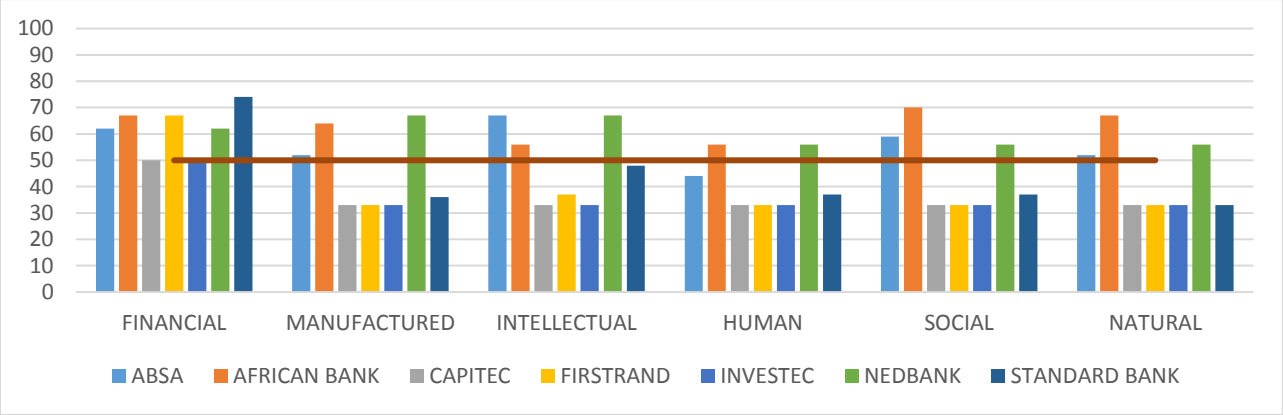
It was also apparent for all three years (2017, 2018 and 2019), that the banks' that applied the framework reported across all six capitals, while bank's that did not apply the framework or applied similar concepts tended to be more selective. For example, manufactured, intellectual, human, social and natural capital tended not to be addressed by the latter group, hence the low percentages for those capitals.

Table 4.3.: Bank's capital focus percentage for the three years

	ABSA			AFRICAN BANK			CAPITEC			FIRSTRAND			INVESTEC			NEDBANK			STANDARD BANK		
	17	18	19	17	18	19	17	18	19	17	18	19	17	18	19	17	18	19	17	18	19
FINANCIAL	62	93	93	67	67	88	50	50	50	67	69	69	50	67	62	62	69	86	74	79	81
MANUFACTURED	52	58	67	64	67	67	33	33	33	33	33	33	33	39	39	67	58	73	36	36	39
INTELLECTUAL	67	78	81	56	56	67	33	33	33	37	37	37	33	48	48	67	70	85	48	48	56
HUMAN	44	59	59	56	52	53	33	33	33	33	33	33	33	52	59	56	44	67	37	37	41
SOCIAL	59	63	63	70	70	78	33	33	33	33	33	33	33	63	63	56	59	67	37	48	41
NATURAL	52	52	56	67	59	52	33	33	33	33	33	33	33	67	67	56	59	63	33	41	41

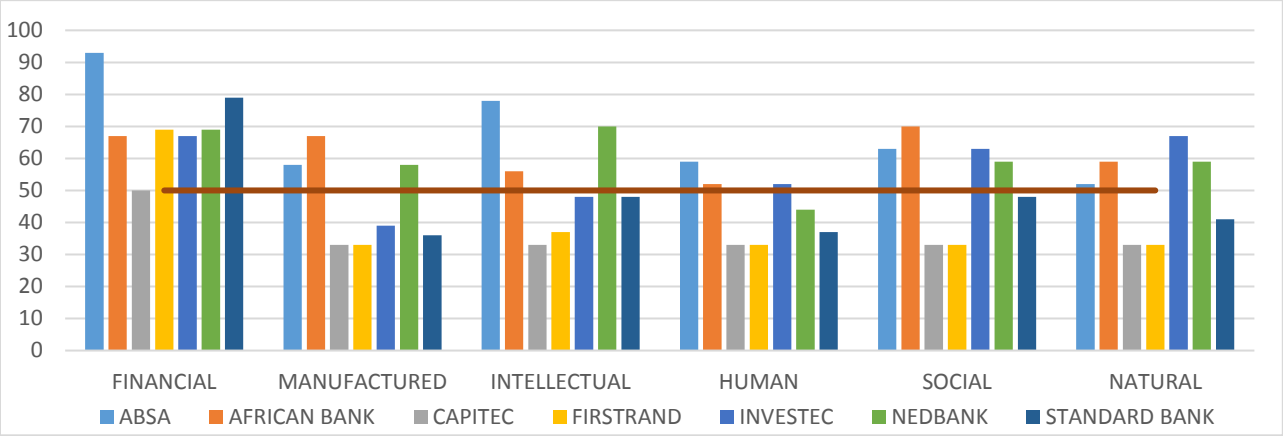
Source: Researchers own construct based on data gathered from each bank's capital focus percentages

Figure 4.1.: Graph depicting banks' capital focus (2017)



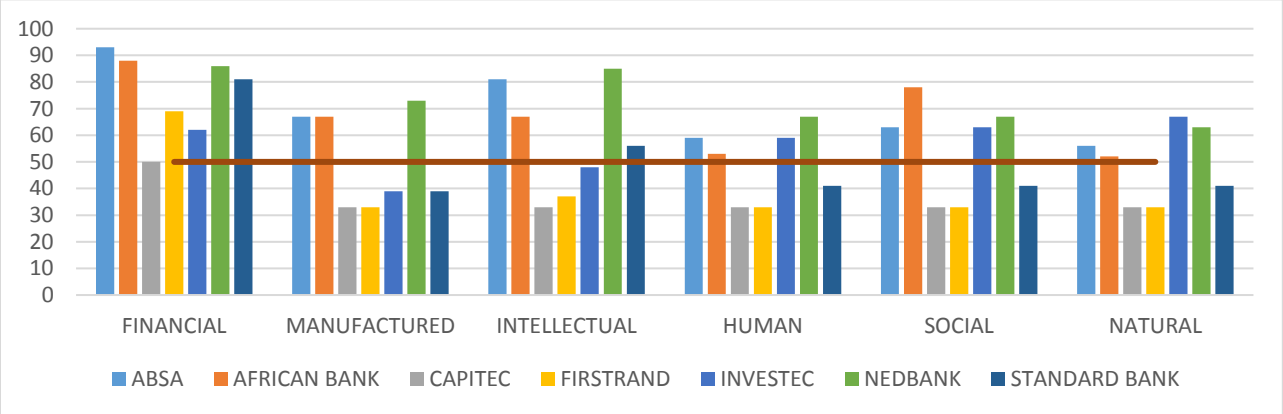
Source: Researchers own construct based on data from table 4.3

Figure 4.2.: Graph depicting banks' capital focus (2018)



Source: Researchers own construct based on data from table 4.3

Figure 4.3.: Graph depicting banks' capital focus (2019)



Source: Researchers own construct based on data from table 4.3

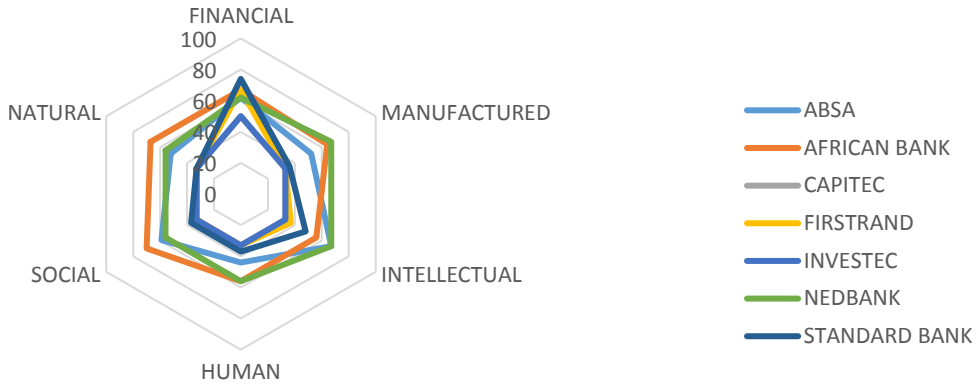
Bar graphs largely represent the total amount of observations in the data for that category. In this study, they represent how the seven banks have focused on the six capitals, over the three years. The graph for 2017 highlights that financial capital was the main focus amongst all the banks, with African Bank and Nedbank being the only two banks with a business model that evenly distributed their focus across all capitals, surpassing the midpoint. Standard Bank attained the highest score for their financial capital, however fell short when it came to other capitals.

The 2018 graph highlights that all banks scores across all capitals generally increased, with Capitec being the only exception, as their scores remained stagnant. Surprisingly, Nedbank which had a business model that focused evenly on all capitals in 2017, dropped below the midpoint for their human capital in 2018. Absa and African Bank were the banks that surpassed the midpoint across all capitals.

And then in 2019, capital scores increased again for five of the seven banks, namely Absa, African Bank, Investec, Nedbank and Standard Bank, while Capitec and FirstRand's scores remained unchanged. Once more, financial capital continued to be the main focus amongst all banks. It was also interesting to see that Investec, in both 2018 and 2019, had a higher score for their natural capital than Nedbank, which is positioned as a "green bank".

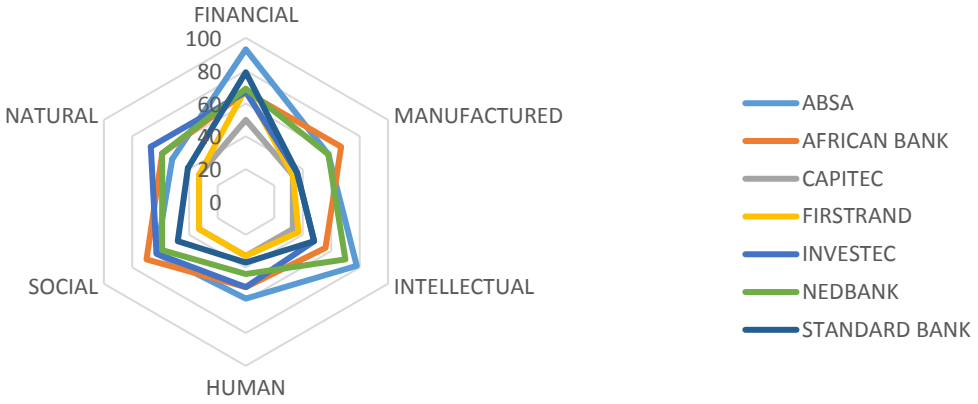
Below are radar graphs used to display multivariate observations. In this case, the radar graphs for each year have six quantifiable variables, which are the six capitals, represented on axes starting from the same point.

Figure 4.4.: Radar graph highlighting each bank's capital focus (2017)



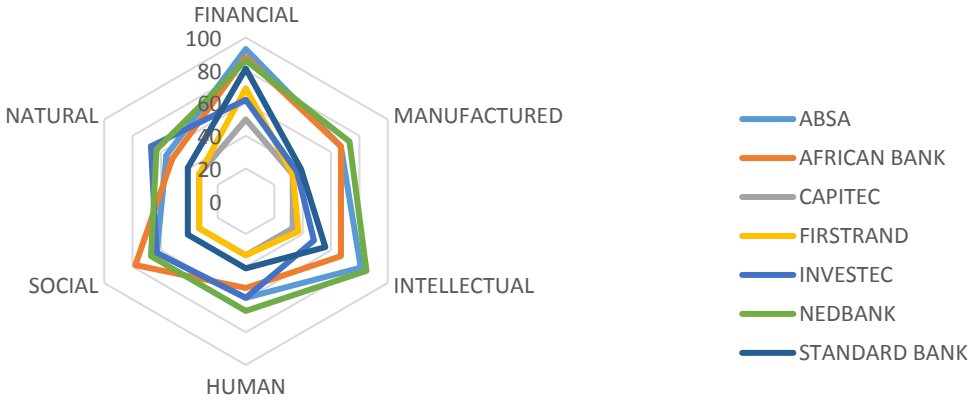
Source: Researchers own construct based on data from table 4.3

Figure 4.5.: Radar graph highlighting each bank's capital focus (2018)



Source: Researchers own construct based on data from table 4.3

Figure 4.6.: Radar graph highlighting each bank's capital focus (2019)



Source: Researchers own construct based on data from table 4.3

If one compares these radar graphs for the three-year period, one would definitely see that the majority of the banks displayed an outwards movement towards the capitals as the years progressed, despite the fact they were not necessarily going out at the same pace. Conversely, this meant that there was a richer description in relation to the business model application through the years. Capitec and FirstRand were the only two stagnant banks for all three years.

Overall, the tables and graphs above highlight that over the three years, all banks had a significantly higher focus on financial capital, which is not surprising given their familiarity and the fact that their main function is finance based. It is also the most easily quantifiable capital and is considered the most directly relevant to the stakeholders.

Absa, African Bank and Nedbank had the best, almost evenly distributed business models, which addressed all the capitals for all three years. What was also visible was that all the banks, with the exception of Capitec and FirstRand, displayed some improvement in their percentages across all six capitals through the years, meaning that they deliberately made the decision to continuously focus on getting better, all in pursuit of being more efficient and effective.

Capitec's business model and focus on capitals was significantly lower than all the other banks, and also remained stagnant through the years, however, as previously highlighted, this was predominantly due to the fact that they did not follow or apply the <IR> Framework, and in their defense, following the <IR> Framework is not mandatory. Interestingly, Capitec's integrated reports for all three years, highlight how value creation is the foundation of their business. Their business model also leverages on their strengths and weaknesses, and highlights how their strategic focus has shifted over time, hence one cannot necessarily fault them (Capitec, 2020).

Below are tables 4.4, 4.5 and 4.6 that summarises business model description by displaying the total scores and percentages achieved by all the banks from 2017 to 2019, followed by the ranking of each bank for the three years according to their business model description scores, and then classifying these business model descriptions as either rich, moderate or poor.

Table 4.4.: Banks Ranking According to Business Model Description Score (2017)

BANK NAME	TOTAL DESCRIPTION SCORE	%	RANKING	CLASSIFICATION
AFRICAN BANK	116	63	**1**	Moderate
NEDBANK	111	61	**2**	Moderate
ABSA	103	56	**3**	Moderate
SBSA	85	46	**4**	Moderate
FIRSTRAND BANK	76	42	**5**	Moderate
CAPITEC / INVESTEC	68	37	**6**	Moderate

Source: Researchers interpretation

Table 4.5.: Banks Ranking According to Business Model Description Score (2018)

BANK NAME	TOTAL DESCRIPTION SCORE	%	RANKING	CLASSIFICATION
ABSA	126	69	**1**	Rich
AFRICAN BANK	114	62	**2**	Moderate
NEDBANK	111	61	**3**	Moderate
INVESTEC	103	56	**4**	Moderate
SBSA	92	50	**5**	Moderate
FIRSTRAND BANK	77	42	**6**	Moderate
CAPITEC	68	37	**7**	Moderate

Source: Researchers interpretation

Table 4.6.: Bank's Ranking According to Business Model Description Score (2019)

BANK NAME	TOTAL DESCRIPTION SCORE	%	RANKING	CLASSIFICATION
NEDBANK	136	74	**1**	Rich
ABSA	131	72	**2**	Rich
AFRICAN BANK	127	69	**3**	Rich
INVESTEC	103	56	**4**	Moderate
SBSA	95	52	**5**	Moderate
FIRSTRAND BANK	77	42	**6**	Moderate
CAPITEC	68	37	**7**	Moderate

Source: Researchers interpretation

In essence, tables 4.4, 4.5 and 4.6 highlighted that no banks business model description was classified as poor, instead, all the banks started off with moderate business model descriptions in 2017, and all showing some improvement in their description in 2018 and 2019. As previously highlighted, FirstRand Bank, Investec and Capitec, had low scores for their business model descriptions, mainly due to the fact that they did not follow the <IR> Framework, however, Investec adopted the <IR> Framework from 2018, hence the upward trajectory in the scores and percentages.

Absa, African Bank and Nedbank had the best business model description scores for all three years, as for the most part, their business models were clear, concise and highlighted most, if not all the capitals, and components according to the <IR> Framework.

It will be interesting to see if these banks with higher business model description scores and percentages perform better. To calculate financial performance, the CAMELS rating system model was followed.

4.4. Financial Performance

An observation identified was that each bank measures their performance according to their own metrics and their strategic priorities. The metrics adopted by each bank are:

- Absa measures their performance based on their ranking on the JSE in terms of their market capitalisation; their balance sheet assets; their headline earnings; net asset value; how much they paid in dividends; their shareholder return, and how much they contributed in taxes (Absa, 2019).

- African Bank measures their performance based on their return on equity; their funding diversification; non-interest revenue; their credit loss ratio; the strength of their balance sheet; the growth of their customer base, and the people engagement survey score (African Bank, 2019).

- Capitec measures their performance based on their profitability; their asset value; they also consider their liabilities; and their operations which focuses on the amount of branches they have, the number of employees and the number of active clients (Capitec, 2019).

- FirstRand measures their performance based on return on equity; normalised earnings; dividends per share; earnings per share; the number of employees they have; their B-BBEE status; their economic value added to society; and the number of customers they have (FirstRand, 2019).

- Nedbank measures their performance based on their market capitalisation, the number of clients they have; the number of employees; client satisfaction rating; their B-BBEE status; and their carbon-neutral operations (Nedbank, 2019).

- Standard Bank measures their performance based on their number of clients; the number of permanent employees; their infrastructure which looks at the number of branches and ATMs; their digital capabilities; and their brand recognition (Standard Bank, 2019).

Although financial performance indicators are unlikely to capture fully the many dimensions of organisational performance, the non-financial performance indicators identified from the seven banks in this study, were mostly based on surveys, which are not necessarily reliable, as research highlights that people usually misrepresent themselves, as a result, the findings generally exhibit poor statistical reliability. Hence this study focused on the banks financial performance, by firstly highlighting each bank's change in share price for the three years, and then evaluating the overall financial performance of these banks, which is done by adopting the CAMELS rating system model. Table 4.7 below displays each bank's change in share price for the three years.

Table 4.7.: Bank's Change in Share Price for Financial Years 2017, 2018 and 2019

BANK NAME	2017 FINANCIAL YEAR			2018 FINANCIAL YEAR			2019 FINANCIAL YEAR			TOTAL RETURN FOR SHAREHOLDERS FROM 2017 TO 2019
	1 July 2016	30 June 2017	% Change	1 July 2017	30 June 2018	% Change	1 July 2018	30 June 2019	% Change	
ABSA	R768	R743.35	**-3.2%**	R743	R700	**-6%**	R700	R748	**7%**	**-3%**
AFRICAN BANK	-	-	-	-	-	-	-	-	-	-
CAPITEC	R595	R830	**39.5%**	R830	R888	**7%**	R888	R1 290	**45.3%**	**117%**
FIRSTRAND BANK	R44.84	R47.89	**7%**	R47.89	R64.23	**34%**	R64.23	R68.71	**7%**	**53%**
INVESTEC	R85	R82	**-4%**	R82	R73.25	**-11%**	R73.25	R85.66	**17.3%**	**0.8%**
NEDBANK	R186.4	R210.28	**13%**	R210.28	R255.73	**22%**	R255.73	R255.77	**0.02%**	**37%**
STANDARD BANK	R127.8	R144.62	**13.2%**	R144.62	R192.55	**33%**	R192.55	R196.74	**2.2%**	**54%**

Source: Johannesburg Stock Exchange (2021)

A share price is the amount it would cost to buy one share in an organisation. An important factor to note is that the price of a share is not fixed, but fluctuates depending on market conditions. Research shows that a higher change in share/stock prices tend to reflect a fundamentally strong business that has grown in value over time and produced strong returns for their shareholders. As seen in the table above (table 4.7), Capitec's change in share price over the three-year period was exceedingly higher than all the other banks, followed by Standard Bank, then FirstRand, in fourth place was Nedbank, and then Investec, followed by Absa, and then in last place was African Bank, mainly due to the fact that the bank delisted on the JSE, as a result, their data was not available for all three years. A study

by Elliott and Schaub (2006) states that the higher the change in stock price level in the stock market, the higher the financial performance of an organisation. Steyn (2019) on the other hand reiterate that indeed there is a significant statistical relationship that exists between financial performance and share price performance, specifically in the banking sector on the JSE, however the relationship exists not on all financial ratios, but on just price to earnings ratios and return on equity ratios. This study also attempted to briefly assess if these theories are true, particularly for the selected seven South African banks.

Puspitaningtyas (2017) states that the assessment of financial performance can be done using fundamental analysis, which is usually through the measure of financial ratios as an indicator. Puspitaningtyas (2017) adds that there are several financial ratios that can be used as a tool for assessing financial performance, these include, but not limited to, liquidity, leverage, growth, and valuation. The CAMELS rating system is an ideal model to measure financial performance as it uses a combination of financial ratios and some qualitative judgments.

The data was obtained from each banks annual integrated report and The Banker Database, and then applied to the CAMELS rating system model, in order to assess the financial performance of the selected banks in South Africa for 2017, 2018 and 2019. Financial performance is evinced in a form of financial ratios which are displayed in Table 4.8. Table 4.9 goes a step further by taking those financial ratios and assigning each one of them a composite rating according to the CAMELS rating system model, where a rating of 1 is the best or strongest and a rating of 5 the weakest. After that, the composite ratings are added to give a total component score.

Table 4.8.: Application of CAMELS Rating System Model for years 2017, 2018 and 2019

Banks ratios for year 2017 (%)		BANKS						
CAMELS COMPONENTS	**RATIO**	**ABSA**	**SBSA**	**NEDBANK**	**FNB**	**CAPITEC**	**AFRICAN BANK**	**INVESTEC**
Capital adequacy	**CAR**	14.9%	16%	15.4%	17.1%	34%	32.9%	15.4%
Asset quality	**NPL/TL**	3.75%	3.2%	2.7%	2.3%	11.3%	16.5%	2.6%
Management quality	**C/I**	56.8%	55.7%	57.2%	51.0%	34%	31%	66.8%
Earning ability	**ROA**	1.39%	1.32%	1.22%	2.07%	5.19%	2.39%	1.07%
	ROE	16.4%	17.1%	16.4%	23.4%	27%	9%	14.2%
Liquidity	**TL/TD**	90.6%	85.1%	93.6%	91%	92%	382%	75%
Sensitivity to market risk	**TS/TA**	6.1%	12.4%	13%	15.9%	5.7%	3.2%	3.8%
Banks ratios for year 2018 (%)		**BANKS**						
CAMELS COMPONENTS	**RATIO**	**ABSA**	**SBSA**	**NEDBANK**	**FNB**	**CAPITEC**	**AFRICAN BANK**	**INVESTEC**
Capital adequacy	**CAR**	16.1%	16%	14.8%	14.7%	36%	36%	15.5%
Asset quality	**NPL/TL**	5.1%	3.8%	3.4%	3.2%	11.08%	15.2%	2.23%
Management quality	**C/I**	57.7%	54.4%	58.6%	51.2%	36%	35%	66.5%
Earning ability	**ROA**	1.34%	1.36%	1.33%	1.92%	5.26%	3.32%	1.19%
	ROE	16.8%	18%	17.9%	23%	27%	10.6%	14%
Liquidity	**TL/TD**	93.8%	84.4%	91%	90%	91.2%	354%	77.4%
Sensitivity to market risk	**TS/TA**	7%	12.8%	13.2%	15.1%	5.3%	3.6%	3.5%
Banks ratios for year 2019 (%)		**BANKS**						
CAMELS COMPONENTS	**RATIO**	**ABSA**	**SBSA**	**NEDBANK**	**FNB**	**CAPITEC**	**AFRICAN BANK**	**INVESTEC**
Capital adequacy	**CAR**	16.1%	16.7%	15.0 %	16.8%	33.9%	40.7%	15.8%
Asset quality	**NPL/TL**	4.9%	3.76%	3.5%	3.3%	9.9%	14%	2.1%
Management quality	**C/I**	58%	56.4%	58.6%	51.8%	39%	45%	47.5%
Earning ability	**ROA**	1.20%	1.99%	1.13%	1.75%	5.27%	4%	1.12%
	ROE	15.8%	16.8%	24.8%	22.8%	28%	11.1%	10.4%
Liquidity	**TL/TD**	93.0%	87.6%	89.6%	89%	91%	298%	77.2%
Sensitivity to market risk	**TS/TA**	6.9%	12.2%	13.2%	14.9%	5.2%	4.3%	3.5%

Source: Researchers compilation based on data from each banks Integrated Report dating from 2017 till 2019 and The Banker Database (2021)

Table 4.9.: CAMELS composite ratings for years 2017, 2018 and 2019

CAMELS rating for year 2017		BANKS						
CAMELS COMPONENTS	RATIO	ABSA	SBSA	NEDBANK	FNB	CAPITEC	AFRICAN BANK	INVESTEC
Capital adequacy	CAR	2	1	1	1	1	1	1
Asset quality	NPL/TL	4	3	3	2	5	5	3
Management quality	C/I	5	5	5	5	3	3	5
Earning ability	ROA	1	1	1	1	1	1	1
	ROE	3	2	3	1	1	4	3
Liquidity	TL/TD	5	5	5	5	5	5	4
Sensitivity to market risk	TS/TA	1	1	1	1	1	1	1
TOTAL		21	18	19	16	17	20	18
CAMELS rating for year 2018		**BANKS**						
CAMELS COMPONENTS	RATIO	ABSA	SBSA	NEDBANK	FNB	CAPITEC	AFRICAN BANK	INVESTEC
Capital adequacy	CAR	1	1	2	2	1	1	1
Asset quality	NPL/TL	4	4	3	3	5	5	2
Management quality	C/I	5	5	5	5	3	3	5
Earning ability	ROA	1	1	1	1	1	1	1
	ROE	3	2	2	1	1	3	3
Liquidity	TL/TD	5	5	5	5	5	5	4
Sensitivity to market risk	TS/TA	1	1	1	1	1	1	1
TOTAL		20	19	19	18	17	19	17
CAMELS rating for year 2019		**BANKS**						
CAMELS COMPONENTS	RATIO	ABSA	SBSA	NEDBANK	FNB	CAPITEC	AFRICAN BANK	INVESTEC
Capital adequacy	CAR	1	1	1	1	1	1	1
Asset quality	NPL/TL	4	4	3	3	5	5	2
Management quality	C/I	5	5	5	5	4	4	5
Earning ability	ROA	1	1	1	1	1	1	1
	ROE	3	3	1	1	1	3	3
Liquidity	TL/TD	5	5	5	5	5	5	4
Sensitivity to market risk	TS/TA	1	1	1	1	1	1	1
TOTAL		20	20	17	17	18	20	17

Source: Researchers own construct based on CAMELS rating system

Once the total component scores for each bank per year were provided, these scores attained by each bank were then divided by six (6), in order to give the final CAMELS composite rating, and then to provide an analysis or classification of each bank's financial performance according to the CAMELS rating system model. Essentially, the lowest composite score for a bank indicates the best performing bank and the highest composite score indicates the worst performing bank. This is displayed in table 4.10, 4.11 and 4.12 below.

Table 4.10.: Banks' CAMEL Composite Rating (2017)

BANK NAME	TOTAL COMPONENTS SCORE	TOTAL COMPONENTS SCORE /6	CAMELS COMPOSITE RATING	CAMELS RATING ANALYSIS
FIRSTRAND BANK	16	2.7	3	Fair
CAPITEC	17	2.8	3	Fair
INVESTEC	18	3	3	Fair
SBSA	18	3	3	Fair
NEDBANK	19	3.2	3	Fair
AFRICAN BANK	20	3.3	3	Fair
ABSA	21	3.5	4	Marginal

Source: Researchers interpretation

Table 4.11.: Banks' CAMEL Composite Rating (2018)

BANK NAME	TOTAL COMPONENTS SCORE	TOTAL COMPONENTS SCORE /6	CAMELS COMPOSITE RATING	CAMELS RATING ANALYSIS
CAPITEC	17	2.8	3	Fair
INVESTEC	17	2.8	3	Fair
FIRSTRAND BANK	18	3	3	Fair
SBSA	19	3.2	3	Fair
NEDBANK	19	3.2	3	Fair
AFRICAN BANK	19	3.2	3	Fair
ABSA	20	3.3	3	Fair

Source: Researchers interpretation

Table 4.12.: Banks' CAMEL Composite Rating (2019)

BANK NAME	TOTAL COMPONENTS SCORE	TOTAL COMPONENTS SCORE /6	CAMELS COMPOSITE RATING	CAMELS RATING ANALYSIS
FIRSTRAND BANK	17	2.8	3	Fair
INVESTEC	17	2.8	3	Fair
NEDBANK	17	2.8	3	Fair
CAPITEC	18	3	3	Fair
ABSA	20	3.3	3	Fair
AFRICAN BANK	20	3.3	3	Fair
SBSA	20	3.3	3	Fair

Source: Researchers interpretation

The data in the tables above indicate that the best performing banks in 2017 were FirstRand and Capitec. The worst performing banks according the CAMELS rating system model in 2017 were African Bank and ABSA. In 2018, the best performing banks were Capitec and Investec, and then followed by FNB. ABSA was the worst performing bank in 2018, which was closely followed by Standard Bank, Nedbank and African Bank. In 2019, the best performing banks were Nedbank, FNB and Investec, and the worst performing banks were ABSA, Standard Bank and African Bank.

The tables also highlight that in 2017 ABSA's performance was marginal due to the high scores achieved for management quality and liquidity, however there was improvement in 2018 and 2019, where their performance was categorised as being fair according to the CAMELS analysis, just like the six other banks, meaning that overall, none of them were performing poorly. Fundamentally, the CAMELS rating system aids banks management to understand and regulate possible risks, which in turn enables them not only to improve operating efficiency but also to upgrade their capabilities to respond to market needs and to be profitable (Ifeacho and Ngalawa, 2014).

Is there a relationship between share price and financial performance of the seven selected banks?

As previously highlighted, the study by Elliott and Schaub (2006) stated that there is a relationship between the change in the share price level in the stock market and the financial performance of an organisation. Steyn (2019) agreed that there is a relationship that exists between financial performance and share price, but the relationship exists only on price to earnings ratios and return on equity ratios. This study attempted to briefly verify the theories (seen in table 4.13), by highlighting the rankings of these banks according to their change in share price and their financial performance, which followed the CAMELS rating system model.

Table 4.13.: Banks' Change in Share Price Ranking Versus Financial Performance Ranking

BANK NAME	2017		2018		2019	
	CHANGE IN SHARE PRICE RANKING	FINANCIAL PERFOMANCE RANKING	CHANGE IN SHARE PRICE RANKING	FINANCIAL PERFOMANCE RANKING	CHANGE IN SHARE PRICE RANKING	FINANCIAL PERFOMANCE RANKING
ABSA	5	6	6	4	3	3
AFRICAN BANK	7	5	7	3	6	3
CAPITEC	1	2	4	1	1	2
FIRSTRAND BANK	4	1	1	2	3	1
INVESTEC	6	3	5	1	2	1
NEDBANK	3	4	3	3	5	1
STANDARD BANK	2	3	2	3	4	3

Source: Researchers interpretation

As can be observed in table 4.13, the ranking according to the change in share price and the financial performance ranking according to the CAMELS rating system model were at a slight variance, however, as Steyn (2019) highlighted, the relationship exists with some financial ratios, namely, price to earnings ratios and return on equity ratios, not all of them. The CAMELS rating system model focused on more financial ratios in order to give a more holistic assessment on financial performance, but, if we following Steyn's (2019) theory by just focusing on the two financial ratios, it is important to note that the CAMELS rating system model did not employ price to earnings ratios, but just return on equity ratios. Subsequently, table 4.14 shows the comparison of the ranking of return on equity ratios for the banks, which were provided in table 4.9, and based on the CAMELS composite rating; to the change in share price ranking.

Table 4.14.: Banks' Change in Share Price Ranking Versus Return on Equity Ranking

BANK NAME	2017		2018		2019	
	SHARE PRICE CHANGE RANKING	RETURN ON EQUITY RANKING	SHARE PRICE CHANGE RANKING	RETURN ON EQUITY RANKING	SHARE PRICE CHANGE RANKING	RETURN ON EQUITY RANKING
ABSA	5	3	6	3	3	2
AFRICAN BANK	7	4	7	4	6	2
CAPITEC	1	1	4	1	1	1
FIRSTRAND BANK	4	1	1	1	3	1
INVESTEC	6	3	5	3	2	2
NEDBANK	3	3	3	2	5	1
STANDARD BANK	2	2	2	2	4	2

Source: Researchers interpretation

From just these observations in table 4.14, we could conclude that Steyn's (2019) theory was somewhat true, for one could say that there is indeed a relationship between the change in share price and return on equity ratios, as Capitec was ranked in first place for 2017 and 2019 for their share price and first place again for their return on equity ratios for all three years, just like African Bank was in

last place for the three years for their share price and their return on equity ratios. Yet, what was surprising was that FirstRand was in fourth place for their change in share price in 2017, first place in 2018 and third place in 2019, but was in joint first place for their return on equity ratios for all three years. Standard Bank was ranked second place for both their change in share price and their return on equity ranking for two consecutive years (2017 and 2018), however was ranked fourth place for their change in share price in 2019 and maintained their second place for their return on equity ranking. Nevertheless, this study seeked to assess the overall financial performance of the banks, not just focusing on their share price or a few financial ratios, and the CAMELS rating system model did just that- it took financial ratios and gave them ratings which were assigned based on a ratio analysis of the financial statements, and then classified the bank's overall condition or financial performance. What also came from the analysis on financial performance based on the CAMELS rating system model, was that the total scores attained by the banks were very close to each other, and that all the banks for all three years were classified as performing fairly, which meant that the banks performed in a way that fulfils expectations or needs, with the exception of Absa, as it was classified as performing marginally in 2017, however improved from 2018.

4.5. The merge of Business Model Description with Financial Performance

Literature has suggested that there is a relationship between business model description and firm performance (Zott and Amit, 2007). The main aim of the study was to determine whether there is a relationship between the business model description of South Africa's top seven banks and their financial performance, over a three-year period. Numerous analyses were done, which resulted in the banks being ranked according to their business model description and their financial performance. The results are shown below in tables 4.15, 4.16 and 4.17.

Table 4.15.: Banks' Business Model Description Versus Financial Performance (2017)

RANKING	BUSINESS MODEL DESCRIPTION	CHANGE IN SHARE PRICE	FINANCIAL PERFORMANCE
1	AFRICAN BANK	CAPITEC	FIRSTRAND
2	NEDBANK	SBSA	CAPITEC
3	ABSA	NEDBANK	INVESTEC/ SBSA
4	SBSA	FIRSTRAND	NEDBANK
5	FIRSTRAND	ABSA	AFRICAN BANK
6	CAPITEC / INVESTEC	INVESTEC	ABSA
7	-	AFRICAN BANK	-

Source: Researchers interpretation

Table 4.16.: Banks' Business Model Description Versus Financial Performance (2018)

RANKING	BUSINESS MODEL DESCRIPTION	CHANGE IN SHARE PRICE	FINANCIAL PERFORMANCE
1	ABSA	FIRSTRAND	CAPITEC/ INVESTEC
2	AFRICAN BANK	SBSA	FIRSTRAND
3	NEDBANK	NEDBANK	SBSA/ NEDBANK/ AFRICAN BANK
4	INVESTEC	CAPITEC	ABSA
5	SBSA	INVESTEC	-
6	FIRSTRAND	ABSA	-
7	CAPITEC	AFRICAN BANK	-

Source: Researchers interpretation

Table 4.17.: Banks' Business Model Description Versus Financial Performance (2019)

RANKING	BUSINESS MODEL DESCRIPTION	CHANGE IN SHARE PRICE	FINANCIAL PERFORMANCE
1	NEDBANK	CAPITEC	FIRSTRAND/ INVESTEC/ NEDBANK
2	ABSA	INVESTEC	CAPITEC
3	AFRICAN BANK	ABSA/ FIRSTRAND	ABSA/ AFRICAN BANK/ SBSA
4	INVESTEC	SBSA	-
5	SBSA	NEDBANK	-
6	FIRSTRAND	AFRICAN BANK	-
7	CAPITEC	-	-

Source: Researchers interpretation

While intuitively one might think that there is a relationship between business model description and financial performance as literature has stated that, yet what we saw was, with Capitec for example, the bank didn't score well when it came to their business model description, mainly due to the fact that they didn't follow the IIRC <IR> Framework, however there is the perception that they are the best performing bank based on their share price. Another example is African Bank- the bank scored well when it came to their business model description, yet they are not even listed on the JSE, meaning that their share price is non-existent, moreover, for all three years, the bank was also ranked in the lower end of spectrum when it came to their overall financial performance, which was measured through the CAMELS rating system model.

By just looking at the tables above, one could conclude that there is no relationship between business model description and financial performance for these seven banks, however this study identified that not all banks followed the IIRC <IR> Framework to disclose their business models, which meant that the scores were not necessarily fair. On a positive note, the study showed that all the banks either improved or remained the same when it came to their business model description over the years. Relating to financial performance, the scores attained by the banks for all three years, were so close to each other for one to even make a fair judgement and comparison on which bank performed better

than the others. Moreover, what was interesting to see was that none of the banks were classified as performing poorly according to the CAMELS rating system model. Conversely, for a more in depth analysis and to test the hypothesis distinguishing whether there is a relationship between business model description and financial performance, the study applied correlation coefficient. The business model description scores and financial performance components scores for each bank for the three years, were used together as sample data to test this hypothesis.

4.6. Hypothesis Testing (Correlation Coefficient)

A hypothesis test of the "significance of the correlation coefficient" was performed to decide whether the linear relationship in the sample data is strong enough to use to model the relationship. This analysis was done using Microsoft Excel. Table 4.18, 4.19 and 4.20 below displays all the data used, and gives the correlation coefficient for each year.

Table 4.18.: Correlation Coefficient 2017

BANKS	TOTAL DESCRIPTION SCORE 2017	TOTAL COMPONENTS SCORE 2017
ABSA	103	21
AFRICAN BANK	116	20
CAPITEC	68	17
FIRSTRAND	76	16
INVESTEC	68	18
NEDBANK	111	19
SBSA	85	18

Results= **0.78003053**

Source: Researchers own computation using Microsoft Excel software

Table 4.19.: Correlation Coefficient 2018

BANKS	TOTAL DESCRIPTION SCORE 2018	TOTAL COMPONENTS SCORE 2018
ABSA	126	20
AFRICAN BANK	114	19
CAPITEC	68	17
FIRSTRAND	77	18
INVESTEC	103	17
NEDBANK	111	19
SBSA	92	19

Results= **0.71818680**

Source: Researchers own computation using Microsoft Excel software

Table 4.20.: Correlation Coefficient 2019

BANKS	TOTAL DESCRIPTION SCORE 2019	TOTAL COMPONENTS SCORE 2019
ABSA	131	20
AFRICAN BANK	127	20
CAPITEC	68	18
FIRSTRAND	77	17
INVESTEC	103	17
NEDBANK	136	17
SBSA	95	20

Results= **0.30260297**

Source: Researchers own computation using Microsoft Excel software

There are obviously a number of limitations to adopting correlation coefficient in this specific study, as this is a relatively small sample set, and there could also be a possibility of multicollinearity, however, the general tendency that business models and performance increase together is unquestionably present, as research has highlighted that. Nevertheless, the analyses performed indicate that there was a strong positive correlation in 2017 and 2018; and a weak positive correlation in 2019. A weak positive correlation indicates that while both variables tended to go up in response to one another, the relationship is not very strong. Even though one acknowledges that the correlation analysis does not address all the relationships that need to be addressed, however, since there were 2 strong positive correlations identified in the study, we can conclude by saying the correlation is statistically significant. This means that there is a relationship between the banks business model description and their financial performance. Therefore, one can reject the null hypothesis, which stated that there is no relationship between the business model description and the bank's financial performance; and accept the alternate hypothesis which states that there is a relationship between the business model description and the bank's financial performance.

4.7. Conclusion

This chapter provided an analysis of business model description of the banks, and their financial performance. For business model description, the <IR> Framework was followed, where each business model component was given a rating between 1 and 3, with 3 being the best and 1 the worst rating. Percentages of each component was then calculated, which gave room for the banks business model descriptions to be given an overall rating, where the higher the rating meant the better the business model description. The banks business model descriptions were then categorised into three categories, either rich, moderate or poor. The findings reveal that for all the three years, no banks business model description was categorised as poor, they were either moderate or rich. For the

financial performance of the banks, the study firstly considered each bank's share price, and then the CAMELS rating system model was adopted as a measure for overall financial performance of each bank, where each component was given a rating from 1 to 5, however in this case, 1 was the best rating, and 5 was the worst. The banks were then given an overall rating, where this time, the lower the rating, the better the banks performance. This was done for the three years. The findings also reveal that no bank performed poorly, instead they were all categorised as being fair, with the exception of ABSA in 2017, as it the only bank categorised as being marginal, however there was some improvement identified, as the bank was now categorised as being fair from 2018 just like all the other banks. After all the analysis were done, correlation coefficient was employed to test the hypothesis for all the three years using the business model description scores and the financial performance scores for each year. The results reveal that indeed, there was a positive relationship between business model description and financial performance of these banks, meaning that the null hypothesis was rejected, and the alternate hypothesis was accepted. With that said, a thorough discussion of the analysed data follows in the next chapter.

CHAPTER 5: DISCUSSION

5.1. Introduction

The previous chapter presented the results and provided an overview of the various analyses done. This chapter discusses the findings of the study in line with the research objectives and literature review. As previously highlighted, the purpose of the study was to analyse the business model description of South Africa's biggest banks, over three consecutive years (2017, 2018 and 2019), and if there was a relationship to their financial performance. To reiterate, the objectives were to:

- Assess, evaluate and analyse the components of the banks business model according to the IIRC's *International <IR> Framework*;
- compare each banks business model components against each other over the three years, and also highlight the pattern of change, using tables and graphs;
- assess, analyse and evaluate the banks financial performance using the CAMELS Rating System model;
- evaluate whether the business model description according to IIRC's *International <IR> Framework,* has an effect on bank's financial performance;
- and lastly, contribute to existing literature by providing new perspectives on business models and performance.

5.2. Discussion of the findings

5.2.1. Business Model Description according to the IIRC's *International <IR> Framework*

The <IR> Framework was used to accelerate the adoption of integrated reporting across the world. The aim of integrated reporting was to primarily improve the quality of information available to providers of financial capital to enable a more efficient and productive allocation of capital (IIRC, 2013). The IIRC's framework identified six capitals that reporting organisations may use as a tool for their disclosure. These six capitals included:

1. **financial capital**, which is the conventional measure of performance- usually the pool of funds available within an organisation;

2. **manufactured capital**, which encompasses physical infrastructure or technology such as equipment and tools;
3. **intellectual capital** are usually the intangible assets associated with the brand and reputation, as well as related patents, copyrights, organisational systems and processes;
4. **human capital** is the skills and knowledge of an organisation's employees, which essentially affects their ability to perform their functions;
5. **social and relationship capital** encompasses the relationships between an organisation and all its stakeholders;
6. **natural capital** includes resources such as water, fossil fuels, solar energy, crops and carbon sinks, that can't be replaced and are essential to the functioning of the economy as a whole (IIRC, 2013).

South African organisations are recognised as leaders in the field of corporate reporting. Many listed companies and large government organisations have issued integrated reports, as they are required to produce these integrated reports or explain why they have not done so (Roberts, 2017). The main reasons for following the <IR> Framework in this study was that it necessitated organisations to disclose their business model, at the same time the framework displayed the organisations performance against strategy; explained the six capitals used and affected, gave a longer-term view of their organisation; and most South African organisations, including the banks largely adhered to the <IR> Framework.

Even though it is mandatory for listed organisations to produce integrated reports, following the <IR> Framework was not a requirement. The IIRC (2013) states that while organisations often find the adoption of capitals terminology as an appropriate way to structure or articulate disclosures in their integrated reports, the inclusion of the capitals model in the framework is not intended to serve as the only possible model that can be reported against, but rather as a benchmark. With that said, once the various analyses were done for the business model descriptions, adhering to the <IR> Framework, the results revealed that Absa, Nedbank and African bank had the best business model description scores for all three years, because for the most part, their business models were clear, concise and highlighted most, if not all the capitals and components according to the <IR> Framework. It is also worth noting that African Bank was placed under curatorship in 2014, which is stated to be due to years of excessive unsecured lending and a spiral of bad debt, however, the bank has since completely restructured their business model, hence the bank attained one of the best overall rating according to the <IR> Framework.

On the other hand, FirstRand Bank, Investec and Capitec, had low ratings for their business model descriptions, which was mainly due to the fact that the banks did not follow the <IR> Framework, however, Investec adopted and adhered to the <IR> Framework from 2018, hence the major improvement in the rating. Nevertheless, overall the results reveal that no bank's business model description was classified as poor, instead, all the banks started off with moderate business model descriptions in 2017, and all showed some improvement in their description in 2018 and 2019. The results also revealed that all the banks focused more on their Financial Capital, with less description of the other capitals. It can be said that financial capital is the fuel of the business, but other capitals are equally important for organisations to create sustainable value. Nonetheless, a noticeable change from year to year, over the three-year period (2017, 2018 and 2019), was that the various integrated reports of the seven banks, got easier to read; one could say that these banks got better at connecting the different, yet intertwined elements of their business, such as their business model description, and their performance against their strategic objectives.

5.2.2. Financial performance according to the CAMELS Rating System

As has been mentioned before, banks play a vital role in the economic development of a nation. To a large extent, these financial institutions wield control over the supply of money in circulation and are the main stimuli of economic progress. Whilst banks help individuals and businesses by rendering a wide range of products and services, the products and services are more or less identical from one bank to another, and there is little scope for differentiating between them. The literature reveals that a bank's performance could be defined as the reflection of the way in which the resources of a bank are used in a form which enables it to achieve its objectives.

Research revealed that over the years, regulators, supervising institutions, bank management bodies, and also clients, have become increasingly concerned about the sustainability and stability of these financial institutions. It is to be noted that the performance of banks cannot be easily measured since a lot of their service and product offerings are intangible in nature. However, the CAMELS Rating System model was a useful tool to examine the financial performance and soundness of the banks, by posing a simplistic approach that measures the overall financial condition of these banks, hence the study adopted it as the main model in assessing the banks' financial performance.

The CAMELS Rating System model comprises of six components which includes, Capital Adequacy, Asset Quality, Management Quality, Earning Ability Liquidity and lastly, Sensitivity to Market Risk. Each of the banks were given a rating from 1 to 5 for each component of the CAMELS rating system,

specific to each ratio, with a rating of 1 indicating the strongest performance, and 5 indicating the poorest performance. Once all ratings were given for all components, these ratings were then added to give a total component score, which would highlight how the bank is performing.

The **capital adequacy** component was represented by the capital adequacy ratio, and presented as a percentage, where a higher percentage means for safety. A low percentage indicates that the bank does not have enough capital for the risk associated with its assets. For this component all seven selected banks generally performed well for all the three years, with a majority of the banks attaining a score of 1. ABSA was the only bank to receive a rating of 2 in 2017, while Nedbank and FirstRand Bank, received a rating of 2 in 2018, however, all received a rating of 1 in 2019.

The **asset quality** component was represented by the asset quality ratio, where in this case, the higher the ratio, the more loss-producing assets the bank has relative to the money the bank has to protect those losses. Pertaining to this component, Capitec and African bank performed the worst amongst all the banks in all the years from 2017 to 2019, both receiving a rating of 5. A score of 5 according to the CAMELS rating system is seen as inadequate, and exhibits a high level of exposure to the risk of failure, and the organisation is in dire need of urgent supervision. ABSA and Standard bank also performed poorly through the years, with a rating of 4. Investec was the only bank to show improvement over the years, moving from a score of 3 in 2017, to a satisfactory score of 2 in 2018 and 2019.

The **management quality** component was represented by the cost to income ratio, where the lower the ratio, the better the bank's performance. The study revealed that the majority of the banks performed poorly, with ABSA, Standard Bank, Nedbank, FirstRand Bank and Investec all receiving a score of 5 for all the years. Capitec and African Bank were the exception, both scoring 3 in 2017 and 2018, however dropping to 4 in 2019.

The **earning ability** component was represented by the return-on-assets and the return-on-equity ratios. A low return-on-assets ratio indicates that the bank is not able to maximize the use of its assets for getting more profits, just like a low return-on-equity ratio indicates that the bank may be mismanaged and potentially reinvesting earnings into unproductive assets. All the banks did well according to their return-on-assets ratio, all receiving a score of 1 for the three years. FirstRand Bank and Capitec did exceptionally well for this ratio, both receiving a score of 1 for the three years. Nedbank moved from a rating of 3 in 2017, to a rating of 2 in 2018, and a rating of 1 in 2019. ABSA and Nedbank remained stagnant with ratings of 3 for all three years. African bank performed the worst in 2017,

receiving a rating of 4, however, improved slightly in 2018 and 2019, to record a rating of 3 for both years.

Liquidity was intricate in the sense that a high liquidity ratio indicated that the bank was holding too much funds that could be utilised elsewhere, while a low liquidity ratio meant that the bank could struggle to pay short-term obligations. For this ratio all banks performed gravely, receiving a rating of 5 for the three years, with the exception of Investec, which received a rating of 4 for all three years. A study conducted by Mashamba and Kwenda (2017) found that South African listed banks passively manage their liquidity, which could be a concern.

For the **sensitivity to market risk** component, a higher percentage meant that the bank's risk tolerance was excessive. All the selected banks received a rating of 1 for all the three years, which fundamentally meant that all the banks selected for this study had effective management practices put in place to address their sensitivity to market risk.

Once all the banks were allocated ratings according to the six components of the CAMELS rating system model, the scores were added to give the total component score, which enabled one to classify and rank each bank. The findings affirm that the best performing banks in 2017 were FirstRand Bank and Capitec, reporting a total rating of 15 and 16 respectively. The worst performing banks according to the CAMELS rating system model in 2017 were ABSA with a rating of 20, and African Bank with a rating of 19. In 2018, the best performing banks were Capitec and Investec, both with a rating of 16, and then followed by FirstRand Bank with a rating of 17. ABSA was the worst performing bank in 2018, reporting a rating of 19, which was closely followed by Standard Bank, Nedbank and African Bank, all receiving a rating of 18. In 2019, the best performing banks were Nedbank, FirstRand Bank and Investec, all with a total rating of 16, and the worst performing banks were ABSA, Standard Bank and African Bank, all with a total rating of 19. However, the CAMELS rating system reveal that, overall, none of the seven banks were performing poorly for all three years, in fact, these banks ratings were so close to each other, displaying the fact that, for the most part, they serve the same purpose, however, they are all competing with each other.

5.2.3. Link between Business Model Description and Performance

Literature indicates that there is a relationship between business models and performance. This study attempted to assess and evaluate whether there is a relationship between business model description and financial performance. The findings indicate that even though there was a relationship between

business model description and financial performance, the banks with the best business model descriptions, which this study characterised as rich descriptions, namely Absa, Nedbank and African Bank, did not necessarily have the best rating for their financial performance. The best performing banks according to the CAMELS rating system model were FirstRand Bank and Capitec, yet had business model descriptions which were rated the worst according to the <IR> Framework. However, this was largely due to the fact that these banks did not follow the <IR> Framework to describe their business models. Moreover, the scores attained by the banks for their financial performance for all three years, were so close to each other for one to even make a fair judgement.

As previously highlighted, the study by Sohl, Vroom and Fitza (2020), acknowledge and reiterate that there is a relationship between business models and performance, however, they highlight that little is known about how much, or to what degree these business models matter in explaining heterogeneity in business performance.

It was almost expected that the banks with the highest rating for their business model descriptions, according to the <IR> Framework, would perform better according to the CAMELS rating system model, however, that was not the case. Literature has highlighted that many organisations use business models as their differentiator. Differentiation is the essence of strategy, the prime source of competitive advantage. It was clear that the banks leveraged on their business models as their differentiator, however, what this study found was that long-term differentiation from competitors proved to be increasingly difficult with products and services, especially in the financial sector, as these banks offer more or less the same products and services. Moreover, this study found that even though business models were important to the banks financial performance, other factors also played a part, like some components of the CAMELS rating system model, which highlighted the importance of banks tightening their credit risk management and continuously assessing assets to reduce any risks.

Conversely, for a more in depth analysis and to test the hypothesis distinguishing whether there is a relationship between business model description and financial performance, the study applied correlation coefficient. Correlation coefficient was used due to the fact that it is the most widely used statistical measure aimed at characterising the strength of the association between two variables (Wilcox, 2012). Correlation coefficients are always values between -1 and 1, where -1 shows a perfect negative linear correlation, and 1 shows a perfect positive linear correlation. The business model description scores and financial performance components scores for each bank for the three years, were used together as sample data to test this hypothesis. The results in this study indicate that there was a strong positive correlation between 2017 and 2018 since the values were closer to 1, and a

weak positive correlation in 2019. Ultimately, a weak correlation coefficient value may signal an unsubstantial relationship between two variables, however, in this case, there are other evidential bases proving the strength of the fitness existing between the targeted variables, which means that the correlation can be supported. This meant that one could reject the null hypothesis, which stated that there was no relationship between the business model description and the bank's financial performance; and accept the alternate hypothesis which stated that there was a relationship between the business model description and the bank's financial performance.

5.3. Conclusion

The findings reveal that indeed there was a relationship between business model description and financial performance, however other factors also contributed. The next chapter highlights any limitations identified, provides the recommendations for future research, and then concludes the study.

CHAPTER 6: CONCLUSION

6.1.Introduction

This final chapter provides a brief summary of the findings, acknowledges the limitations, highlights the contributions of the study, and then makes recommendations for further research.

6.2.Summary of the findings

The aim of this study was to explore the link between bank's business model description and their financial performance. This was done by firstly assessing and analysing the components of the bank's business model according to the IIRC's International <IR> Framework, and then comparing the components focus of each bank for every year of this study; followed by an assessment, analyses and evaluation of each banks financial performance using the CAMELS Rating System model. The scores for both business model description and financial performance were then used to test the hypothesis using correlation coefficient- which is a statistical measure of the strength of the relationship between the relative movements of two variables.

The findings from the business model description analysis revealed that no bank had a poor business model description, they were all categorised as either moderate or rich for the three consecutive years, moreover, all bank's business model descriptions showed some improvement over the three consecutive years. The banks which displayed the richest business model description were Absa, African Bank and Nedbank; Standard Bank was in between, and the banks with the lowest rating for their description were FirstRand Bank, Investec and Capitec.

The findings from the banks financial performance analysis also revealed that no bank performed poorly, they all had a composite rating of 3, meaning that they performed fairly. Although all banks performed fairly, overall, FirstRand Bank and Capitec were identified as the best performing or financially sound banks, and the banks with the lowest performance scores were Absa and African Bank.

The scores for both business model description and performance were then used to test the hypothesis using correlation coefficient. The findings reveal that there was a strong positive correlation in 2017 and 2018, and a weak positive correlation in 2019. These correlation coefficient results proved that indeed there is a relationship between the banks business models description and their financial performance.

It was interesting to see that the banks with the richest business model description were not necessarily the best performing banks, in actual fact, these banks had low ratings for their performance, and the banks with the lowest rating for their business model description had the highest financial performance rating. However, other factors contributed to these ratings, for example, Capitec and FirstRand Bank had low ratings for their business model description mainly due to the fact that their business models did not follow the <IR> Framework, yet ironically they performed the best according to the CAMELS rating system model. This goes back to the study by Sohl, Vroom and Fitza (2020), who in their study recognise that there is a relationship between business models and performance, however, little is known about how much, or to what degree these business models matter in explaining heterogeneity in business performance.

Indeed, some banks fared better than others in both the business model description and performance, however, it is important to reiterate that no banks business model description or their financial performance was rated as being poor or inadequate. Furthermore, the fact that the business model description and financial performance scores for all these banks showed some improvement over the three years, indicate that these banks are progressively finding new ways to enable themselves to stay relevant in the market through their business models, which in turn yields enhanced financial performance. Research has also proven that the lack of widespread failure for South African banks is due in part to bank regulators who are charged with protecting the safety and soundness of the banks they regulate.

6.3.Limitations

This study encountered a number of limitations, which includes:

- The data collected was based on secondary data mainly integrated annual reports, journals, websites, and existing dissertations. Consequently, limitations of secondary data apply to the research and analyses performed.

- Not all banks followed the <IR> Framework to disclose their business models, therefore resulting in a low rating for banks that did not follow the framework.

- The study applied a deductive approach, whereas if it was done inductively, it would have potentially shown other business model components that have not been included in this study.

- Monetary constraints also limited access to some ratios required to measure financial performance, predominantly on The Banker Database website, as it required one to subscribe at a cost if one required access to all the data, as a result, this meant that some of the ratios needed to be calculated individually.

- The researcher did a very simple statistical analysis, with a small dataset- one could have certainly subjected it to a more structured equation modelling type with a larger dataset, whereas one would get to understand more about the relationship between the variable.

6.4. Contribution of the study

Although the limitations of this study have been acknowledged, the study has contributed to the knowledge of understanding the relationship between business models and financial performance in a South African context.

6.5. Scope for further research

An important factor to note is that this study was not a reflection of the entire banking sector of South Africa. Only listed banks were considered, even though African Bank was delisted from the Johannesburg Stock Exchange in June 2020. Henceforth further research could be conducted on more banks in order to deduct a broader view on the relationship between business model description and financial performance of South African banks. Moreover, it would be of greater significance to conduct the various analyses over a longer period of time, because with a broader scope of data, for a longer period, more conclusive findings could be possible.

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ANNEXURES

Below are tables highlighting how each bank attained the scores for each capital for their business model description.

Table 1.: Breakdown of banks Financial Capital ratings per component

		FINANCIAL													
		INPUTS					ACTIVITIES				OUTPUTS			OUTCOMES	
		NP	TC	CR	EA	CY	AD	LF	OB	I	ND	V	S	T	D
ABSA	2017	3	3	3	3	3	1	1	1	1	1	1	1	2	2
	2018	3	3	3	3	3	3	3	3	3	2	2	2	3	3
	2019	3	3	3	3	3	3	3	3	3	2	2	2	3	3
AFRICAN BANK	2017	3	3	3	3	3	1	1	1	1	1	1	1	3	3
	2018	3	3	3	3	3	1	1	1	1	1	1	1	3	3
	2019	3	3	3	3	3	3	3	2	3	1	2	2	3	3
CAPITEC	2017	2	1	3	3	3	1	1	1	1	1	1	1	1	1
	2018	2	2	3	3	3	1	1	1	1	1	1	1	1	1
	2019	2	2	3	3	3	1	1	1	1	1	1	1	1	1
FIRSTRAND	2017	2	1	3	3	3	2	3	3	3	1	1	1	1	1
	2018	2	3	3	3	3	3	2	2	3	1	1	1	1	1
	2019	2	3	3	3	3	3	2	2	3	1	1	1	1	1
INVESTEC	2017	2	1	3	3	3	1	1	1	1	1	1	1	1	1
	2018	3	3	3	3	3	1	1	1	1	1	1	1	3	3
	2019	3	3	3	3	3	1	1	1	1	1	1	1	2	2
NEDBANK	2017	3	3	3	3	3	1	1	1	1	1	1	1	2	2
	2018	2	3	3	3	3	1	1	1	1	1	2	2	3	3
	2019	2	3	3	3	3	2	3	2	2	2	3	2	3	3
STANDARD BANK	2017	3	3	3	3	3	2	2	2	2	1	1	1	3	2
	2018	3	3	3	3	3	3	3	2	3	1	1	1	2	2
	2019	3	3	3	3	3	3	3	2	3	2	2	2	1	1

Source: Researchers own construct based on capital rating

Table 2.: Breakdown of banks Manufactured Capital ratings per component

		MANUFACTURED										
		INPUTS				ACTIVITIES			OUTPUTS		OUTCOMES	
		IIT	AC	ATM	NB	NE	PC	AIT	ICB	IP	WCS	SPS
ABSA	2017	2	1	3	2	2	1	1	2	1	1	1
	2018	2	1	3	2	2	1	1	2	1	2	2
	2019	2	1	3	2	2	1	1	2	2	3	3
AFRICAN BANK	2017	3	3	3	2	1	1	1	1	1	3	2
	2018	3	3	3	3	1	1	1	1	1	3	2
	2019	3	3	3	3	1	1	1	2	1	3	2
CAPITEC	2017	1	1	1	1	1	1	1	1	1	1	1
	2018	1	1	1	1	1	1	1	1	1	1	1
	2019	1	1	1	1	1	1	1	1	1	1	1
FIRSTRAND	2017	1	1	1	1	1	1	1	1	1	1	1
	2018	1	1	1	1	1	1	1	1	1	1	1
	2019	1	1	1	1	1	1	1	1	1	1	1
INVESTEC	2017	1	1	1	1	1	1	1	1	1	1	1
	2018	3	2	1	1	1	1	1	1	1	3	3
	2019	3	2	1	1	1	1	1	1	1	3	3
NEDBANK	2017	3	1	3	2	1	1	1	2	2	3	3
	2018	3	1	3	3	1	1	1	2	2	1	1
	2019	3	1	3	3	1	1	1	3	2	3	3
STANDARD BANK	2017	1	1	1	1	1	1	1	2	1	1	1
	2018	1	1	1	1	1	1	1	2	1	1	1
	2019	1	1	1	1	1	1	1	2	2	1	1

Source: Researchers own construct based on capital rating

Table 4.3.: Breakdown of banks Intellectual Capital ratings per component

		INTELLECTUAL								
		INPUTS			ACTIVITIES		OUTPUTS		OUTCOMES	
		IIIT	DNT	BV	PBS	ACO	CS	PCF	VAC	RCS
ABSA	2017	3	3	1	3	2	2	2	1	1
	2018	3	3	1	3	2	2	2	3	2
	2019	3	3	1	3	3	2	2	3	2
AFRICAN BANK	2017	2	2	2	1	1	1	1	3	2
	2018	2	2	2	1	1	1	1	3	2
	2019	2	2	2	2	1	2	2	3	2
CAPITEC	2017	1	1	1	1	1	1	1	1	1
	2018	1	1	1	1	1	1	1	1	1
	2019	1	1	1	1	1	1	1	1	1
FIRSTRAND	2017	1	1	1	2	1	1	1	1	1
	2018	1	1	1	2	1	1	1	1	1
	2019	1	1	1	2	1	1	1	1	1
INVESTEC	2017	1	1	1	1	1	1	1	1	1
	2018	1	2	1	1	1	1	1	3	2
	2019	1	2	1	1	1	1	1	3	2
NEDBANK	2017	2	1	3	1	1	2	2	3	3
	2018	2	1	3	1	1	3	2	1	1
	2019	3	3	3	2	2	3	2	3	2
STANDARD BANK	2017	1	1	1	2	1	2	3	1	1
	2018	1	1	1	2	1	2	3	1	1
	2019	1	2	2	2	1	2	3	1	1

Source: Researchers own construct based on capital rating

Table 4.4.: Breakdown of banks Human Capital ratings per component

		HUMAN								
		INPUTS			ACTIVITIES		OUTPUTS		OUTCOMES	
		EL&D	ML&D	ED	NWC	SSC	BCE	FMC	MSE	GCB
ABSA	2017	1	3	1	1	2	1	1	1	1
	2018	1	1	3	1	2	2	2	2	2
	2019	1	1	3	1	2	2	2	2	2
AFRICAN BANK	2017	1	3	1	1	1	1	1	3	3
	2018	2	1	1	1	1	1	1	3	3
	2019	2	2	1	1	1	2	2	3	3
CAPITEC	2017	1	1	1	1	1	1	1	1	1
	2018	1	1	1	1	1	1	1	1	1
	2019	1	1	1	1	1	1	1	1	1
FIRSTRAND	2017	1	1	1	1	1	1	1	1	1
	2018	1	1	1	1	1	1	1	1	1
	2019	1	1	1	1	1	1	1	1	1
INVESTEC	2017	1	1	1	1	1	1	1	1	1
	2018	1	1	2	1	1	1	1	3	3
	2019	1	2	3	1	1	1	1	3	3
NEDBANK	2017	1	1	1	1	1	2	2	3	3
	2018	1	1	1	1	1	1	2	2	2
	2019	2	3	3	1	1	2	2	2	2
STANDARD BANK	2017	1	1	1	1	1	2	1	1	1
	2018	1	1	1	1	1	1	2	1	1
	2019	1	1	1	1	1	2	2	1	1

Source: Researchers own construct based on capital rating

Table 4.5.: Breakdown of banks Social Capital ratings per component

		SOCIAL								
		INPUTS			ACTIVITIES		OUTPUTS		OUTCOMES	
		CSC	BR	SSP	EI	PPC	CG	ISR	IBR	VC
ABSA	2017	3	3	1	1	2	2	2	1	1
	2018	3	3	1	1	2	2	2	1	2
	2019	3	3	1	1	2	2	2	1	2
AFRICAN BANK	2017	3	3	3	1	1	1	1	3	3
	2018	3	3	3	1	1	1	1	3	3
	2019	3	3	3	1	1	2	2	3	3
CAPITEC	2017	1	1	1	1	1	1	1	1	1
	2018	1	1	1	1	1	1	1	1	1
	2019	1	1	1	1	1	1	1	1	1
FIRSTRAND	2017	1	1	1	1	1	1	1	1	1
	2018	1	1	1	1	1	1	1	1	1
	2019	1	1	1	1	1	1	1	1	1
INVESTEC	2017	1	1	1	1	1	1	1	1	1
	2018	3	3	1	1	1	1	1	3	3
	2019	3	3	1	1	1	1	1	3	3
NEDBANK	2017	3	1	1	1	1	2	2	2	2
	2018	3	2	1	1	1	2	2	2	2
	2019	3	3	1	1	1	2	2	3	2
STANDARD BANK	2017	1	1	1	1	1	2	1	1	1
	2018	2	3	1	1	1	2	1	1	1
	2019	1	1	1	1	1	2	2	1	1

Source: Researchers own construct based on capital rating

Table 4.6.: Breakdown of banks Natural Capital ratings per component

		NATURAL								
		INPUTS			ACTIVITIES		OUTPUTS		OUTCOMES	
		GI	EC	GE	RNR	IEC	KNC	NCID	DEU	DCE
ABSA	2017	2	2	2	1	1	1	1	3	1
	2018	2	2	2	1	1	1	1	3	1
	2019	2	2	2	1	1	1	1	3	2
AFRICAN BANK	2017	2	3	3	1	1	1	1	3	3
	2018	2	3	1	1	1	1	1	3	3
	2019	2	3	1	1	1	2	2	1	1
CAPITEC	2017	1	1	1	1	1	1	1	1	1
	2018	1	1	1	1	1	1	1	1	1
	2019	1	1	1	1	1	1	1	1	1
FIRSTRAND	2017	1	1	1	1	1	1	1	1	1
	2018	1	1	1	1	1	1	1	1	1
	2019	1	1	1	1	1	1	1	1	1
INVESTEC	2017	1	1	1	1	1	1	1	1	1
	2018	3	3	2	1	1	1	1	3	3
	2019	3	3	2	1	1	1	1	3	3
NEDBANK	2017	3	3	2	1	1	1	1	2	1
	2018	3	3	3	1	1	1	1	2	1
	2019	3	3	3	1	1	1	1	2	2
STANDARD BANK	2017	1	1	1	1	1	1	1	1	1
	2018	2	2	1	1	1	1	1	1	1
	2019	2	2	1	1	1	1	1	1	1

Source: Researchers own construct based on capital rating