

FINTECH AND THE FINANCIAL SERVICES INDUSTRY IN SOUTH AFRICA

J.J CROUSE

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FINTECH AND THE FINANCIAL SERVICES INDUSTRY IN SOUTH AFRICA

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ABSTRACT

A preliminary literature review indicated that little to no research exists on the Fintech phenomena in the South African context. The purpose of this study is to gain the perceptions of South African bankers on the Fintech phenomena and to develop a deeper understanding of the Fintech phenomena in the South African context.

An empirical exploratory qualitative approach was employed and an interpretivism research paradigm was utilised. A detailed literature review was conducted into the Fintech phenomena as well as the financial services sector in South Africa. The use of purposive sampling was initiated, and the sample of the study consisted of five individuals who work for the largest South African banks. The data was gathered through in-depth structured interviews which consisted of ten predetermined research questions. Rich data was obtained which was then analysed through the use of content analysis and coding. This enabled the transcription of data and the extraction of codes which assisted in obtaining findings that answered the research question. Authenticity, rigor, trustworthiness and credibility criteria was applied from the onset and throughout the research study.

The themes that emerged from the data analysis process were navigated so that findings could be reached by comparing the themes to previous literature.

In conclusion, six themes emerged from the data analysis, namely; collaboration can create new markets and create market share, investing in Fintech to overcome legacy infrastructure by going digital, Fintech companies are more customer focused, balance regulation between protecting the industry and creating an innovative environment competition in future will be fiercer, competition is good for the performance of the financial services industry and the Fintech phenomena is positive for the banking industry.

Certain findings and conclusions were drawn; regulations in South Africa do allow for innovation, regulation is not biased towards banks, banks innovate and collaborate

through Fintech, Fintech is positive for the banking industry, South African banks are investing in preparation for Fintech, South African banks have limited budgets, there is no significant loss of market share for banks due to Fintech companies, market share can be gained by banks partnering with Fintech companies and the future of the financial services industry in South Africa.

Key words: Banks, financial services, Fintech companies, technology.

LIST OF ABBREVIATIONS

CPA:	Consumer Protection Act
DLT:	Distributed ledger technologies
ECA:	Electronics Communications Act
FAIA:	Financial Advisory and Intermediaries Act
FCA:	Financial Conduct Authority
FIC:	Financial Intelligence Centre
FICA:	Financial Intelligence Centre Act
FINTECH:	Financial technology
FSB:	Financial Services Board
FSCA:	Financial Sector Conduct Authority
GDP:	Gross Domestic Product
GFC:	Global financial crisis
HKMA:	Hong Kong Monetary Authority
IMF:	International Monetary Fund
IT:	Information technology
LASIC:	Low margin, asset light, scalable, innovative, compliance easy
NCA:	National Credit Act
NCR:	National Credit Regulator
OCC:	Office of the Comptroller of the Currency
PASA:	Payments Association of South Africa
SADC:	Southern African Development Community
SARB:	South African Reserve Bank

TERMINOLOGY

The succeeding terminology is created based on subject matter read by the researcher and does not epitomise prescribed definitions.

Artificial Intelligence – Computer systems that can perform tasks that usually require human intelligence

Augmented Reality – Computer generated sensory information used in a real-world environment

Biometrics – Linking biological data through statistical analysis

Blockchain – A decentralised database containing digital information that can be used and shared within a publicly accessible network

Disruptive technologies – Is any innovation that displaces a previously established technology or industry by creating a completely new one

Fintech – This is any technology that aids financial services

Fintechs – These are financial technology companies that use their innovation to improve the financial services industry

Legacy Infrastructure – An inherited technological system that has become outdated due to new technological advances but due to costs is expensive to replace

Machine Learning – It is a system with the ability to learn automatically through algorithms without being overtly programmed to do so

Regulatory Sandbox – Is a model created by a regulator that allows innovators to experiment whilst under the regulator's supervision in an environment that is controlled

Telco – It is a word used to describe a company that primarily operates in the telecommunications space

Virtual Reality – Is a computer simulated environment in which interaction between a person and three-dimensional settings take place

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CHAPTER 1

AN INTRODUCTION TO THE FINTECH PHENOMENA

1.1 INTRODUCTION

Fintech is a contraction of “financial technology” and is seen as the marriage of financial services and information technology (IT). The term Fintech can be traced to the early 1990’s and the Financial Services Technology Consortium which was a project initiated by Citigroup to facilitate technological cooperation efforts.

Innovation in financial services began in earnest at the beginning of the 20th century. Although the term has been around since the 1990s, it gained mainstream recognition after the global financial crisis (GFC) in 2008 in which a so called “perfect storm” in the financial, political and public environments allowed a new generation of market participants to establish a new paradigm known as Fintech today (Buckley, 2016, p. 1271-1273).

Fintech covers digital innovations and technology enabled business models in the financial sector. These innovations have the power to disrupt existing industry structures and blur boundaries between industries. Examples of these innovations today include cryptocurrencies, blockchain, peer to peer lending, artificial intelligence or machine learning, crowdfunding and mobile payment services (Philippon, 2016b, p. 2).

The emergence of Financial Technology (Fintech) on the global stage saw Tyme Digital progressing from a Fintech company to a bank in 2018. Also, after studying research done by John Gibson which detailed a study into Ireland being a new Fintech hub (Gibson 2015, p. 1-165) it became apparent that little to no literature exists on the South African context. The lack of such a focus offering in the finance sector suggests that our country could be missing out on an opportunity to become a Fintech pioneer on the African continent.

This chapter outlines the background, rationale and study objectives of this research project. This thesis begins with a brief literature review as an introduction of the topic for the research study, which is followed by the problem statement and research objectives. A brief description of the research methodology and ethical issues are explained briefly; and lastly, a framework of the study is summarised.

1.2 BRIEF LITERATURE REVIEW

The Fintech industry includes areas such as cryptocurrencies and blockchain, new digital advisory and trading systems, artificial intelligence and machine learning, peer to peer lending, equity crowdfunding and mobile payment systems (Philippon, 2016, p. 2).

These areas have in the past been serviced by incumbent financial services providers and due to regulation have had high barriers to entry. Recently however due to the emergence of new technologies Fintech or technological companies can now explore this space. Fintech companies can be declared financial services providers but not as a bank unless it gains a banking licence.

Stephen Bird CEO of global consumer banking for Citi admitted “Fintech is different, it will change your life and my life. And will change this institution and every other bank” (Gandel, 2016, p. 59). Likeminded Jamie Dimon, the CEO of JP Morgan, the largest US bank wrote a letter to shareholders alerting them that “Silicon Valley is coming” (Loo, 2017, p.6). This warning was meant to suggest technology companies had their eyes set on disrupting the banking industry and that banks could be vulnerable to this.

If banks lose too much market share this could ultimately collapse the financial sector of a country plunging the country into an economic crisis. 43% of banking revenues are expected to be created through payments in 2018, this also happens to be the area in which most Fintech companies are operating, these revenues could be under serious risk (Opus, 2018, p. 4).

1.2.1 The problems that the Fintech phenomena causes

Ever since the global financial crisis in 2008 consumers have had a growing distrust of banks. The financial crisis in 2008 was caused by banks offering subprime mortgage lending. Fintech companies capitalised on this mistrust by offering convenient financial services at a decreased cost thus offering customers lower prices (Loo, 2017, p. 8).

The Fintech industry manages lower operating costs by harnessing the Low margin, Asset light, Scalable, Innovative, and Compliance easy (LASIC) attributes on their business models. Fintech companies are low margin, asset light, scalable, innovative and compliance easy (Chuen & Teo, 2015,p.3). The millennial generation are now emerging as financial services clients which is different from previous generations, as millennials have been brought up with technology and require convenient solutions to banking. Millennials want to be able to bank 24/7 and do so digitally from a mobile device. According to EY Fintech Adoption Index the highest users of Fintech are in the 25-34 age category. This report also indicates that China and India have the highest rate of adoption, due to these populations having a high number of unbanked or financially under-served people (EY, 2017, p. 7-15).

The main reason why banks struggle to compete in the Fintech space is due to two reasons the first being banks must subscribe to harsh stifling regulations which makes innovation difficult and expensive. Secondly, banks have old legacy systems which are expensive to change allowing new players to start with new more cost-effective systems whilst banks have to merge existing systems into new systems which takes not only time but is also extremely expensive to do, thus threatening banks' economies of scale.

1.2.2 Possible solution

Some countries have implemented regulatory sandboxes or created Fintech innovation hubs. A regulatory sandbox is created to deliver more effective competition in the interest of consumers. Fintech companies get a chance to create a product free from legislation for 6-12 months after that period the regulators have studied the product and know how to effectively regulate it without it having a severe impact on incumbents, customers or the Fintech company itself. Innovation hubs allow banks

and Fintech companies to partner and collaborate to ensure innovative new solutions for the future. Currently there are big Fintech hubs in countries such as the UK, US, Singapore, Australia, Canada and Ireland.

1.3 PROBLEM STATEMENT

The impact of Fintech on the financial services industry in South Africa.

There is a lack of literature on the Fintech phenomena in the South African context. Most qualitative and quantitative research has focused on international countries. One particular study, was Gibson (2015, p. 1-165) which focused on the impact of Fintech on financial services in the Republic of Ireland. This qualitative study used semi-structured interviews with 6 financial services experts. Two studies were compiled on Fintech and its development in China; (Chen, 2016, p. 225-239) and (Stern, Makinen, & Qian 2017, p. 215-228). Another study from Vasiljeva and Lukanova (2016, p. 25-34) focused on the competition between banks and Fintech companies in Latvia. This was a quantitative study using a sample of 378 participants. Three studies were aimed at the regulation of Fintech in specific countries: Didenko (2018, p. 359-360) focused on Kenya, Brody et al. (2017, p. 86-89) focused on the United Kingdom and the United States of America and Ng and Kwok (2017, p. 422-434) focused on Hong Kong.

Fintech adoption is rapidly growing in South Africa, in 2017 EY (2017, p. 21) expected the South African adoption of Fintech to grow from 35%, 2% higher than the global average, to 71%. South Africa's current financial system has not created an enabling regulatory environment for Fintech (Centre of Excellence in Financial Services, 2016, p. 16-17).

In an international context, global firm Goldman Sachs reports that banks are expected to lose more than \$10 billion in profitability or 1/5 of market share to peer to peer lending Fintech companies alone, which is only one space Fintech companies operate in (Beck, 2015, p. 32-35). Globally, total investment in Fintech companies and the general market has increased from \$9 billion to over \$25 billion and valuations have quadrupled since the global financial crisis (International Monetary Fund, 2017, p. 8).

In PWC (2016, p.19) 83% of financial service incumbents believed that part of their businesses were at risk to be lost to standalone Fintech companies; and it topped 95% according to bank respondents. Incumbents also felt that as much as 23% of their business could be at risk due to developments in the Fintech industry.

The UK's Fintech sector alone generates £20 billion with a total of £3.6 billion in disruptive Fintech (Financial Conduct Authority, 2016, p. 5). It is expected that 50% of banking employees could become redundant (Chen, Li, Wu, & Luo 2017, p. 4).

The problem arises that if Fintech companies are left unregulated in South Africa (SA) this could result in job losses in a sector which is currently contributing 14% of the GDP (Theobald, Stuart & Orin Tambo, 2017, P. 8)

1.3.1 Importance of solving the problem

If not addressed this scenario could result in South African banks becoming uncompetitive internationally, clients in South Africa not experiencing adequate financial options, and the South African government not achieving financial inclusion.

The benefits of addressing this situation is that banks will not face disruption from Fintech companies or experiencing a potential collapse of the South African banking system. More importantly, South Africa will be able to maintain its high standard in financial services.

1.3.2 Potential causes of the problem

Governments are unsure of how to regulate Fintech companies. Banks with legacy systems are vulnerable to new flexible competitors who offer quicker, cheaper and more convenient financial services.

The internet with its high accessibility and low regulation has created a world which allows Fintech and technological companies to enter the financial space which would not have been possible without these developments.

1.3.3 Proposed solutions to the problem

EY (2017, p. 29) suggests Fintech firms, policy makers, incumbent institutions and investors collaborate, stating that engagement with other players is essential as the eco-system is evolving at a rapid pace. The industry would ultimately benefit from a generation of ideas, talent and innovation.

Saksonova and Kuzmina-Merlino (2017, p. 970) recommended two possible avenues. Firstly, government should encourage a platform or 'sandbox' allowing innovative financial technologies to enter the market to test their safety. Secondly, an understandable and transparent system needs to be created to supervise Fintech activities.

In the South African context Saksonova and Kuzmina-Merlino's (2017, p. 970) and EY's (2017, p. 29) proposed solutions could be plausible. Increased regulation and complete deregulation would not work as this would only expand the big 5 South African banks market and decrease competition. It is important for regulators in South Africa to find a balance between the stability of the financial sector whilst creating an innovative environment. Collaboration could ultimately benefit the industry as a whole. It is unclear at this stage whether Fintech companies, banks and regulators are willing to collaborate. Therefore, the question can be posed, what are bankers' perceptions regarding the disruptive potential of Fintech on the financial services industry in South Africa?

1.4 RESEARCH OBJECTIVES

The primary objective of the study is to examine banker's perceptions regarding the disruptive potential of Fintech on the financial service industry in South Africa.

In order to achieve the above-mentioned primary objective, the following secondary research objectives were pursued:

1. To provide a literature review for the Fintech concept and related factors that could be disruptive for the South African financial services industry.

2. To create a Fintech “frame of reference” incorporating uncertainties and disruptions related to the concept.
3. To create a questionnaire on the basis of the study of the literature.
4. To use the questionnaire to empirically evaluate by way of interviews, banker’s perceptions regarding the nature of the Fintech concept and related factors that could be disruptive for the South African financial services industry.

1.5 INTENDED CONTRIBUTION OF THE STUDY

This study is an investigation of the Fintech industry in the South African context to understand what operations banks and financial services companies are employing to meet the needs of this growing sector and whether these efforts are effective. Such a study could explore the combative and competitive industry that Fintech is creating in the financial services industry and how this could affect the South African economy and banking sector in the near future. Ultimately, this research paper would provide interested parties with a greater understanding as to the readiness of South Africa to enter the Fintech industry.

1.6 RESEARCH METHODOLOGY AND DESIGN

1.6.1 Research paradigm

The research design used was of an interpretivist nature which falls under a qualitative research methodology paradigm and thus qualitative in approach. The study therefore subscribes to the five basic assumptions in an interpretivistic study, namely: The Ontological assumption, the Epistemological assumption, the Axiological assumption, the Rhetorical assumption and the Methodological assumption.

Ontological assumption states that the research study has multiple realities that are subjective in nature. The epistemological assumption states that knowledge gathered is subjective evidence in that participants interviewed in this study may have a particular bias to the research question. The axiological assumption therefore assumes that the findings are also biased in nature. The rhetorical assumption notes

that the research study is interpretivistic because accepted qualitative terms and limited priori definitions have been utilised. Lastly, the methodological assumption states that the research study is inductive due to the topic studied within its context using an emerging design where categories identified during the research process are still in the stage of being developed for understanding. The research study regardless of its perceived bias, is still reliable as the findings should be readily verifiable and replicated in future studies.

1.6.2 Research approach

In this study qualitative research methods were used and deployed in two phases. In Phase 1, secondary research in the form of a literature review was conducted. Secondary literature sources were critically evaluated to create an interview schedule to be used to interview bankers in South Africa. In Phase 2, first-hand, original data was collected by conducting semi-structured one-on-one interviews. Content analysis was used to analyse the data collected from the interviews and codes were used to identify dominant themes. The purpose of Phase 2 is to identify the banker's perceptions regarding the disruptive potential of the Fintech phenomena on the financial services industry in South Africa.

1.6.3 Sampling design

The population of this study was drawn from banking executives in South Africa. The unit of analysis is based on the organisations these executives work for, this includes the Big 6 banks in South Africa (Absa, Capitec, FNB, Nedbank, Standard Bank, Investec) and Fintech companies. The executives chosen were individuals with a specific knowledge or understanding of either the risks banks face and or innovation. The type of sampling being used was non-probability sampling; in particular, purposive sampling. These sampling methods were used because they were subjective, and the members selected conform to predetermined criteria where participants are deliberately chosen by the researcher (banking and Fintech executives).

1.6.4 Data collection method

The data collection method used in this study was through interviews. These interviews were in-depth, one-on-one and covered 10 pre-determined questions which were subject-related and aimed specifically at recording perceptions of the executive being interviewed. A voice recorder was used to record the interview as this would

provide accurate data collection for analysis and transcription (See Appendix 2). Using this method would eliminate research bias and enable the researcher to be more objective. The recordings were captured on multiple devices to ensure that technical errors do not lead to loss of data. All interviewed parties had access to these recordings so that transparency between the interviewer and interviewee was optimised.

1.6.5 Data analysis method

Content analysis and coding was used to interpret data collected during the interviews as it is a verified method of data analysis for qualitative interviews.

1.6.6 Method of reporting and synthesis

Once all data was collected and analysed, a report on the results and findings based on the research questions and the interpretations of these findings. The findings and results of the study were then compared to previous literature studies and new themes provided. The limitations of this study could then be addressed and elaborated on while the discussion on areas for further research delineated. A holistic conclusion based on the research study is then given.

1.7 ETHICAL ISSUES

Stringent research ethics protocols were utilised throughout the duration of the study.

The research ethics protocols were as follows:

1. The interviewees were informed when the interview recording began and that their responses were being gathered and interpreted for purely academic research;
2. Any data collected within the research study would remain confidential between the researcher and the designated Nelson Mandela University (NMU) staff and no other individual or organisation would be given access to this information; and
3. Access to interview results or interview recordings would be provided per request.

1.8 OUTLINE OF THE STUDY

This study consists of five chapters covering the following content:

- i. Chapter 1 is the introduction to the study and explains the scope of the research including the background and contribution of this study, the problem statement, research questions, research objectives, methodology and ethical issues.
- ii. Chapter 2 is a review of the relevant literature defining what Fintech is and how it has evolved around the world. Other literature reviews are conducted into financial services in South Africa and South Africa as an emerging market.
- iii. Chapter 3 explains the research methodology and design. This chapter includes research paradigms, methods of study, measuring instruments and ethical issues. All these concepts are defined, and those used in this study discussed in greater detail.
- iv. Chapter 4 highlights the empirical results that was obtained from the qualitative data used. It also includes the research methods uses, data collection method that was applied and the analysis of the data.
- v. Chapter 5 discusses the managerial implications of these results and concludes the study. The main findings are reported as well as the limitations that occurred. Recommendations are made on the findings and areas of further research identified.

1.9 CONCLUSION

Chapter 1 has outlined an introduction into the study and how and what the study aims to measure, as well as the rationale behind it. Chapter 1 concluded with an outline of this study's chapters. Chapter 2 provides the literature review into the phenomena of Fintech, financial services in South Africa and South Africa as an emerging market. The available literature defines Fintech and the evolution of Fintech globally as well as addresses the current financial services environment in South Africa. An understanding of South Africa's standing as an emerging market globally is underlined.

CHAPTER 2

A LITERATURE OVERVIEW OF THE FINTECH EVOLUTION

2.1 INTRODUCTION

Chapter 1 introduced the Fintech phenomena and highlighted areas in the financial services industry in South Africa where the Fintech phenomena could possibly disrupt business.

The aim of the study is to examine banker's perceptions regarding the disruptive potential of Fintech phenomena on the financial services industry in South Africa. The purpose of this chapter is to perform a literature review addressing the Fintech phenomena in the global as well as the South African context.

The chapter commences with a review of various definitions of the Fintech phenomena and discusses the evolution of Fintech taking place across different countries. Thereafter the emerging market context of South Africa is discussed, followed by the Financial service industry in South Africa. The next section considers the relevant literature on bankers in the South African context. Lastly the possible strategies for Fintech businesses are discussed.

2.2 DEFINING THE FINTECH PHENOMENA

"Fintech" is a combination of two words, namely, financial and technology and is often referred to as the marriage of financial services and information technology. Dhar and Stein (2017, p. 33) comprehensively defines the Fintech phenomena as "financial sector innovations involving technology enabled business models that can facilitate disintermediation, revolutionize how existing firms create and deliver products and services, address privacy, regulatory and law-enforcement challenges, provide new gateways for entrepreneurship, and seed opportunities for inclusive growth".

Mirmazaheri (2017, p. 176) refers to Fintech as “an economic industry composed of companies that use technology to make financial systems more efficient”.

Vasiljeva and Lukanova (2016, p. 26) refers to Fintech as an evolution and further summarises the Fintech evolution as aiming to enhance customer experiences and increase process efficiency at traditional institutions. This opens new markets for other entrants who redesign traditional services to be more personalised, accessible and transparent. Using these digital channels, customers are offered alternatives to traditional services.

Essentially, the Fintech evolution merges two of the most powerful industries in the world: technology and finance and sets them up to be either competitors or collaborators (Loo, 2017, p. 6).

2.2.1 Defining a Fintech business

A Fintech business can be referred to as a business or representatives of companies that combine financial services with modern innovative technologies. These companies offer internet-based and application-oriented products. Fintech companies attract customers with products and services that are user friendly, efficient, transparent and automated and are an improvement in one or all of these areas in what is currently available (Dorfleitner, Hornuf, Schmitt, & Weber, 2017, p. 5).

Fintech businesses as companies can be categorised into specific categories according to solutions offered (Ng & Kwok, 2017, p. 425). The first level of Fintech is, providing efficient payment processes which facilitates faster payments with lower transaction costs through technology. Secondly, another level of Fintech is the provision of robo-advisers that use artificial intelligence and data mining tools to give investment advice without the human bias. Thirdly, peer to peer loan and deposit platforms which offer loan and deposits without the need of intermediaries like banks but connect borrowers and depositors in real time. Lastly, crowdfunding that provides a platform where various projects and business ventures can raise funds from a large number of donors or investors.

Another method is using PWC’s conceptualised model of four different categories for the Fintech phenomena, which are the As, Bs, Cs and Ds which place certain types of companies in certain categories based on size and infrastructure (Mirmazaheri, 2017, p. 177). Large well-established financial institutions such as Bank of America and Chase are classified within the A category. The B category includes big technological companies which are active in the financial services space but are not exclusive to it, such as Facebook and Apple. The C category belongs to companies that provide technology or infrastructure in which financial transactions are performed. Lastly there is the D category which belongs to the disruptors, these are the start-ups who focus on a certain innovative technology. Table 2.1 summarises two different classification models for Fintech businesses identified from the literature.

Table 2.1: Literature overview of Fintech business classification models

CLASSIFICATION MODEL	SOURCE	DESCRIPTION OF CATEGORIES
Solutions offered by the Fintech business	Ng and Kwok (2017, p. 422-434)	<ol style="list-style-type: none"> 1. Efficient payment process 2. Robo-advisors 3. Peer to peer platforms 4. Crowdfunding
Size and infrastructure of Fintech business	Mirmazaheri (2017, p. 175-194)	<ol style="list-style-type: none"> 1. A: Large well established 2. B: Big technological company 3. C: Financial companies 4. D: Disruptor

Source: Researcher’s own construct

Table 2.1 shows that Fintech businesses may be classified according to two classification models.

2.2.2 Fintech phenomena as a disruptor

The Fintech phenomena has developed in areas such as mobile internet, cloud computing, big data, blockchain and search engines, which has changed the financial industry tremendously and has forced banks to transform and upgrade. This can be

disastrous for banks as more efficient Fintech innovation ultimately means less reliance on human involvement in transactions. Chen et al. (2017, p. 1) mentioned that Citigroup researchers have predicted that Fintech innovations would reduce the number of employees in traditional banks by one third in the next ten years. In fact, this could disrupt the current reliance on the banking system itself. Puschmann (2017, p. 74) features an example of a blockchain peer to peer payment system as a disruptive innovation that would allow users to make payment transactions without using any banks.

Disruptive innovation is a process that disturbs the existing competitive dynamics of an industry through product or service innovation (Jeffery & Arnold, 2014, p. 15). This is very dangerous as disruptors lower the cost structure compared to the norm in the industry. Incumbents thus cannot match the cost structure or the product/service quality and become obsolete.

The threat of this disruption can come from companies that adopted the Fintech phenomena but are looking at entering the financial services space, for example; Airbnb, Apple, Alibaba, Facebook, Samsung and Starbucks (Weichert, 2017, p. 25) These companies compete alongside Fintech companies such as Venmo, Prosper, Ripple and OnDeck in a wide range of payment innovations.

2.3 INTERNATIONAL PERSPECTIVE ON THE FINTECH EVOLUTION

Different countries have different approaches to Fintech phenomena. The following is an in-depth analysis of global trends.

Fintech markets have grown rapidly in Asia where the regional market is heavily controlled by state-owned banks. Here public distrust in state-owned banks is high and the public is quick to accept alternatives. Asia also has the highest mobile penetration rates in the world and amongst these mobile rates a high number of smartphone adopters. Asian Fintech is highlighted by Hong Kong and Singapore's creation of Fintech accelerator programs where Malaysia is becoming the first country to introduce crowdfunding regulation (Buckley, 2016, p. 1297-1298).

Fintech emerged in Africa largely due to two factors namely the generally under-developed level of banking and financial services and second the very rapid spread of mobile phone use. It is due to the rapid adoption of mobile phone use that telecommunications companies (Telcos) have tended to take the lead in Fintech developments on the continent not banks. A typical example of this is a telecommunications company that encourages customers to purchase e-money and use financial services on their phone, usually in the same way as they would buy airtime. It is thus due to the lack of detailed financial regulation that telecommunications companies could enter the financial services space (Buckley, 2016, p. 1295-1298).

According to Buckley, (2016, p. 1299) Fintech in the developing world is supported by the following characteristics: (1) young digital savvy populations with access to mobile devices; (2) inefficient financial and capital markets; (3) a shortage of banking infrastructure; and (4) less stringent data protection and fewer competitors. It is also argued that India and China have an additional characteristic due to them having large engineering and technology graduates.

The Fintech evolution in five different countries namely Russia, the United Kingdom (UK), the United States of America (USA), China and Kenya is now explored.

2.3.1 Fintech evolution in Russia

Kalmykova and Ryabova (2016, p. 1-4) states that Russia has no legal regulation for Fintech although the central bank is an active participant in the development of the Fintech industry in Russia. The central bank recently wanted to abolish digital currency and make using Bitcoin punishable by law.

2.3.2 Fintech evolution in the United Kingdom

The UK has a regulatory sandbox similar to Hong Kong and its intention is to create a safe space that allows businesses to test innovative products and services and business models in a live environment without facing all the regulatory consequences they would normally face when engaging in such activities. The sandbox is a

component of Project Innovate by the FCA. Large banks, Fintech companies and government bodies are included in this project (Brody, Lev, Taft, Wilkes, Bisanz, Shinohara, Tsai, 2017, p. 89). The whole policy pack was part of the manifesto “UK Fintech 2020” which clearly stated the objective is to make London the global centre of the Fintech industry. Then Prime Minister David Cameron and his government lent their full support to making this happen (Chen, 2016, p. 237).

2.3.3 Fintech evolution in the United States of America

The Office of the Comptroller of the Currency (OCC) created an Office of Innovation headed by a chief innovation officer and has regional offices in New York, San Francisco and Washington DC to facilitate these efforts. It also announced its intention to revise its internal operations to support innovation by developing internal expertise in identifying and supporting emerging trends. External innovators are allowed to test innovative products or services or processes while still complying with consumer protection laws (Brody et al., 2017, p. 86-89). Regulation differs between states in relation to financial services and innovation, making Fintech companies prefer states with less stringent rules and regulation.

2.3.4 Fintech evolution in Kenya

Kenya is home to the biggest success story in Fintech history, mobile money platform M-Pesa founded in 2007. M-Pesa dramatically increased financial inclusion by allowing the majority of adult’s access to financial services. The impact M-Pesa has on the Kenyan economy is significant, the volume of transactions is estimated at over 40% of the Kenyan GDP. At the launch of M-Pesa the Central Bank of Kenya issued a letter of no objection to Safaricom the mobile operator that controls M-Pesa, only later in 2011 did dedicated payment system regulations come into place such as the National Payment System Act and later in 2014 the National Payment Systems Regulations. It is clear from the M-Pesa example how regulations lagged behind the adoption of Fintech (Didenko, 2018 ,p. 362).

According to Blythin and Cooten (2017, p. 8-9) over 85% of the adult population in Kenya use mobile financial services like M-Pesa regularly far exceeding the 38.4% that use traditional bank accounts. Furthermore, only 18% use their bank accounts on

a weekly basis. The key factors contributing to this is Kenya's mobile phone penetration peaking at 90%, with growing smartphone adoption and the highest internet penetration in Africa.

Kenya does have some problems, however, Didenko (2018,p.364) mentions that the time it takes to get a regulators approval to launch a start-up Fintech business is concerning, as well as the lack of coordination between regulators could potentially cause conflicts in the near future of jurisdiction in the Fintech space.

2.3.5 Fintech evolution in China

China's Fintech coverage is a lot higher than the USA's, in almost all areas such as payments, wealth management and financing (Chen, 2016, p. 226). There are two factors which explain China's rapid progress in Fintech development. First China had a late mover advantage and secondly technology, finance and real-life need has been better in China. China's large banks are also guilty of not responding rapidly to the surging needs of online shopping which has led to these developments. A growing need for financial inclusion has led to China's rapid Fintech developments and this is without much intervention from government in developing sandboxes and gaps in current regulation. A report by McKinsey Global Institute establishes that the Fintech industry could grow Chinese GDP by 4.2% until 2025 mainly due to digital financial services (Stern, Makinen, & Qian 2017, p. 215-228). China has over 10000 internet based companies that have directly cut into traditional finance firms' market share, breaking all the barriers of traditional finance (Chen et al. 2017, p. 1).

Buckley (2016, p. 1302) stated that China has the opportunity to leapfrog financial regulation standards by establishing a regulatory framework that controls and promotes the use of Fintech and internet finance companies. China has not had the time to develop western levels of banking infrastructure, and due to the rise in Fintech it will probably never have to.

The Hong Kong Monetary Authority (HKMA) established the Fintech Innovation Hub in 2016 to support research and adoption of Fintech. This hub provides a neutral ground where various stakeholders can innovate through collaboration. Industry companies such as banks, payment services providers and start-ups can come

together and develop new solutions and innovations. Subsequently HKMA launched its Fintech Supervisory Sandbox to grow other innovations like augmented reality, biometric authentication, blockchain, mobile payment services and robotics (Ng & Kwok, 2017, p. 429).

Table 2.2 summarises the different approaches that different countries have to the Fintech phenomena.

Table 2.2: Fintech evolution in different countries

COUNTRY	APPROACH TO THE FINTECH PHENOMENA
Russia	No legal regulation towards Fintech although Central Bank is an active participant in the development of Fintech. Cryptocurrency has been outlawed
The United Kingdom	Has developed a regulatory sandbox that allows Fintech companies to test products and services in a live environment without the legal consequences they would normally face. This allows regulators to study new innovative products and services to get a sense of how to regulate them. UK Fintech 2020's goal is to make London the centre of the Fintech industry.
The United States of America	OCC created an office for innovation to support Fintech. Fintech innovators are allowed to test products and services while still having to comply with consumer protection laws. Different states have different laws relating to financial services some state laws are more lax and easier for Fintech companies to comply with.
China	Gaps in regulation and lack of change and innovation from large banks has allowed a Fintech

	boom. Fintech has capitalized on the growing need for financial inclusion. China has not had time to develop to western levels of banking with the emergence of Fintech it might not need to as new regulations would need to be Fintech friendly to not negatively impact on GDP.
Hong Kong	Established a Fintech innovation lab in 2016 where banks, start-ups and payment services providers can innovate through collaboration. Also launched a Fintech Supervisory Sandbox to stimulate innovation into augmented reality, robotics, biometric authentication and blockchain.
Kenya	Home of the biggest success story in Fintech M-Pesa owned by Safaricom which is a telecommunications company. Regulation has lagged behind Fintech development allowing Fintech companies to gain over 85% of the market. Current lack of coordination between regulators hampers new start -up companies.

Source: Researcher's own construct

Table 2.2 shows how different countries namely, Russia, The United Kingdom, The United States of America, China, Kenya and Hong Kong differ in their approaches to Fintech. In China and Kenya, a lack of strict financial regulation has allowed Fintech companies to exploit market opportunities and capture the large unbanked population with little to no competition from their big banks. It can be said that these countries and Russia's government have appointed a wait and see approach to regulation only regulating after the emergence of Fintech companies.

The UK and Hong Kong's governments have embraced Fintech and are also trying to regulate it efficiently by creating regulatory sandboxes where they can regulate it in real time through hands on experience. Both these nations are seeking to become leaders in Fintech and use it as a way of increasing foreign investment into their

countries. The USA, however, is finding their financial regulatory landscape difficult to overcome and although they are trying to stimulate innovation different state laws are making this issue more complex.

2.4 FINTECH EVOLUTION IN SOUTH AFRICA

The South African financial services regulators, the Financial Intelligence Centre (FIC), The Financial Sector Conduct Authority (FSCA), The South African Reserve Bank (SARB) and National Treasury (NT) combined to form the Intergovernmental Fintech Working Group (IFWG) to explore the potential of Fintech at the end of 2016. The first workshop of the IFWG was held on the 19th and 20th of April 2018 and numerous topics related to Fintech including private crypto-currencies, financial inclusion and innovation facilitators were discussed. Two clear steps emerged from this workshop. First, that they intend to draft a policy paper setting out the South African policy on Fintech and innovation by early 2019 and secondly to host another workshop by the end of 2018 to discuss other issues not discussed during this workshop (IFWG, 2018, p. 46).

The South African Reserve Bank (SARB) launched a financial technology programme to strategically assess the emergence of the Fintech industry in an organised manner and to consider its regulatory implications (The South African Reserve Bank, 2018, p.1-2).

The Fintech programme focuses on three primary objectives:

1. Review the SARB's position on private cryptocurrencies to update its policy framework and regulatory management;
2. Explore and decide on the applicability of innovation hubs; and
3. Launch a project called Khokha in which distributed ledger technologies (DLT) will be experimented with (SARB, 2018, p.1-2).

SARB initiatives are in line with other central banks such as Canada's project Jasper, Europe and Japan's Project Stella and closely modelled on Singapore's project UBin. Project Khokha involves several domestic banks such as ABSA, Capitec, Discovery,

First Rand, Investec, Nedbank, Standard Bank and included a Fintech company called Consensys. In August 2017 the SARB formally established a Fintech unit to explore Fintech innovation and all Financial services in South Africa (The South African Reserve Bank, 2018b, p. 9-16).

While South Africa has no overarching Fintech-orientated regulatory framework, the country has a developed financial services regulation in place according to Didenko (2018,p.356) that includes the Banks Act, the Financial Advisory and Intermediary Services Act and the Financial market Act. Some discussants observed that South Africa's sector specific regulations may create obstacles in bringing together technology companies and financial institutions.

In South Africa the regulatory approach to mobile money is formulated in the position paper on Electronic Money NPS 01/2009, in which the SARB differentiates between payments made to a third person to whom the payment is due and sending electronic value to a beneficiary who can cash that value without any obligation to that beneficiary. The former can be provided by non-banks but the latter is classified as deposit-taking and would require a banking licence (Didenko, 2018, p. 359).

Crowdfunding has no bespoke regulation in South Africa. In a 2016 newsletter the Financial Services Board it said it was in the process of considering how to structure crowdfunding rules. At the same time the regulator informed that current legislation might cover crowdfunding activities, depending on their mode of operation. Any person wanting to take part in crowdfunding needs to contact the Financial Services Board beforehand to establish whether this activity falls within legislation (Didenko, 2018, p. 359-360).

Didenko (2018, p. 360) suggests that not enough dialogue is taking place between regulators and stakeholders in the Fintech space and that self-regulation is problematic due to the diversity of Fintech businesses. There is a further need for representation of this industry as it is likely to shape the future regulations.

2.5 FINANCIAL SERVICES IN SOUTH AFRICA

The importance of financial services is summarised in The Banking Association South Africa (2017, p. 2-3) which states that the financial sector is the upholder of the nation's savings, serves as a financier of major infrastructure projects, ensures the country pays for its imports and receives payments for exports. Banks are an essential part of a successful economy and make a vital contribution to the welfare of our economy and society. Banks also play an imperative role in job creation and establishing effective entrepreneurs.

South Africa's financial services sector is highly developed compared to the rest of the SADC region which means that as a nation we are able to create and access financial services other countries in the region cannot (Theobald, Stuart, Orin, & Tambo, 2017, p. 4). The South African banking sector is highly concentrated, and theory would imply that competition is low. However, research suggests that in the banking sector high concentration does not infer low competition at all (Simatele, 2015, p. 826). The South African banking industry is made up of 37 banks licenced by the Reserve Bank, 16 of them are locally and foreign controlled banks, 15 are local branches of foreign banks, 3 mutual banks and 2 cooperative banks. These 37 banks employ 153 846 employees, which is 3% of all personal income tax payers in South Africa. In 2014 banks contributed R23 billion in corporate tax and since 2005, they have paid over R 102 billion. The largest six retail banks represent more than 90% of the entire banking industry (The Banking Association South Africa, 2017, p. 3-4). The financial services proportion of GDP has grown from 18% in 1993 to just over 28% in 2015, meaning the country is becoming more and more reliant on financial services for growth (Theobald et al, 2017, p. 8).

The banking sector in South Africa is growing steady, BrandsEye (2017, p. 1-3) reports that three new banks will be launched in 2018 and this is likely to intensify competition among the existing big five banks. One of these new banks is TymeDigital, a subsidiary of the Commonwealth Bank of Australia, this lender provides customers with digital systems to access their finances through their phones. Tyme was granted a banking licence by the Reserve Bank in September 2017 and will launch with two other banks namely Discovery and Postbank sometime in 2018 (PWC, 2017, p. 7). It will be

interesting to see how the big five Standard Bank, Absa, FNB, Nedbank and Capitec will respond to these new entrants considering reports that customer loyalty in retail banking has decreased by more than 3% over the last three years and led to an increase in switching of banks (Major, 2017, p. 1195).

2.5.1 Domination of the big four banks

The big four banks FNB, ABSA, Standard Bank and Nedbank have dominated the industry since 1994. Theobald et al. (2017, p. 20) lists the following balance sheet items with the subsequent market share of that item held by the big four banks.

- Short-term deposits 84.40%;
- Total deposits 83.63%;
- Mortgage Lending 89.26%;
- Credit cards 92.31%;
- Total assets 82.71%; and
- Personal loans 61.11%.

This shows the absolute domination by the big four in the industry with personal loans seeming to be where smaller competitors are targeting. The general thought that has emerged from this author is that the four banks have little to no incentive to engage in any form of price competition.

It must be said that Capitec has been largely successful in capturing the entry level market share and has forced the big four banks to respond with similar product offerings (Anong & Kunovskaya 2013, p. 461).

Smaller banks have had some troubles as of late with African Bank which was placed under curatorship on the 10th of August 2014 after its parent company ABIL posted a headline loss of R6.4 billion for the financial year of 2014 (Marcus, 2014, p. 3-4). VBS mutual bank was also placed under curatorship on 11 March 2018 due to VBS experiencing increasing liquidity challenges over the last 18 months. These liquidity challenges came from the maturity of large deposits from municipalities and was increased by the termination of other large deposits and the inability to procure sufficient funding (Kganyago, 2018, p. 1-3).

2.5.2 Regulation and regulators in South African financial services.

As mentioned in The Banking Association South Africa (2017, p. 3) banks have to comply with approximately 244 pieces of legislation, which in itself makes it difficult for new entrants to enter the industry. SA has four main regulators the South African Reserve Bank (SARB), National Credit Regulator (NCR), the Financial Services Board (FSB) and the Financial Intelligence Centre (FIC), in addition the SARB is also the overseer of all banking operations. Payments Association of South Africa (PASA) is a self-regulatory agency operated by the big four banks through Bankserv, the payment clearing house for banking in South Africa (Anong and Kunovskaya, 2013, p. 461). The FSB is set to change to the Financial Sector Conduct Authority (FSCA) and this will change its mandate from regulating non-banking financial sector to being market conduct regulator for the whole financial services industry (Financial Services Board, 2017, p. 8).

There are also a number of laws in place to protect consumers such as the Electronics Communications Act (ECA) of 2002, the Financial Advisory and Intermediaries Act of 2002 (FAIA), the Financial Services Ombuds Schemes Act of 2004, National Credit Act (NCA) of 2005 and the Consumer Protection Act of 2009 (Anong & Kunovskaya, 2013, p. 461).

Banks also have the Financial Intelligence Centre Act (FICA) of 2001 which is aimed at preventing money laundering and terrorism financing. SA Banks have also implemented Basel III which was developed after the financial crisis in 2008 which has revamped market risk capital requirements and implemented stiffer capital requirements (The Banking Association South Africa, 2017, p. 9). IFRS 9 the new accounting measure, has also been undertaken by SA banks (Deloitte, 2016, p. 4).

South African regulations that Fintech businesses need to comply with is summarised in Table 2.3 below.

Table 2.3: Regulations in South Africa

REGULATIONS	IMPACT ON FINTECH BUSINESSES
South African Reserve Bank	Regulates Cryptocurrencies, mobile banking, crowdfunding and all other innovations in banking. SARB is vital for Fintech as it provides guidelines on how they are to be regulated currently and in the future. The SARB has yet to introduce a regulatory Sandbox for Fintech to operate in. Some positive developments are mentioned above like them exploring the possibilities of cryptocurrencies.
National Credit Regulator	Regulates the National Credit Act to which all financial services providers must comply. Impacts granting and offering of credit to customers and peer to peer lending.
Financial Sector Conduct Authority	Regulates insurance, pensions, credit rating services and securities. FAIA and FICA being the two biggest acts financial services providers need to comply with.

Source: Researcher's own construct

Table 2.3 shows that Fintech businesses are forced to comply with regulation, the major difference between them and banks is that banks have far more regulations to comply with and require a banking licence. Because Fintech companies do not take deposits, they do not require a banking licence to trade. Thus, the red tape for banks to implement new products and services is immense compared to Fintech companies.

The SARB has not introduced a regulatory sandbox where it can view Fintech business models to figure out how to regulate them. Current banking legislation is also stifling collaboration between banking and Fintech as banks cannot operate in the Fintech space and Fintech requires a banking licence to enter the banking space. It is mandatory for banks to comply with stress tests, liquidity ratios and capital ratio in Basel iii which Fintech companies do not have to comply with.

2.5.3 Current client views on South African banks

BrandEye recently tracked 1 790 933 social media posts by 554 unique authors about South Africa's big 5 banks from September 2016 to August 2017. Capitec had the highest net sentiment for a third consecutive year and is the only bank to show a positive net sentiment. Over the last three years Capitec grew their share of online conversation by 15% while FNB has declined the most with a 6% loss since 2015. Low bank charges and simplicity of use was another function consumers valued about Capitec. The bank with the lowest sentiment was ABSA mainly due to ethics and the Public Protector's report on Apartheid era bailouts. Client complaints were mostly about cards and turnaround times in receiving credit cards.

Only FNB and Capitec had positive net scores with ABSA, Nedbank and Standard Bank all being negative with the authors suggesting a negative score is uncommon and this illustrates complete dissatisfaction. Capitec was the only bank to have a positive net sentiment for in-branch turnaround time the only aspect receiving negative conversation was their banking app. FNB customers had negative conversations about their banking app and telephonic interactions with the bank.

Nedbank had problems with their app, in-branch experience and telephonic discussion as did Standard Bank, which also had the longest queuing issues (BrandsEye, 2017, p. 1-23).

From this study we can see that Standard Bank, ABSA and Nedbank are particularly vulnerable to Fintech companies that can target these areas where customers are experiencing bad levels of service especially in convenience as these three banks all scored badly for in-branch experience and their mobile banking apps. Attempts by these three banks to embrace digital banking has not created positive sentiment. FNB and Capitec managed to get better reviews in most aspects of banking however even they struggled to keep customers happy with their banking app which effectively at this stage no South African bank has been able to convert to the digital banking experience clients demand. This section is meant to show that South African banks are not as bulletproof or modern as they would like to seem to think and are still dealing with the legacy of technology slowing down operations.

2.5.4 South African banking efforts to invest in the future

South African banks have started to create start-up incubators to explore the spectrum of Fintech possibilities the examples of these are listed in PWC (2017, p. 12) with First Rand creating Alphacode to support start-ups who are developing digitally disruptive technologies. Nedbank is currently partnering with LaunchLab to host programmes driven by an innovation platform to capture new ideas and business models which can potentially be disruptive to banking. Barclays has Rise Innovation Hub to provide Fintech innovators with a space to work and Standard Bank's Open Innovation Lab gives entrepreneurs access to markets so that they can pitch their ideas to the bank.

2.6 LITERATURE REVIEW ON SOUTH AFRICA AS AN EMERGING MARKET

When defining an emerging market Andreasson (2011, p. 1170) uses Cornelissen's six general characteristics suggesting emerging market status: economic size, the ability to influence contemporary trajectories of the world economy, forging deep economic ties with the smaller southern nations, a geographic location outside the North Atlantic industrial capitalism, an ability to consolidate state strength by fostering considerable degree of ideological cohesion, and an ability to challenge the character of the international system.

Schwab (2017, p. 34, 268) ranks South Africa 61st out of 137 countries on the 2017/2018 Global Competitiveness Index down 14 positions from 2016/2017's 47th position which was the highest in the last 5 years. This index lists twelve pillars and South Africa's global ranking to the relevant pillar.

In the first pillar ranking institutions South Africa ranked 76th out of 137 countries. With the second pillar based on the infrastructure in SA the ranking was 61st. The third pillar on macroeconomic environment SA received a ranking of 82nd. The 4th pillar named healthcare and primary education SA received it's worse ranking of 121st. Higher education and training, the 5th pillar, SA ranked 85th globally and 54th in pillar 6 on the efficiency of the goods market. Labour market (pillar 7) was another poor performer giving SA a ranking of 93rd while financial markets (pillar 8) received a higher ranking

of 44th. Pillar 9: technological readiness ranked SA 54th while market size, (pillar 10) received the highest ranking of 30th. Pillars 11, business sophistication, and pillar 12 on innovation, received relatively high rankings of 37th and 39th respectively.

South Africa also has risks it has to deal with (IRMSA, 2017, p. 3). The top 10 risks plaguing SA in order from 1 to 10 are: increased corruption, water crises, unemployment, droughts in Sub-Saharan Africa, lack of leadership, fiscal crisis/credit rating downgrades, economic slowdown or recession, increasing strike action, profound political and social instability, and governance failure. The Organisation for Economic Co-operation and Development (2017, p. 24) feels that the governments exposure to state-owned entities has accelerated in the past years and notes SAA's potential default the most serious risk. It could be argued that government's exposure in Eskom is higher and therefore Eskom's weak financial position exposes government to a potential problematic risk.

According to IMF (2017, p. 5) South Africa has also fallen in the Doing Business Rankings from 34th out of 183 countries to 74th out of 190 countries in 2016, this was mainly due to significant decreases in the ease of starting a business, dealing with construction permits, enforcing contracts, getting credit and paying taxes. On the positive side however both World Governance Indicators, governance effectiveness and control of corruption have improved from 2010 levels. The IMF also commended South Africa's resilience due to its flexible exchange rate, low reliance on foreign debt, large domestic investor base, and its generally balanced international investment position. Other aspects of good performance are mentioned in Marketline (2013, p. 3-75) which notes that South Africa has the best infrastructure and most developed telecommunications network in Africa, is the world's largest producer of gold, platinum, manganese and chromium and the second largest producer of vermiculite and Zirconium. SA's legal system is independent and of the highest quality and its banks are seen as world class. SA has also performed well in the Global Gender Gap securing 16th place in 2012; the only Sub-Saharan country in the top 20.

The recent loss of steam by the SA economy is due to two factors: the first being high commodity prices and the second being foreign direct investments due to the sub-investment level downgrades by rating agencies (The World Bank, 2017, p. 6-9).

Economic growth remains too low to generate sufficient jobs as the World Bank expects the economy to grow in 2018 and 2019, but at a rate barely faster than the population. This is at least an increase from the 2016 recorded 0.3% GDP growth caused by weak demand and low outputs in manufacturing and mining (South African Reserve Bank 2017, p. 4).

South Africa's sovereign credit ratings have been under pressure South African Reserve Bank, (2017, p. 1) this was triggered by President Zuma's decision to implement a cabinet reshuffle on 31 March 2017, two ratings agencies downgraded South Africa's sovereign credit ratings due to political tensions and increased uncertainty in government policy. IMF (2017, p. 7) also notes SA's foreign currency debt, the downgrade to below investment grade by two agencies where local currency debt was put below investment grade for one agency, meaning SA has been excluded from the JPMorgan GBI-EM index. Credit ratings have also been devalued for banks and SOE's due to weak growth, sizable liabilities in state-owned enterprises and perceptions of a lack of direction in economic policy.

Cape Town, Johannesburg and Durban are the three largest metros with Cape Town and Johannesburg receiving regional recognition for their entrepreneurial ecosystems. These cities have the critical building blocks that The World Bank (2017, p. 35) is deemed necessary for innovation. This report argues that SA has large untapped innovation potential with, the ten most needed skills in SA being in ICT related fields. Entrepreneurship is low compared to other emerging countries and the environment for small businesses is more difficult than other nations. The Organisation for Economic Co-operation and Development (2017, p. 7-64) argues that addressing these gaps would create badly needed jobs. South Africa participates in all international conventions on the protection of intellectual property rights which is essential for innovative companies which rely on patents, trademarks and copyrights to create new business areas to target (Marketline, 2013, p. 37). Although SA falls short in transforming research into patents which is lower than developing nations like Brazil, Russia and India at only 242 patents in 2012, the Network Readiness Index ranked it 70th among 144 economies. IT remains small in SA, contributing only 3% to

GDP and 17.5% of service exports compared to 55% of service exports in Brazil and 40% in China (The World Bank, 2017, p. 34).

IMF (2017, p. 19-22) suggests certain areas that need to be addressed in SA. Labour market reforms, reforming public schools, reforms of public enterprises, fostering more competition in the banking system, more durable foreign direct investment and increasing international reserves. Schwab (2017, p. 34, 268) lists the most problematic factors for doing business in South Africa as corruption, crime and theft and government instability which need to be addressed.

2.7 STRATEGIES FOR INCUMBENTS AND FINTECH COMPANIES TO BE SUCCESSFUL

Buchak and Matvos (2017, p. 2) declared two leading hypotheses to explain the decline in traditional banking. The first hypothesis is the increased regulatory burden on traditional banks, and the second hypothesis is that traditional banking has declined due to the emergence of disruptive technologies.

Chen et al. (2017, p. 4-12) details a comparison between Citibank (US) and ICBC (China). Citibank has adopted a decentralised strategy to deal with the impact of the Fintech phenomena, each sector within Citibank sets its own strategy and budget to reply to the Fintech challenge. Citigroup has also invested in many financial start-ups while also starting Citigroup venture capital for VC investments. It has also developed its own innovation lab and a start-up incubator for testing disruptive innovations. A network has been created that fosters close relationships with universities, design companies and other partners in venture capital. If an employee comes up with an innovative idea, he or she can decide to join the innovation project and work on its full time, if this project creates a new organisation, he or she can decide to join this organisation, or they can return to their old position.

ICBC on the other hand does not pursue innovation, but rather positions itself as a follower. ICBC's original financial system is slow moving in that even with upgrades transformation is limited. Although it remains to be seen, Citibank's response to the

broader Fintech phenomenon as stronger and likely to deliver better results; possibly setting trends and staying ahead of the curve rather than following the curve and not in a position to influence the phenomenon.

Philippon (2016, p. 15) states that banks have an advantage in that they have a large customer base and a good ability to forecast the evolution in the industry while having superior knowledge of existing regulations. Kalmykova and Ryabova (2016, p. 1-4) adds advantages like consumer confidence due to being well regulated, rich historical data, a banking licence, a head-start in compliance and superior knowledge of banking in general. In contrast, Stern et al. (2017, p. 217) believe Fintech companies to have the advantage over traditional banks, as they offer unique innovative financial services solutions and at the same time are more flexible to adapt to changes in the market in comparison to traditional banks with legacy systems.

Other strategies being used by incumbents include J.P. Morgan's Corporate and Investment Bank's recent launch of their In-Residence Program for Fintech start-ups in which these start-ups can work side by side with their employees in order to develop innovations that will make banks faster, safer and operate at a lower cost (Lee & Shin, 2018, p. 40). Goldman Sachs is launching an online lender whilst Bank of America has given its Fintech response group an annual budget of \$3 billion. Goldman Sachs also has more engineers working for it than both twitter and Facebook (Loo, 2017, p. 7).

Vasiljeva and Lukanova (2016, p. 32) gives the following recommendations for banks:

1. They must invest in digitalisation and innovation. In order to get these ideas, they must have innovation labs within the organisation;
2. Banks must analyse and use the information they own about their customers and their transactions to improve the understanding of their needs and behaviours; and
3. New business processes must be online to enhance customer service.

Chuen and Teo (2015, p. 3-4) indicates that for Fintech companies to be successful their business models must have the following 5 attributes: They need to be low margin, asset light, scalable, innovative and compliance easy in order to have a sustainable business that leads ultimately to financial inclusion. The customer

management challenge is of vital importance according to Lee and Shin (2018, p. 44). Fintech companies need to understand their niche market and give the best possible customer service to them. High responsiveness to customers concerns is supreme as good word-of-mouth is essential to the success of a Fintech start-up.

Stewart and Jürjens (2017, p. 17) concluded that the biggest deterrent to the adoption of Fintech in Germany was data security and privacy concerns. Therefore, it was suggested that Fintech companies ensure that data security issues and user design interface be addressed effectively to increase confidence in Fintech companies. Chen (2016, p. 238) summarised that financial innovation is not enough if it is based only on the technology but rather should also focus itself on how well it serves business and real-life needs. Table 2.4 summarises the possible strategies that Fintech companies could follow.

Table 2.4: Strategies followed by Fintech businesses

STRATEGY	LITERATURE SOURCE
Unique innovative flexible financial products	Stern et al (2017, p. 217)
Business models which are based on the Lasic principles, which are; low margin, asset light, scalable, innovative and compliance easy	Chuen and Teo (2015, p. 3-4)
Targeting and understanding niche markets with high responsiveness to customer concerns	Lee and Shin (2018, p. 44)
Serving business and real-life needs	Chen (2016, p. 238)

Source: Researcher's own construct

Table 2.4 shows that companies in the Fintech space are targeting niche markets that are either unserved or underserved by large retail banks. These businesses are more flexible to change in customer needs and seek markets where they can easily comply with regulation. Innovation is the cornerstone in a Fintech business and features heavily in their business models, they embrace change as they see banks legacy

systems as a deterrent in their innovation strategies. Businesses in this space attempt to keep their assets light and many have no interest in becoming a retail bank.

As highlighted in Table 2.4, under the Lasic principles they do not enter spaces where regulation is strict but rather in areas where regulation is still catching up to new business models of technological companies. Companies within the Fintech space are focused on identifying customer needs first and then creating an innovative product or service to address these needs whereas banks tend to do the opposite.

2.8 FINTECH FRAME OF REFERENCE

Table 2.5: Fintech innovation frame of reference

Table 2.5 below summarises the Fintech innovation frame of reference that appeared during the literature review. The Fintech frame of reference will be used as a guide for developing interview questions and identifying codes.

CODE	LITERATURE	AUTHOR
Customer Focus	Summarises the Fintech evolution as aiming to enhance customer experiences and increase process efficiency at traditional institutions	Vasiljeva & Lukanova (2016, p. 25-34)
	Fintech companies attract customers with products and services that are user-friendly	Dorfleitner et al. (2017, p. 5-10)
	Banks must analyse and use the information they own about their customers and their transactions to improve the understanding of their needs and behaviours	Vasiljeva & Lukanova (2016, p. 25-34)
	Fintech companies need to understand their niche market and give the best possible customer service to them	Lee & Shin (2018, p. 35-46)
Advantage of Fintech	Fintech can facilitate faster payments and lower transaction costs by using technology	NG & Kwok (2017, p. 422-434)

Regulatory Sandbox	The government could create a platform or sandbox which allows innovative financial technologies to enter the market and validates their safety	Kuzmina-Merlino (2017, p. 961-973)
	The United Kingdom and Hong Kong governments have embraced Fintech and are also trying to regulate it efficiently by creating regulatory sandboxes	Brody et al. (2017, p. 84-91) NG & Kwok (2017, p. 422-434)
Financial Inclusion	A growing need for financial inclusion has led to China's rapid Fintech developments and this is without much intervention from government	Chen (2016, p. 225-239)
	A sustainable business that leads ultimately to financial inclusion	Chuen & Teo (2015, p. 1-26)
Regulation hampering innovation and Fintech partnerships	Some discussants observed that South Africa's sector-specific regulations may create obstacles in bringing together technology companies and financial institutions	Didenko (2018, p. 356)
Lack of progress with regulators	Not enough dialogue is taking place between regulators and stakeholders in the Fintech space and self-regulation is problematic due to the diversity of Fintech businesses	Didenko (2018, p. 360)
More competition in banking	Three new banks were launched in 2018 and this is likely to intensify competition among the existing big five banks	BrandsEye (2017, p. 1-23)
	Fostering more competition in the banking system	IMF(2017, p. 1-85)
Capitec capturing market share	Capitec has been largely successful in capturing the entry-level market share and has forced the big four banks to respond with similar product offerings	Anong & Kunovskaya (2013, p. 453-464)
	Banks have to comply with approximately 244 pieces of legislation	The Banking Association South

Disadvantage for banks		Africa (2017, p. 1-31)
	Increased regulatory burden on traditional banks	Buchak & Matvos (2017, p. 1-87)
Regulation protects the industry	There are also a number of laws in place to protect consumers such as the ECA of 2002, FAIA of 2002, NCA of 2005 and CPA of 2009	Anong & Kunovskaya (2013, p. 453-464)
Going digital	Attempts by these three banks to embrace digital banking has not created positive sentiment	BrandsEye (2017 p. 1-23)
	They must invest in digitalisation and innovation. In order to get these ideas, they must have innovation labs within their organisation	Vasiljeva & Lukanova (2016, p. 25-34)
Legacy Technology	South African banks are not as bulletproof or modern as they would like to seem and are still dealing with legacy technology slowing down operations	BrandsEye (2017, p. 1-23)
Investment into Fintech	South African banks have started to create start-up incubators to explore the spectrum of Fintech possibilities	PWC (2017, p. 1-17)
	Citibank has adopted a decentralised strategy to deal with the impact of the Fintech phenomena, each sector within Citibank sets its own strategy and budget to reply to the Fintech challenge	Chen et al. (2017, p. 1-16)
SA banks cannot spend what international banks can	Bank of America has given its Fintech response group an annual budget \$3 billion	Lee & Shin (2018, p. 35-46)
SA Banks are world-class	SA's legal system is independent and its banks are seen as world-class	Marketline (2013, p. 12-86)

Technology focused	Citigroup has also invested in many financial start-ups while also starting Citigroup Venture Capital for venture capital investments	Chen et al. (2017, p. 1-16)
	Goldman Sachs also has more engineers working for it than Twitter and Facebook combined	Loo (2017, p. 1-47)
	New business processes must be online to enhance customer service	Vasiljeva & Lukanova (2016, p. 25-34)
Innovative culture within the bank	If an employee comes up with an innovative idea, he/she can decide to join the innovation project and work on it fulltime	Chen et al. (2017, p. 1-16)
Advantage of banks	Banks have an advantage in that they have a large customer base and a good ability to forecast evolution in the industry while having superior knowledge of existing regulations	Philippon (2016, p. 1-24)
Collaboration with Fintechs	JP Morgan's Corporate & Investment Bank announced the launch of their In-Residence Programme for Fintech start-ups in which these start-ups can work side by side with their employees in order to develop innovations	Lee & Shin (2018, p. 35-46)
Trust	It was suggested that Fintech companies ensure that data security issues and user design interfaces be addressed effectively to increase confidence in these companies	Stewart & Jürgens (2017, p. 1-26)
Fintech solves specific problems	Financial innovation is not enough if it is based only on the technology but rather should also focus itself on how well it serves business and real-life needs	Chen (2016, p. 225-239)
Fintech not targeting all banking markets	Businesses in this space attempt to keep their assets light and many have no interest in becoming a retail bank	Chuen & Teo (2015, p. 1-26)

Source: Researcher's own construct

Table 2.5 shows the codes identified in the literature. The table includes the code, the quoted text, as well as the author.

2.9 RESEARCH INSTRUMENT: INTERVIEW QUESTIONS

Based on the literature review as well as the Fintech frame of reference, the following research questions were developed which will guide the qualitative interviews:

1. Do you believe regulations in South Africa do not allow for innovation?
2. Do you feel regulations are biased towards banks and therefore place them at a disadvantage in terms of the technology space?
3. Do you feel that regulation needs to be reviewed so that banks can innovate or partner through Fintech?
4. What are your thoughts and views on the emergence of Fintech?
5. Considering the above question, do you feel the emergence of Fintech is positive for the banking industry?
6. Is your bank currently investing in preparation for the arrival of Fintech?
7. Do you feel the current investment/ strategy is sufficient?
8. Are you currently experiencing any loss of market share due to the emergence of Fintech companies?
9. Do you feel market share or new markets can be gained or created by partnering with Fintech companies?
10. What do you feel the financial services industry in South Africa will look like in the future?

2.10 CONCLUSION

The purpose of Chapter 2 was to perform a literature review addressing the disruptive potential of Fintech, as well as giving an insight into South Africa as an emerging market country and an overview of the current financial services industry. This chapter commenced with a review of various definitions of the Fintech phenomena. It was found that there is no specific agreed-upon definition for the term Fintech. However,

recurring themes were addressed in various definitions: evolution, disruption and revolution and that Fintech combines the two most powerful industries of finance and technology by using technology to make finance more convenient and accessible to a greater market. It was apparent in the literature that South Africa has some catching up to do compared to other international countries where their industries are more mature, and regulations have been amended to incorporate Fintech into the greater financial services industry.

The literature review on the South African financial services industry gave insight as to how financial services in South Africa is one of the few industries that is considered truly world class and is extremely important to the country's GDP. South Africa is a dominant force on the African continent and dwarfs its African counterparts in size, efficiency, and infrastructure. The literature proved that the South African market is still dominated by the top 5 banks: ABSA, Capitec, FNB, Nedbank and Standard Bank and that competition remains fierce between these competitors in retail banking. The review also gave the customer insights as to whether current banking clients are satisfied by the services provided by these large banks. Lastly, the literature proved that there is some investment in innovation by our large banks although the scale remains unclear.

The last literature review focuses on South Africa as an emerging market. First the literature provided a definition of what characteristics are needed for it to be seen as an emerging market and why South Africa fits into this category. Next the World Bank rankings were provided to show how South Africa compares internationally in certain areas and what areas need to be focused on for development. The literature provided proof that South Africa's economy was not growing fast enough to create employment and that political instability was the main force behind the slow growth. Once again financial services were mentioned as a shining star in the country and one of the largest reasons why foreign investors favoured South Africa over its other African counterparts. This is important because Fintech has achieved great success in emerging markets where large parts of the population were unbanked or underbanked, secondly due to South Africa being considered one of the best ways to access the African market it could be a prime market for international investment into Fintech and

lastly due to the financial services industry in South Africa being world class, collaboration between banks and Fintech could yield impressive results.

The focus of Chapter 3 is on the research design and methodology of this study. The chapter delineates the research paradigms used for this study. The research approaches will also be explained together with the sampling design. Chapter 3 also explains the ethical considerations that apply to this research study. Lastly the data collection and reporting methods are defined, and reasons given as to why the chosen methods apply to this particular study.

CHAPTER 3

THE RESEARCH DESIGN

3.1 INTRODUCTION

Chapter 2 outlined the various definitions for the Fintech phenomena and described how Fintech is evolving across different countries. The emerging Fintech market of South Africa; as well as the financial service industry were discussed. Lastly, possible strategies for Fintech businesses in the SADC region were highlighted.

The aim of the study is to examine banker's perceptions regarding the disruptive potential of the Fintech phenomena on the financial services industry in South Africa. The purpose of this chapter is to describe the research methodology and design, which addressed the primary and secondary objectives of the study.

This chapter starts by defining what research is and introduces research paradigms and the difference between quantitative (positivistic) and qualitative (interpretivistic) studies and which paradigm has been chosen for this research studies. The design further describes the sample, data collection method and measuring instrument used. Lastly the quality and rigour of the study is interrogated, as well as an identification and discussion of ethical issues within this study and how these were overcome.

3.2 THE RESEARCH SCHOOLS OF THOUGHT

3.2.1 Positivism

Rahi (2017, p. 1-5) states that supporters of this paradigm have the belief that true knowledge is obtained through observation and experiment and usually select a scientific method to produce knowledge. A positivism reality remains stable and can be described through an objective. O'Neil and Koekemoer (2016, p. 1-16) refers to the positivist paradigm as being associated with realism, objectivism and the aim of uncovering a single truth. The aim of such research is to reveal underlying laws that explain the how and why of certain behaviours and events which makes it useful for developing predictive models of behaviour.

3.2.2 Interpretivism

Rahi (2017, p. 1-5) in describing a supporter of this interpretivism states that such a person believes in a deep understanding of a concept and tries to understand the world in which they live through exploration. This person believes that true knowledge can only be obtained through a deep interpretation of the subject. O'Neil and Koekemoer (2016, p. 1-16) views interpretivism as a reaction to the inadequacies post positivism. Interpretivism does not focus on the falsification or identification of variables, but rather on uncovering meaning and truth which is viewed as relative; therefore, it is believed multiple realities can exist.

An interpretive approach is characterised in Zaina (2007, p. 22) by three researcher's immersion and empathy, the focus on the meanings actors give to the phenomena under study and the acknowledgement of the intentions, motivations and their understanding. In addition Bhattacharya (2012, p. 465-467) sees interpretive research as a framework and practice within the social sciences that is invested in understanding social reality through philosophical and methodological ways. Interpretive research is viewed as a practice embedded in diverse frameworks from ethnomethodology to critical feminist theory. As an epistemological framework it has been used extensively across human and social sciences especially in communication, cultural studies, social work, sociology and education. There is a call within interpretive practices for social sciences and humanities to create social change through meaningful discussion, which should centre on race, gender, sexuality, war, democracy and globalisation.

All three approaches were considered for this research study. However, for this study (which involves analysing the Fintech phenomena in the South African context) the interpretative approach was chosen by the researcher. The research involves interpretation within the social world of Fintech by bankers, gauging their perceptions and experiences within the South African financial services industry. The researcher believes the Fintech phenomena within the South African context needs deep interpretation to gain a true understanding and the interpretivism approach is the best way to achieve this.

3.2.3 Critical theory

Budd (2012, p. 175) defines critical theory as the foundational perspective from which the analysis of social action, politics, science and many other human endeavours can advance. Research from this school of thought has critique at its centre, critique entails both what is done and why it is done by examining both the action and the motivation.

3.3 THE METHODOLOGICAL PARADIGMS OF RESEARCH

A research paradigm describes a cluster of beliefs and dictates what should be studied, how the research is to be done, and the interpretation of the results. Rahi (2017, p. 1-5) defines a paradigm as an essential collection of beliefs shared by scientist with a set of agreements about how problems are to be understood, how we view the world, and how we go about conducting research.

3.3.1 Quantitative research

The quantitative research approach utilises numerical data to access information about the world (Kalu, 2017, p. 43). According to Rahi (2017, p. 1-5) the quantitative method is a scientific method and its grounds can be found in the positivist paradigm. This method focuses on new data collection to address a problem from a large population and analysis of the data, but it ignores an individual's feelings and emotions or the environmental context of the study. With such an approach the researcher is more focused on describing the data than interpreting it.

3.3.2 Qualitative research

Kohlbacher (2006, p. 3-13) uses Cassel and Symon (1994) to give a list of the defining characteristics of qualitative research and defines it as follows: It focuses on interpretation rather than quantification, emphasizes subjectivity rather than objectivity, and displays flexibility in conducting research. Qualitative research is focused on an orientation towards process rather than outcome, concerns context regarding behaviour and situation as intrinsically linked in forming an experience and

gives an explicit recognition of the impact of the research process on the research situation.

Qualitative researchers according to Creswell (2007, p. 36-51) study things in their natural settings and attempt to make sense of, or interpret, phenomena in terms of the meanings people bring to them. A qualitative approach is appropriate to use when a problem needs to be explored, when a complex or detailed understanding is needed when the researcher seeks to understand the context or setting of participants and when a researcher wants to write in a flexible style. Kohlbacher (2006, p. 3-13) states that qualitative techniques have emerged from interpretive or phenomenological paradigms.

Berg (2012, p. 827) explains that qualitative research in social sciences is guided by orientations set forth in the symbolic interaction. Symbolic interactions maintain that what humans do and say is a result of how they interpret their social world to have meaning, in fact what people say and do has specific meanings communicated through shared symbols or the most common one which is language.

Whilst giving careful consideration to other methodological paradigms, this research study falls into the qualitative paradigm as the researcher is attempting to make sense and interpret the Fintech phenomena in terms of the view's of South African bankers. The qualitative paradigm gives the researcher the necessary flexibility needed to deal with the phenomena in its natural setting which cannot be quantified and can only be studied subjectively rather than objectively.

3.3.3 Participatory research

The basic tenet of this form of research is that it should contain an action agenda for reform that may change the lives of participants, the institutions they work or live in or could even change the researcher's life (Creswell, 2007, p.21). In Rahi (2017, p. 1-5) it is argued that supporters of the participatory paradigm felt that the positivist paradigm did not address social and political issues. These researchers believe that inquiry must contain political and social issues. Issues addressed by this paradigm include empowerment, inequality, alienation, oppression and domination amongst others.

3.4 RESEARCH APPROACH

3.4.1 Ethnographic studies

This research approach can be defined as a qualitative design in which the researcher interprets and describes the learned and shared values, beliefs, behaviours and language of the culture-sharing group. As a process it entails extended observations of the group, this most often takes place as participant observation, in which the researcher immerses themselves in the day to day lives of the group and observes or interviews the participants (Creswell, 2007, p. 68). In Yin (2006, p. 14) it is suggested ethnographic methods seek to satisfy two conditions such as the use of close-up detailed observation of the natural world by the researcher and to avoid commitment theoretical model prior to undertaking the research.

3.4.2 Case Study

A case study is defined in Zainal (2007, p. 1-6) as one that allows the researcher to closely examine data within a specific context. In their true essence case studies explore and investigate real-life phenomenon through detailed contextual analysis of a limited number of events and their relationships. Creswell (2007, p. 73) defines case studies more broadly as a qualitative approach in which the investigator explores a bounded system over time, through detailed, in depth data collection which involves multiples sources of information and reports a case description or theme. Case studies focus on how and why questions and for this reason it is appropriate for descriptive and exploratory studies (Ponelis, 2015, p. 537)

3.4.3 Life histories or Narrative analysis

Life history is a method uses a narrative perspective to gather information about a person's experiences throughout their lives (Pereira & Álvaro, 2013, p. 40). Life histories can also be referred as narrative analysis using narrative models a researcher can gain an insight into the way human beings enact their lives through stories (Sandelowski, 1991, p. 163). Earthy and Cronin (2008, p. 420-439) adds that the narrative approach does not only concern story-telling components or

characteristics of an account, but also concern social interactions between interviewer and interviewee that encourage and influence the way that the account is presented.

3.4.4 Phenomenology

Phenomenology studies involve exploring the living experiences of individuals in regard to a certain phenomenon and provides a greater understanding and enlightenment into the meaning that such individuals attribute to their experiences (Kalu, 2017, p. 47). The purpose of phenomenology as described in Creswell (2007, p. 58) is to reduce individual experiences with a phenomenon to a description of universal essence. Another interesting explanation is van Manen (2007, p. 12) who views phenomenology as a sober reflection on the lived experience of human existence, which should be free from theoretical, prejudicial, and intoxications.

3.4.5 Grounded theory

Grounded theory is a creative process that is appropriate to use when there is a lack of knowledge or theory of a topic. There are no solutions provided by existing theory or availability for modifying existing theory, it identifies a series of events and how these change over time (Bluff, 2005, p. 147). As stated in Creswell (2007, p. 62-63) the intent of grounded theory study is to move beyond description to generate discovery of a certain theory. The overall outcome of grounded theory should provide a theory or conceptual framework of processes, actions or interactions that are grounded in the research participant's view.

3.4.6 Hermeneutics

Hermeneutics philosophy confronts the problem of meaning, in essence the problem of meaning is focused on whether it is possible for anyone to completely and precisely understand the communication from another person (Chandler, 2013, p. 635). Forster (1996, p. 1) agrees and views hermeneutics as the theory of interpretation, such as texts, utterances and so on.

3.5 SAMPLING DESIGN

Sampling can be simply defined as selecting the segment of the population for investigation, it is a process of selecting a sample of units from a data set, so a researcher can measure the beliefs, characteristics and attitudes of these people, and use these to generalise similar beliefs and characteristics of a broader group.

3.5.1 Population

The population of this study was executives and managers of Banks in South Africa, in particular the 6 largest banks namely ABSA, Capitec, FNB, Nedbank Standard Bank and Investec. These managers and executives have the knowledge and expertise needed to answer the research questions, as well as provide a unique insight into the perceptions of their thoughts and feelings towards the phenomena known as Fintech.

3.5.2 Sampling frame

A sampling frame defines the members of the population who are eligible to be included in the research sample, this puts a boundary around the cases acceptable to be included in this study (Morgan, 2012, p. 801).

It should be noted that no sample frame exists as no list of all the individual bankers in South Africa was available to the researcher, thus for the purposes of this study, the technique of non-probability sampling was used to select 5 bankers.

3.5.3 Sampling method

The sampling method was non-probability purposive sampling. Purposive sampling is a strategy in which particular settings, persons, or events are deliberately selected for the critical information they can provide that simply would not be able to be generated from other choices (Maxwell, 2009, p. 235). Gentles, Charles, and Ploeg (2015, p. 1778) states that the logic and power behind purposive sampling lies in selecting information-rich cases for in-depth study. Information rich cases are those from which one can learn a great deal about issues of vital importance to the purpose of the research inquiry. Interviewees or participants are selected on their knowledge

and ability to describe a group or subculture they are a part of. The five selected bankers were South Africans working within the biggest six banks who have knowledge and expertise in Fintech, banking innovation and banking regulation. Only five that can be accessed the easiest within this population would be used.

3.6 DATA COLLECTION METHOD

3.6.1 Interviews

According to Brinkmann and Given (2012, p. 471) interviewing is a conversational practice where an interaction between interviewer and interviewee produces knowledge, unlike every day conversations this research interview is often carried out to serve the researchers objective. Most research interviews involve the researcher asking questions and the interviewee being the respondent.

3.6.1.1 In-depth semi-structured interviews

In-depth interviews are interviews in which participants are encouraged to speak in-depth about the topic being investigated and the researcher does not use predetermined, focused or short-answer questions. In-depth interviews are also called semi-structured interviews because the researcher retains some control over the direction and content being discussed, however participants are free to elaborate or take the interview in a different but still related direction (Given, 2012a, p. 423). Semi-structured and structured interviews involve relatively standardised interview questions to all participants in the research study. This creates a structure that gives equal opportunities to provide data to all persons involved in the study across the same research constructs. Researchers use this when they have already garnered tentative hypotheses regarding what the interviewee might contribute to the interview (Firmin & Given, 2012a, p. 838).

3.6.1.2 Unstructured interviews

Unstructured interviews involve asking open-ended questions of research participants to discover their perceptions on the topic of interest. In this method the researcher

usually asks vague general questions which means the interviewee determines the direction of the interview (Firmin & Given, 2012b, p. 907).

3.6.1.3 This research study

The data collection methods to be used was the use of in-depth semi-structured interviews. These interviews were one-on-one with ten predetermined questions. These ten questions were garnered from the literature review and the interview was particularly structured to gain the perceptions of South African bankers. The five interviewees were chosen for their expertise in innovation in banking and regulation. Some of the interview questions were open ended to allow the interviewees to give honest and detailed answers, the interviewer would only request clarity through a question and not provide any frameworks or suggested answers.

To record these interviews a voice recorder was used as this would provide accurate data collection for analysis and transcription which would appear in the annexure of the research study. Using this method would eliminate certain biases and allow the researcher to be fully subjective. The recording was captured on multiple devices such as voice recorder, mobile phone and a laptop to ensure that technical errors do not lead to loss of data or data being unusable. All interviewed parties had access to these recordings so that transparency between the interviewer and interviewee was maintained.

3.6.1.4 Interview schedule

This study uses the qualitative method of research and therefore a semi-structured interview schedule was constructed to gather data. The interview schedule consists of three parts, namely: Part A (Opening greetings), Part B (Questions) and Part C (Closing remarks) as set out in Table 3.1.

Table 3.1: Interview schedule

<p>A. Opening greetings</p> <p>Interviewee to give introduction of himself work title, background, education, previous employment if relevant</p> <p>Background and purpose of the study explained;</p> <p>Type of questions to be asked summarised; and</p>
--

Motivation for interviewing.

Timeline of the interview 60 minutes

B. Body

Ten questions from Literature on Fintech and South African financial services

1. Do you believe regulations in South Africa do not allow for innovation?
2. Do you feel regulations are biased towards banks and therefore place them at a disadvantage in terms of the technology space?
3. Do you feel that regulation needs to be reviewed so that banks can innovate or partner through Fintech?
4. What are your thoughts and views on the emergence of Fintech?
5. Considering the above question, do you feel the emergence of Fintech is positive for the banking industry?
6. Is your bank currently investing in preparation for the arrival of Fintech?
7. Do you feel the current investment/ strategy is sufficient?
8. Are you currently experiencing any loss of market share due to the emergence of Fintech companies?
9. Do you feel market share or new markets can be gained or created by partnering with Fintech companies?
10. What do you feel the financial services industry in South Africa will look like in the future?

C. Closing

Anything the interviewee would like to add that was not mentioned;

Closing remarks;

Greetings and thanks.

Source: Researcher's own construct

Table 3.1 shows the open-ended questions that were asked. An open-ended question is a type of question posed by researchers to participants that allows them to select how they answer the question in relation to the research topic. This method allows participants the opportunity to choose the terms in which they construct their descriptions and emphasises the topics they find meaningful. Open-ended questions make no presumptions about the kind of answers that might be provided by

participants. The data generated by this is usually wide-ranging, complex and lengthy (Given, 2012, p. 582-583).

3.6.2 Pre-testing of the interview schedule

A pilot test was conducted before the schedule for interviews was used. Two individuals were selected, one from African Bank and another from Grindrod Bank for this test. Feedback from the pilot test was considered and where necessary incorporated into the final schedule.

3.7 DATA-ANALYSIS METHOD

Manual qualitative data analysis was used. This entails four steps from pre-coding to the development of emerging themes.

3.7.1 Grounded Theory

The grounded theory method according to Given (2012, p. 375-377) consists of a set of systematic but flexible guidelines for conducting a qualitative enquiry that contrasts theories. During this process researchers using grounded theory writes memos that elaborate their codes by explaining the conditions under which these codes arise. The codes are then compared with other codes and specific data.

3.7.1.1 Open Coding

Matthew and Price (2012, p. 156-157) refers to open coding as a process through which grounded theory researchers begin the process of questioning, reflecting and categorising perspectives, actions and words of the participants in their study. Open coding begins with the raw research data gathered.

3.7.1.2 Axial Coding

Axial coding is described in Benaquisto (2012, p. 52) as the phase where categories and concepts that stand out are enhanced. The relationships between categories and concepts are pursued and researchers during this step ask questions on the data presented in a focused manner.

3.7.1.3 Selective Coding

Selective coding is the process that takes place after open and axial coding have occurred. Selective coding focuses on theoretical development regarding both the nature and relationships of essential categories that emerge from the data (Price, 2012, p. 158).

3.7.2 Concept Mapping

Concept mapping creates a visual representation of the relationships among a set of selected topics. The goal of this method of analysis is to create an actual map where concepts are represented as nodes and the relationship between them are represented by lines that link these nodes. These links that are created are labelled with descriptions of the relationships between the joining concepts. The result of concept mapping is similar to a network diagram that captures and shows the relationships among the set of topics. This method allows the participants to be more closely involved with analysing key topics while providing a concrete visual summary of the whole process (Guevara, 2012, p. 109).

Cognitive mapping was used in this research study to form connections and describe relationships between the codes created from the interview transcripts through data analysis. Cognitive mapping creates a mental map that the researcher can use to track linkages between concepts and present them in a visual form by starting with a principal idea and ideas that radiate from it and then proceeding to more complex maps with numerous interconnections which would entail additional main points. Cognitive mapping was used as a tool to track and summarize the progress by the researcher during data analysis (Silver & Lewins, 2017, p. 258-263).

3.7.3 Narrative Analysis

Narrative analysis refers to a family of analytic methods for interpreting texts that have a common storied form. As in families there is conflict and disagreement among different perspectives. Methods are case centred and form the basis for analysis. It can be individuals, identity groups, communities, organisations or even nations. Methods can be used to interpret different sorts of texts; be it oral, written or visual.

The term is used in social sciences to refer to texts that overlap at several levels. These can be stories told by research participants or the interpretation by the investigator from fieldwork observation and interviews or even the interpretive narrative a reader constructs after engaging with the participant and investigator's narratives. Narrative analysis interrogates intention and language like how and why events are storied and not simply the content to which the language refers (Riessman, 2012, p. 536-540).

This study involves ten structured questions asked to all participants in the same way. This gives the researcher the chance to create and compare narratives between the participants with the goal of interpreting and narrating it in the context of understanding the Fintech phenomena and the intention of the interviewees to express their precise views. Particular consideration was given to simplifying financial services terminology so that the reader would be able to understand the analysis clearly.

.3.8 ETHICAL ISSUES

When one's research ethics involves people then the ethical considerations affect each and every part of the research objective. The protection of the subject's dignity and the publication of the information in the research is of paramount importance. Informed consent is a major ethical issue when conducting research, informed consent means that a person knowingly, wilfully and voluntarily gives his or her consent in a clear manner to be a participant in the research study (Fouka, 2011, p. 4). What ethical behaviour does is it helps protect individuals, communities and environments and offers the potential to increase the perceived good in the world. It relates to values of honesty and fairness, and when such values permeate research then the respondents are more inclined to trust and contribute fully to the work undertaken. Researchers should also do more than avoiding harm and also act in the benefit of others (Israel & Hay, 2011, p. 2).

Stringent research ethics protocols were utilised throughout the duration of the study, in accordance with NMU policies. Ethics clearance from NMU was obtained (See Appendix 3). As NMU Ethic Form E. Form E dictates, since this research does not

include institutionalised people, minors, university staff or students, no gatekeepers needed to be approached to gain access to the people interviewed in this study.

Interviewees signed consent forms to say they voluntarily consent to being used in this research and can at any stage decide to remove themselves from this study should they wish to do so. The consent forms stated that the interviewee gives his or her consent to be audio recorded during the interview and that these recordings would only be used for the purposes of this research study. This data was to be interpreted for purely academic reasons and interviewees were notified when they were being recorded and when the recording session was over.

Confidentiality and privacy of interviews is safe guarded between the researcher, the interviewee and NMU, no other persons or organisations would be allowed to access this information. Access to the recordings can and will be provided to the interview per request. Access to the research findings would only be given to the participants by NMU otherwise they are to remain confidential. Consent forms of the interviewee can be reviewed at appendix 1.

3.9 CONCLUSION

The purpose of Chapter 3 was to explain the research design of the study by defining and explaining the three schools of thought, the three research paradigms, research approaches, sampling design, ethical issues, data collection, data analysis and how the reporting was done. Special attention was given to the research methods applicable to this research study and why they were chosen over and above other methods.

Chapter 3 explained that this study uses a qualitative or interpretive approach. It alluded to the fact that in-depth or semi-structured in-person interviews would be used for data collection, the interview questions incorporated and based on the themes that emerged from the literature review. The ethical issues in this study were addressed and reflected upon in detail, as well as how the synthesis was completed. The data analysis method chosen was manual coding due to the relatively small, but specialised

sample used for analysis, and to ensure all nuances of the context of Fintech were included and explained.

CHAPTER 4

EMPIRICAL RESULTS

4.1 INTRODUCTION

In this chapter responses to the open-ended interviews are used to gain insight into the perceptions of bankers, regarding the disruptive potential of the Fintech phenomena on the financial services industry in South Africa. Coding and comparing the codes helped the researcher to identify themes in all the participant's accounts.

This chapter involves an in-depth analysis and interpretation of the research data. It begins with initial coding, followed by focused coding and constant comparison between emerging sets of data. Employing the method of constant comparison, the data was scrutinised for incidents of repetition across different interviews. The sole purpose being ensuring all questions were adequately answered.

The development of codes from the data emerges into themes presented by the researcher to be used in the final chapter. The final chapter reflects the results and findings based on the data analysis from this chapter.

4.2 QUALITY AND RIGOUR OF THE STUDY

Rigor in research best thought of in terms of quality of the research process. The more rigorous the process the more trustworthy the findings are. A number of features are thought to define rigorous qualitative research (Saumure, 2012, p. 796). For the purpose of this study issues of credibility, transferability, dependability and confirmability are discussed.

4.2.1 Credibility

Jensen (2012, p. 139) defines credibility as methodological procedures and sources used to establish a high level of harmony between the participants' expressions and the researcher's interpretations of them.

To achieve this member checks were done by taking the transcripts back to the interviewees to check if what has been constructed from the data is in fact what they said and correct any interpretation errors that might have occurred. Another way is to take enough time with the interviewees to get the right information needed. Thereafter, colleagues and support networks that are knowledgeable in Fintech can review and critique the research and provide inputs (Jensen, 2012, p. 139)

4.2.2 Transferability

In Jensen (2012b, p. 886-887) it is suggested for a researcher to increase transferability they should focus on two key considerations. First how close are the participants linked to the context being studied and secondly the contextual boundaries of the findings. This research study uses two strategies to increase the transferability in this study, thick description and purposeful sampling (Jensen, 2012b, p. 886-887). Thick description means the researcher gives the reader a full and purposeful account of the research design, contexts and participants so the reader can determine the transferability. The other strategy is the use of purposeful sampling, where participants chosen are consistent with the research design and enhance the potential that readers can assess the transferability to their given context.

4.2.3 Dependability

Dependability in a qualitative research study recognises that the context of the research is evolving and cannot be completely understood at a singular moment in time. Dependability accounts for this through the relevant methodologies that address and is able to explain the nuances and seeming contradictions or incongruencies emanating from the data collection. A qualitative study is open to variation and change, to ensure dependability the researcher tracked all nuances. This process is called an inquiry audit. An external agent reviews the data analysis to ensure that any changes in the research design have both methodological and theoretical grounds and can be linked to the discovered data (Jensen, 2012b, p. 209).

4.2.4 Confirmability

Confirmability is often equated with reliability and objectivity in qualitative research, these are measures of accuracy of the truth and meaning being expressed in the study. Confirmability can accurately verify the basic goals of qualitative research namely to understand a phenomenon from the research participants and too understand the meaning people give to their experiences (Jensen, 2012a, p. 112-113).

Confirmability in this study was established through an audit trail by getting an independent reviewer to verify the process and interpretations are consistent with both the literature and methodological levels (Jensen, 2012a, p. 112-113)

4.3 INTERVIEWEES BACKGROUND

4.3.1 Participant 1

Participant 1 is the Head of Product Management – Transactional Products and Services at Standard Bank. The participant previously worked for companies such as: Nedbank, Greentech Telecoms, Citibank and HSBC specialising in payments and collections. The participant has been in banking for 25 years and started their career at Standard Bank and has been back at Standard Bank for 5 years. The participant's current role involves payment collections and liquidity management for transactional products and services.

4.3.2 Participant 2

Participant 2 is a Disruption Analyst within the Nedbank Disruption and Innovation Team which lies in the Corporate and Investment Banking department. The participant has been with Nedbank for 3 years and participated in the Nedbank Graduate Programme. The participant's education includes a bachelor's degree in Actuarial and Business Science.

4.3.3 Participant 3

Participant 3 is the Head of Digital and Data Solutions at Capitec Bank. The participant has worked at Capitec for 13 years. The participant has also been a CEO of a micro-finance bank in Nigeria. The participant has experience in Zimbabwe, Nigeria, South Africa, Australia and the United Kingdom's financial services markets. The participant has also previously been employed at Morgan Stanley and Next Systems. The participant's education includes a bachelor's degree of Business Science and an Honour's Degree in Finance. The participant is a qualified Chartered Management accountant and also holds a Master's in Business Administration (MBA).

4.3.4 Participant 4

Participant 4 is the Chief Operations Officer at Investec Corporate and Institutional Banking. The participant has a Bachelor of Commerce degree and previously worked for the old Boland Bank before being employed at Citi Bank London, HSBC London and Old Mutual London.

4.3.5 Participant 5

Participant 5 is the Head of Digital and Partnerships at Absa and has been in banking for 20 years, mainly in the digital space for both Standard Bank and Absa. The participant has been with Absa now for 9 years. The participant has a bachelor's degree in Mechanical Engineering and Software Development and also has a post graduate diploma in Business Administration.

4.3.6 Pilot test interviewees

4.3.6.1 Pilot participant 1

Pilot participant 1 is a Balance Sheet Management Executive at African Bank. The participant is a qualified chartered accountant and has worked for UBS, Old Mutual, Nedbank and Absa.

4.3.6.2 Pilot participant 2

Pilot participant 2 is the Chief Operating Officer at Grindrod Bank and holds an MBA and degrees in Physics, Computer Science and Mathematics.

The age of the five participants that were interviewed for the main study are provided in Table 4.1.

Table 4.1: Age of the participants

Participants	Age
Participant 1	40 – 50 years
Participant 2	20 – 30 years
Participant 3	40 – 50 years
Participant 4	50 – 60 years
Participant 5	40 – 50 years

Source: Researcher's own construct

Table 4.1 show the majority of participants fall between the 40- and 50-year age bracket. The number of years work experience of the participants is summarised in Table 4.2.

Table 4.2: Work Experience of the participants

Participants	POSITION HELD	YEARS OF BANKING EXPERIENCE
Participant 1	Head of Project Management – Transactional Product Services	20+ years
Participant 2	Disruption Analyst	Less than 5 years
Participant 3	Head of Digital and Data Solutions	20+ years
Participant 4	Chief Operating Officer – Corporate and Institutional Banking	20+ years

Participant 5	Head of Digital and Partnerships	20+ years
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Source: Researcher's own construct

Table 4.2 shows that four participants have more than 20 year's work experience and are therefore considered experts in their field.

4.4 NOTES ON INTERVIEWS

4.4.1 Notes on Participant 1 – This interview was relaxed and informal. It ran over the allotted time due to the interviewee's passion for the subject matter. The participant was very helpful in giving the researcher direction to understand the South African context better. The researcher found the interviewee to be very creative and decades of banking experience has not hindered his forward thinking.

4.4.2 Notes on Participant 2 – The interviewee exuded a youthful enthusiasm for the topic. The participant is passionate about regulation, new technologies and out of the box thinking with regards to banking. The interviewee elaborated on topics that are of interest personally and projects currently involved in.

4.4.3 Notes on Participant 3 – This interview was very formal. The participant provided short yet concise answers. The culture experienced at this interview was very different compared to all other interviews. The interviewee took confidentiality very seriously and did not feel overly comfortable elaborating on certain responses. However, the participant gave insight on how Capitec views the South African context, in other words, Capitec's house view.

4.4.4 Notes on Participant 4 – This interviewee was extremely knowledgeable and has a mentoring personality. This participant took to answering the questions in great detail and explained banking processes thoroughly. The researcher could sense the interviewee has very confident opinions due to the vast years of experience both domestically and internationally. The participant's explanations on how South Africa fits into global financial services was very enlightening. The interviewee made the

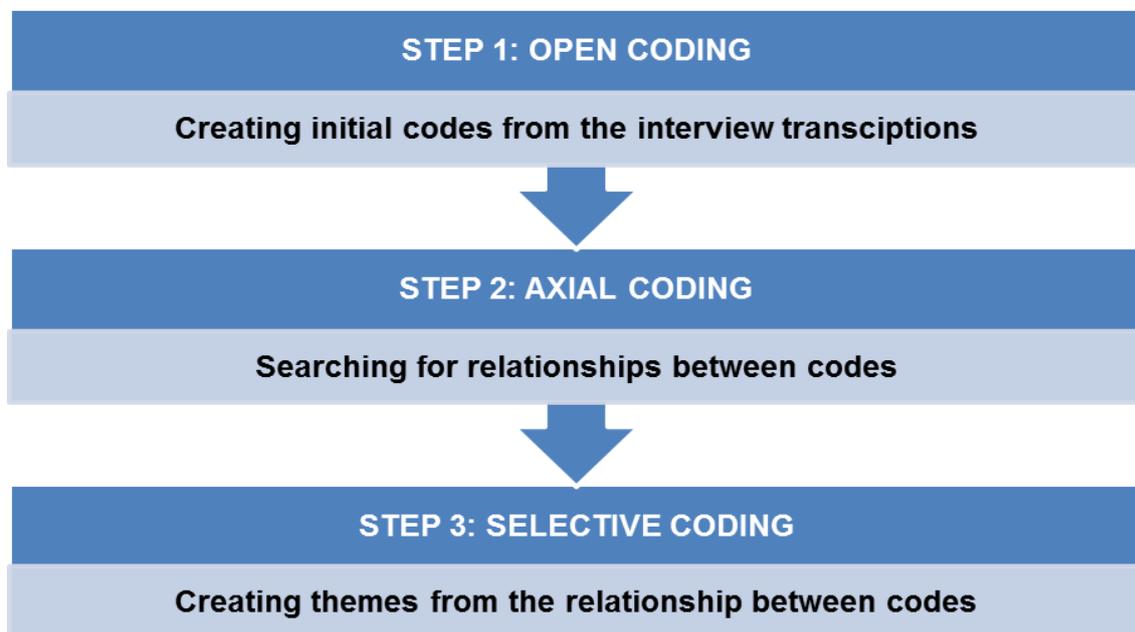
researcher feel at ease when asked any questions and made sure that they elaborated enough when answering all questions.

4.4.5 Notes on Participant 5 – This interviewee was very approachable and laidback. This participant was passionate about the topic. The interviewee is very future-oriented and a new generation banker. The participant spoke predominantly about their area in Absa and not the bank holistically hence the answers were more detailed. The interviewee made sure the researcher had received enough information from the answers and that all answers were elaborated on sufficiently.

4.5 THE CODING FRAME

Figure 4.1 is an illustration of the steps followed during the coding process.

Figure 4.1 The Coding Frame



Source: Researcher's own construct

Figure 4.1 displays the three steps in data coding that was introduced and described in Chapter 3. The first step includes open coding, where codes are created from reading through the interview transcripts. The second step involves axial coding where relationships are sought between the codes established in the previous step. The third

and final step of selective coding is to establish themes that arise from the relationship between codes that emerged in the previous steps.

4.6 INITIAL CODING OF THE INTERVIEW DATA

Figure 4.2 is a snapshot of the interview transcription. This included highlighting of key quotations and initial thoughts from the researcher.

Figure 4.2 Interview transcription snapshot

<p>Researcher My next question is do you feel regulations are biased towards banks and therefore place them at a disadvantage in terms of the technology space?</p>	
<p>Participant 1 Sigh so there's this constant question that banks face or fintechs face let's put it that way right is a bank a tech company or is a tech company a bank the difference is the regulation that governs the two the fintech company is not necessarily governed by the regulations strict regulations that financial institutions are held by take a simple example of deposit holding so for me to hold your deposit means there are reserving requirements or certain criteria I would need to meet in order to hold your deposit a telco does not have the same regulations telco is not governed by the regulations yet the telco will offer you mobile money right? So, they will help facilitate the movement of money but they do not have the same regulations so if you think of KYC and the way we see KYC versus the way you see RICA its completely different you can get a light version versus a very heavy version and that's where the difference comes in. So I do believe the playing field is not necessarily level don't think that's a bad thing either because if it was level maybe if it was level you would get better innovation from banks I don't think banks have not innovated they have innovated in the space that they could in a recent survey conducted by SWIFT we have seen compliance costs go up by 20% right now that's also because you've seen the reckless lending</p>	<p><i>fintech not governed the same as banks the fintech company not necessarily governed by the regulations strict regulation. Eg. bank institution is not held by</i></p> <p><i>telco's do not need to subscribe to banking regulations. telco is not governed by the regulations</i></p> <p><i>"playing field is not necessarily level"</i> <i>the playing field is not level.</i></p> <p><i>banks have however still been able to innovate under current regulation.</i></p> <p><i>compliance costs of banks have gone up 20%</i></p> <p><i>11 compliance costs go up by 20%</i></p>

Source: Researcher's own construct

Figure 4.2 above is a depiction of the first step taken by the researcher after all the interviews were transcribed and read. The researcher highlighted any initial quotations that were found to be important or relevant to the study. The corresponding initial thoughts of the researcher for these quotations, were then tabulated in the margin. Figure 4.3 that follows is a snapshot view of the colours that were used to group codes that were identified.

Figure 4.3 Colour-coded book

3. Do you feel regulation needs to be reviewed so that banks can innovate or partner through Fintech?		
Participant 1	Creates a level playing field so its not that it stifles innovation, it does also protect or try to protect	Protects the industry
	Central Bank ran a block chain proof of concept and the banks were part of that and a Fintech company	SARB new efforts with banks and Fintechs
	The question is Does the future generation actually want this	Future generations prefer innovation over protection
Participant 2	I think banks are already innovating and partnering in Fintech	Already happening
	There are certain areas of regulations where there is a lot less flexibility	Some regulation stifling partnerships
	I think there is always scope for the regulators to be more open	Regulators to decrease regulation
Participant 3	The sandbox type environment where regulations don't necessarily apply is quite exciting	Future scenario sandbox
	Yes	Agrees
	Some of the practicalities havent changed so you are still required for example to submit a report that contains particular fields and that report necessarily becomes de facto regulation	Some regulation stifling partnerships
Participant 4	No i don't think so, I think the SARB has been SA INCs savior	Current regulation sufficient
	International bodies that will grade us and rank us according to regulation	Protects the industry
	They will at some point run out of regulation	Regulators to decrease regulation
Participant 5	We are not prevented from partnering with Fintechs infact we are doing more and more of that by the day	Already happening
	Regulators initiate certain things like we found out with distributed ledger, Block Chain and so forth	SARB new efforts with banks and Fintechs

Source: Researcher's own construct

Figure 4.3 is an illustration captured by the researcher depicting the breaking down of codes and assignment of colour for ease of reference. Each colour is unique to a certain code allowing the researcher the ability to keep track of progress. Figure 4.4 is used to show the open coding process that was utilised.

Figure 4.4 Open coding of data

6	+1			
Banks need Fintechs				
Banks need Fintechs and Fintechs need banks	Participant 1	Collaboration with Fintechs	Participant 1	Customer focused
Big Technology firms could dominate financial services	Participant 2	Participant 1	Participant 1	Participant 3
Changing Legacy infrastructure by going digital	Participant 3	Participant 4		
Changing Legacy infrastructure by going digital	Participant 4			
Changing Legacy infrastructure by going digital	Participant 5	Innovation culture within the bank		Fintech solves specific
Fintech is very niche focused and only offers certain financial services		Participant 3		Participant 1
Focus on client experience		Participant 5		
Innovation culture within the bank				
Innovation culture within the bank		Changing Legacy by going digital		Technology will continue to evolve rapidly
Investing and acquiring Fintech companies		Participant 2		Participant 1
Investing and acquiring Fintech companies		Participant 4		
Investing and acquiring Fintech companies		Participant 5		
Only going to invest in certain areas				
Preparing for the future		Investing and acquiring Fintechs		
Scanning the environment		Participant 1		
Technology focused		Participant 4		
Technology focused		Participant 5		
Technology focused				
Technology focused		Technology focused		
Technology focused		Participant 1		
		Participant 2		
		Participant 3		

Source: Researcher's own construct

Figure 4.4 is snapshot view of the open coding process that was utilised by the researcher in order to find codes between the different participants answers. This enabled the researcher to match participant's answers to a unique code. The researcher could now easily identify which participants answered the question similarly. 4.6.1 to 4.6.10 is the results gathered from this process.

4.6.1 Do you believe regulations in South Africa do allow for innovation?

Interviewees surmised that they were tangible progressive steps that were being taken by regulators to push for a more innovative environment. The interviewees deduced that this was a positive sign that regulators understood the need for an environment which is conducive for innovation. Up until this point in time, it was pointed out that regulators had been overly focused on the stability of the financial services sector. Bankers felt that this new openness could lead to a more constructive relationship between banks, Fintech companies and regulators.

There were, however, negative themes that emerged such as: current regulation being insufficient and the need for regulators to allow for greater innovation. Unnecessary regulation that does not contribute to the stability of the sector was listed as a hindrance that could be reviewed to be more innovation-friendly. A possible sandbox

emerged in the interviews as a way in which regulators can allow firms to innovate and allowing regulators an opportunity to gauge how they can regulate these new technologies by studying them in a controlled environment in real time. Table 4.3 displays the key quotes gathered from the participants with regards to question one.

Table 4.3: Key quotes gathered during question one

KEY QUOTES FROM PARTICIPANTS FOR QUESTION 1	
PARTICIPANT:	QUOTE:
Participant 1	<i>"What I am seeing is that the regulator themselves are now pushing for innovation."</i>
Participant 1	<i>"There is a conflict between regulation and what Fintechs are trying to achieve."</i>
Participant 2	<i>"I will be interested to hear what they say on their proposed sandbox."</i>
Participant 3	<i>"Regulations do allow for innovation, but I think insufficiently, so I think there is scope to change the regulations to allow for more innovation in banking."</i>
Participant 5	<i>"There is an openness for the regulators."</i>

Source: Researcher's own construct

Table 4.3 displays the quotes gathered from the interviewees when they answered question one during the interviews.

4.6.2 Do you feel regulations are biased towards banks and therefore place them at a disadvantage in terms of the technology space?

The data gathered during the interview process confirmed that Fintech companies were at an advantage in terms of not having the burden of regulation that banks face.

Banks regulatory spend increases year on year by between 20 and 30%. Fintech companies on the other hand, have no or limited regulations to comply with.

The interview data gathered had a predominantly negative tone as regulation was found to be somewhat biased towards banks and this placed banks at a disadvantage in the technology space. The dominant theme amongst bankers was that the burden of regulation imposed was largely due to regulators focusing on the stability of the banking sector rather than innovation.

The interview data gathered proved that regulation is stifling competition in the industry and interviewees especially believed that a level playing field is necessary so that banks and Fintech companies can compete effectively. Table 4.4 shows the key quotes gathered from the interviewees when answering question two.

Table 4.4: Key quotes gathered during question two

KEY QUOTES FROM PARTICIPANTS FOR QUESTION 2	
PARTICIPANT:	QUOTE:
Participant 2	<i>"It does place a huge regulatory burden on the banks which some Fintechs do not necessarily have to deal with."</i>
Participant 3	<i>"Focus on stability has led to the banks particularly being over-regulated."</i>
Participant 4	<i>"Our regulatory spend is massive, the regulatory spend has gone up over the last 7 years close to 30%."</i>

Source: Researcher's own construct

Table 4.4 displays the quotes gathered from the interviewees when they answered question two during the interviews.

4.6.3 Do you feel regulations need to be reviewed so that banks can innovate or partner through Fintech?

The data analysis for this question revealed that there were both positive and negative views that emerged. Positive themes included that current regulation was effective in protecting the financial services industry and it currently allows Fintech companies and banks to collaborate. The South African Reserve Bank was praised for the work it has done in regulating the banking industry and for initiatives it has suggested to enhance Fintech innovation. Bankers also mentioned that partnering with Fintech companies was already occurring and at a more frequent rate.

An opposing negative theme also arose; this pertained to certain regulation being too rigid and the need for regulators to be more open and flexible regarding collaboration. The data warns that requiring banks to submit a report could actually be seen as another form of regulation. A regulatory sandbox was touted as being a way for regulators to create a controlled environment in which banks and Fintech companies could collaborate to test new innovations. Table 4.5 displays the key quotes gathered from the participants with regards to question three.

Table 4.5: Key quotes gathered during question three

KEY QUOTES FROM PARTICIPANTS FOR QUESTION 3	
PARTICIPANT:	QUOTE:
Participant 2	<i>“The sandbox type environment where regulations don’t necessarily apply is quite exciting.”</i>
Participant 3	<i>“Some of the practicalities haven’t changed so you are still required for example, to submit a report that contains particular fields and that report necessarily becomes de facto regulation.”</i>

Participant 4	<i>“No, I don’t think so, I think the SARB has been SA Inc’s saviour.”</i>
Participant 5	<i>“We are not prevented from partnering with Fintechs in fact we are doing more and more of that by the day.”</i>

Source: Researcher’s own construct

Table 4.5 displays the quotes gathered from the interviewees when they answered question three during the interviews.

4.6.4 What are your thoughts and views on the emergence of Fintech?

Questions on Fintech and Fintech companies evoked positive emotions throughout the interviews and it was deduced that Fintech in general had numerous advantages that could assist banks with specific customer needs. It was recognised that Fintech and Fintech companies are extremely focused on the client and design products and services that attend to a very specific client need. The respondents believed that this was an area that banks could improve on.

Another positive advantage of Fintech companies that emerged was collaboration. It is believed that through collaboration or partnerships between banks and Fintech companies, innovative solutions that solve particular financial services problems could be created. There is a very clear synergy between what banks and Fintech companies are trying to achieve. This could enable a bigger market place for all participants involved in this industry. One of the most positive themes highlighted was that banks view Fintech companies as potential partners rather than direct competitors.

However, interviewees mentioned that the Fintech concept was not entirely new and that it had been around for many years but under different names. The term has become popularised in recent years due to technology advancing at a much faster rate. Table 4.6 displays the key quotes gathered from the participants when they answered question four.

Table 4.6: Key quotes gathered during question four

KEY QUOTES FROM PARTICIPANTS FOR QUESTION 4	
PARTICIPANT:	QUOTE:
Participant 2	<i>"It's been around for a long time, it's just that technologies are rapidly advancing and reducing in costs."</i>
Participant 4	<i>"I think Fintechs make it easier because I can go after a very specific need."</i>
Participant 5	<i>"View Fintechs as prospective partners as opposed to direct competition."</i>

Source: Researcher's own construct

Table 4.6 displays the quotes gathered from the interviewees when they answered question four during the interviews.

4.6.5 Do you feel the emergence of Fintech is positive for the banking industry?

Fintech, and what it has done for banking overall was seen positively especially in the South African context. Bankers conceded that South African banks had become complacent and were working on inherited outdated models. The competition that Fintech companies brought into the financial services sector forced banks out of their comfort zones thereby improving the industry as a whole.

Once again, the focus on customers by Fintech companies was highlighted. The innovation created by these companies proved successful as it is designed around the customer's needs, drastically reducing the cost around servicing customers. The potential for Fintech to enhance financial inclusion supplemented the literature as a possible advantage.

Fintech in general, from all participant’s point of view, has had a positive impact on the South African financial services industry. Table 4.7 displays the key quotes gathered from the participants with regards to question five.

Table 4.7: Key quotes gathered during question five

KEY QUOTES FROM PARTICIPANTS FOR QUESTION 5	
PARTICIPANT:	QUOTE:
Participant 1	<i>“Banks definitely got complacent.”</i>
Participant 2	<i>“Why Fintech does very well, they are designed entirely for the customer.”</i>
Participant 2	<i>“Competition is good because it is good for the consumer, brings down the cost of financial services and increases inclusion.”</i>
Participant 4	<i>“Very positive thing for South Africa.”</i>

Source: Researcher’s own construct

Table 4.7 displays the quotes gathered from the interviewees when they answered question five during the interviews.

4.6.6 Is your bank currently investing in preparation for the arrival of Fintech?

Bankers viewed their bank’s investment strategies as very focused on technology and their banks being heavily invested in improving this. The predominant theme extrapolated from the interview data was that most South African banks have legacy infrastructure that hampers innovation and was proving a major hindrance. Respondents felt that using a strategy of ‘going digital’ or creating a digital bank is vital to their bank’s success. A digital strategy was seen as a way to move away from legacy infrastructure.

Another strategy or investment focus mentioned, was to partner with Fintech companies. Collaboration with Fintech companies by either investing or acquiring

them was seen as essential. It seems as though all South African banks interviewed were currently pursuing this strategy. These collaborations were focused on increasing innovation in banking products and services and creating an innovative culture within the banks. Table 4.8 shows the key quotes gathered from the interviewees when they answered question six.

Table 4.8: Key quotes gathered during question six

KEY QUOTES FROM PARTICIPANTS FOR QUESTION 6	
PARTICIPANT:	QUOTE:
Participant 1	<i>"We have many investments in Fintech start-ups."</i>
Participant 2	<i>"We have a strategy we call Managed Evolution which is looking at our legacy and construction and how we can digitize the bank."</i>
Participant 5	<i>"The short answer is yes, we have done some work with Fintechs, we are doing some experimental work with Fintechs."</i>

Source: Researcher's own construct

Table 4.8 displays the quotes gathered from the interviewees when they answered question six during the interviews.

4.6.7 Do you feel the current investment/strategy is sufficient?

Interviewees opinions were split on whether their bank's investment strategy is sufficient. Respondents who felt that current investment was insufficient, mentioned that they would like to see their bank being more progressive concerning Fintech. These interview responses cited limited budgets compared to large international banks as one of the main hindrances. South African banks lack the financial resources to spend what international banks can spend on investing in Fintech. Another hindrance

mentioned was shareholder’s pressurising banks for increased dividends, thus them being opposed to any large investments.

The interviewees that felt their bank’s investments were sufficient seemed to suggest that their bank was investing their budgets in the right areas to achieve future success. The data suggested that investment into Fintech was crucial and that technology infrastructure should be upgraded continuously. Table 4.9 displays the key quotes gathered from the participants with regards to question seven.

Table 4.9: Key quotes gathered during question seven

KEY QUOTES FROM PARTICIPANTS FOR QUESTION 7	
PARTICIPANT:	QUOTE:
Participant 1	<i>“The amount of money they spend in IT would shame us.”</i>
Participant 2	<i>“Yeah there is so much going on and so much necessary work.”</i>
Participant 4	<i>“I always believe we can be more progressive.”</i>
Participant 5	<i>“Bigger challenge is how do we proportion it to the right place.”</i>

Source: Researcher’s own construct

Table 4.9 displays the quotes gathered from the interviewees when they answered question seven during the interviews.

4.6.8 Are you currently experiencing any loss of market share due to the emergence of Fintech companies?

The interview data suggested by respondents is that no significant market share was being lost by their bank to Fintech companies; and if any market share was being lost it was minute or in a very specific area.

Certain reasons, such as the trust factor of banks were mentioned as to why Fintech companies were unable to achieve market share. According to the data gathered Fintech companies were unable to achieve the necessary scale to compete against banks. It remained inconclusive from the interviews whether Fintech companies in South Africa were necessarily targeting the market share of the big banks.

It was suggested in the interviews that Fintech companies in South Africa will pose a bigger threat to banks in future. In order for this to occur Fintech companies will have to gain scale and trust. In the literature it was found that Fintech companies in other parts of the world have been able to achieve scale and trust. Table 4.10 displays the key quotes gathered from the participants with regards to question eight.

Table 4.10: Key quotes gathered during question eight

KEY QUOTES FROM PARTICIPANTS FOR QUESTION 8	
PARTICIPANT:	QUOTE:
Participant 1	<i>"Where you lose might be in the value that you could have added to the client's life, you are not necessarily losing on the deposit side."</i>
Participant 2	<i>"I don't think any Fintech in South Africa has reached the scale to challenge a bank and also they are not necessarily starting out targeting the market share of banks."</i>
Participant 4	<i>"I don't think so, I think in actual fact throughout the technology advances we are putting into the bank we are gaining market share because we always think digital first."</i>

Participant 5	<i>“Undoubtedly that would become a bigger risk in future.”</i>
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Source: Researcher’s own construct

Table 4.10 displays the quotes gathered from the interviewees when they answered question eight during the interviews.

4.6.9 Do you feel market share or new markets can be gained or created by partnering with Fintech companies?

Overwhelmingly positive emotions emerged throughout the interview process with regards to what can be gained from banks partnering or collaborating with Fintech companies. It was felt that Fintech companies could open up new markets for banks through effective collaboration whilst banks would give Fintech companies the scale and the client base it needs.

Bankers interviewed felt that the customer focus of Fintech companies can enhance the overall customer experience whilst opening up markets in the financial inclusion space both inside and outside the borders of South Africa. Fintech companies were seen to have a bigger appetite for risk compared to banks, banks can use this to go into markets such as alternate lending, using different methods compared to what they already use. Table 4.11 displays the key quotes gathered from the interviewees when they answered question nine.

Table 4.11: Key quotes gathered during question nine

KEY QUOTES FROM PARTICIPANTS FOR QUESTION 9	
PARTICIPANT:	QUOTE:
Participant 1	<i>“Most definitely right there is this construct or concept of financial inclusion.”</i>

Participant 4	<i>“We do believe the Fintech model or market place allows us to go into other areas.”</i>
Participant 5	<i>“What do they bring to the table that us as a bank may not necessarily be experts at.”</i>

Source: Researcher’s own construct

Table 4.11 displays the quotes gathered from the interviewees when they answered question nine during the interviews.

4.6.10 What do you feel the financial services industry in South Africa will look like in future?

Two concepts proved dominant in how interviewed bankers viewed the future, namely: new technology would continue to develop rapidly, and that competition would be fiercer in the financial services sector and in banking in particular.

The banks of the interviewed respondents appear to be focused on these new technologies and what they could mean for their clients. Bankers interviewed seemed well aware of new emerging technologies. Of all these technologies, digital banking and biometrics seemed to be ones nearest to fruition and most likely to be adopted quickly by their clients.

Respondents felt that competition would be more intense with the suggestion that new banks and Fintech companies would prove more of a threat. The fear that the interviewed bankers portrayed was that, should they not implement new technologies effectively, they would be disrupted and lose market share to competitors. The interview data suggested that the successful financial services companies of the future would be the ones that add the most value to their customer’s lives. Table 4.12 displays the key quotes gathered from the participants with regards to question ten.

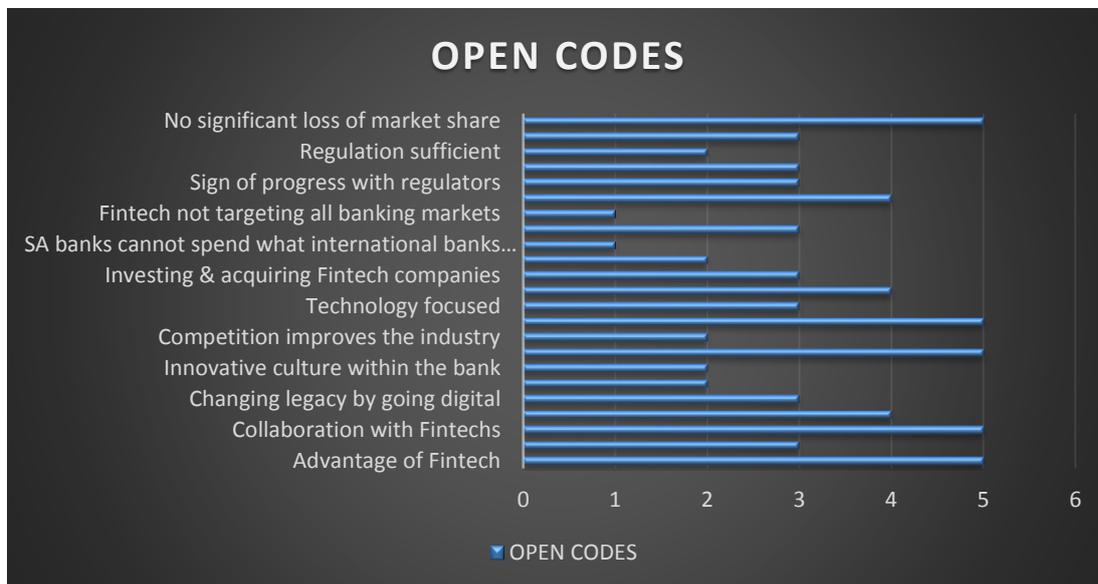
Table 4.12: Key quotes gathered during question ten

KEY QUOTES FROM PARTICIPANTS FOR QUESTION 10	
PARTICIPANT:	QUOTE:
Participant 2	<i>"We are deeply interested in technologies like VR, AR, Simulated Realities, Biological Technologies, NANO Technology, all these things."</i>
Participant 3	<i>"There will be an increase in the number of competitors in the banking market."</i>
Participant 4	<i>"If you want to run a small specific bank for specific people, I believe there is an opportunity."</i>
Participant 5	<i>"Customers expect more of us, we need to add real value."</i>

Source: Researcher's own construct

Table 4.12 displays the quotes gathered from the interviewees when they answered question ten during the interviews. Figure 4.5 below is a graph that displays all the open codes that were gathered from the interview data.

Figure 4.5: Open Codes



Source: Researcher's own construct

Figure 4.5 represents the open codes where there was a degree of agreement amongst the participants. Some of the highlights from this graph were, Advantage of Fintech, Collaboration with Fintech, Positive view on Fintech, Fintech is good for banking and No significant loss of market share, were all codes that all participants agreed upon.

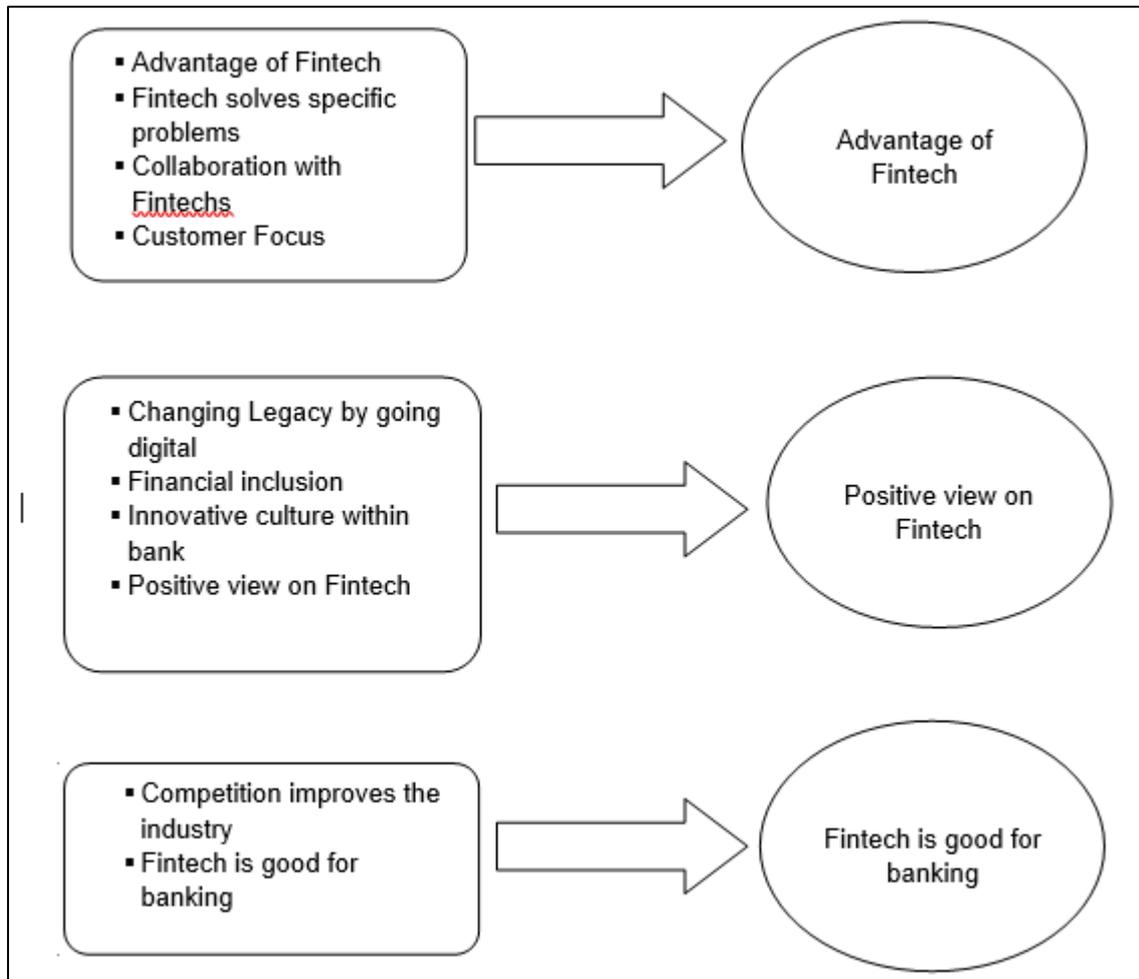
Other interesting codes from the graph were that the regulatory process, for example: The Reserve bank setting up a Fintech unit and the establishment of Project Khokha, was promising. The majority of participants mentioned that Banks struggle with legacy technology and their bank's strategy is to try and overcome this is by going digital. Participants feel that technology will continue to evolve rapidly and there should be increased investment in the technology space.

Interviewees felt that Fintech companies are very focused on customer needs and that financial inclusion is one possible area that can be targeted through collaboration between banks and Fintech companies. The majority of participants mentioned that Fintech has always existed; the word Fintech has just become popular recently. Another aspect, participants agreed upon was that, banks also had some disadvantages to Fintech companies in the regulatory space.

4.7 AXIAL CODING

Figure 4.6 below is a snapshot of the axial coding process.

Figure 4.6: Axial coding process



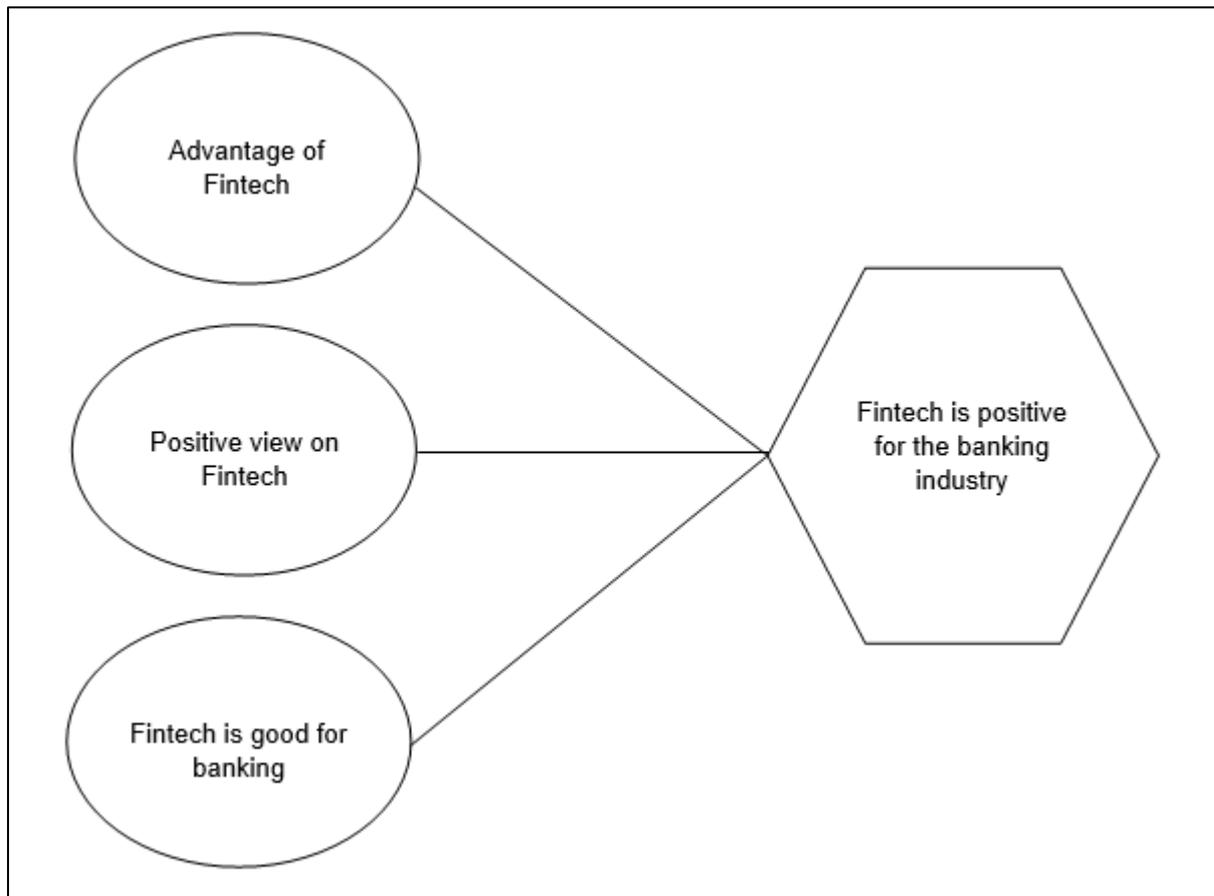
Source: Researcher's own construct

Figure 4.6 depicts the second step in the coding process in which individual codes are grouped into a coding family which shows how the individual codes correlate with the grouped family code. This process is used to break down open codes into a more manageable group of codes called Axial codes.

4.8 SELECTIVE CODING

Figure 4.7 below illustrates a snapshot of the selective coding process.

Figure 4.7: Selective coding



Source: Researcher's own construct

Figure 4.7 illustrates the final stage in the coding process in which themes are created from the axial codes of the previous step that align to the research objective. Axial codes are grouped together to generate a theme that allows the researcher to start drawing conclusions from the interview data.

4.8.1 Six themes that emerged during the selective coding of the data

Table 4.13 below is a tabulation of the codes gathered from the interview data and linked to the six themes that emerged.

Table 4.13: Summary of entire coding process

OPEN CODES	AXIAL CODES	SELECTIVE CODES
Advantage of Fintech	Advantage of Fintech	Fintech is positive for the banking industry
Fintech solves specific problems		
Collaboration with Fintechs		
Customer Focus	Positive view on Fintech	
Changing Legacy by going digital		
Financial inclusion		
Innovative culture within bank		
Positive view on Fintech	Fintech is good for banking	
Competition improves the industry		
Fintech is good for banking	Collaboration can create new markets and increase market share	
Collaboration with Fintechs		Collaboration
Fintech solves specific problems		Technology and customer focus
Technology focused		
Customer Focus		New markets
Financial inclusion		
Technology will continue to evolve rapidly		Investment in Fintech
Investing and acquiring Fintech companies		
Investment in Fintech is critical		Investment in Fintech
Technology focused		
SA Banks cannot spend what international banks can		
Sufficient investment		

Investment in Fintech is critical		
Changing Legacy by going digital	Digital strategy	Investing in Fintech to overcome legacy infrastructure by going digital
Technology will continue to evolve rapidly		
Advantage of Fintech	Focus on the customer need or problem	Fintech companies are more customer focused
Fintech solves specific problems		
Customer focus		
Fintech not targeting all banking markets		
Investment into Fintech is critical	Improves the Financial services focus	
Fintech is good for banking		
Competition improves the industry		
Positive view of Fintech		
Advantage for Fintechs	Playing field not level	Balance regulation between protecting the industry and creating an innovative environment
Disadvantage for banks		
Regulation protects the industry	Focused on protecting the industry	
Regulation sufficient		
Collaboration with Fintechs	Reviewing regulation to be more innovative	
Sign of progress with regulators		
Regulation insufficient		
Technology will continue to evolve rapidly		
No significant loss of market share	Competition is needed	Competition in future will be fiercer, competition is good for the performance
Competition improves the industry		
Fintech not targeting all banking markets		

Customer Focus	Collaboration can overcome competition by adding value to customers	of the financial services industry
Collaboration with Fintechs		

Source: Researcher's own construct

Table 4.13 is a visual portrayal of the themes that emerged when the interview data was analysed and coded. The table gives a detailed summary of each step taken by the researcher during the coding process. A further explanation of each theme is elaborated on below.

4.8.1.1 Collaboration can create new markets and increase market share

Effective partnerships between banks and Fintech companies can allow banks to access new markets that they would be unable to do alone, banks can access Fintech companies experience in these other markets whilst Fintech companies can access the financial resources, scale and clients of the banks enabling a win-win situation.

Fintech companies can assist banks in achieving financial inclusion by targeting the unbanked population which is a new market. Banks can use Fintech companies to lower costs of operations through new technologies, if collaboration is effective this could also enable banks to gain market share over other competitors.

4.8.1.2 Investing in Fintech to overcome legacy infrastructure by going digital

Banks in South Africa suffer from the same problems that large international banks do in that they have inherited legacy infrastructure. This infrastructure is old, outdated and expensive to replace whilst making integration with new technologies difficult. Fintech companies however do not have legacy infrastructure and are already running on cheaper and newer operating systems.

A strategy of creating a digital bank is touted as the best way to overcome legacy infrastructure but this is difficult and expensive to do. International banks, such as Citibank and JP Morgan are spending massive amounts on going digital and are using partnerships with Fintech companies to assist them in pursuing new technologies. Customers are also more likely to adopt new technologies, such as digital platforms

to access financial services and banks need to adapt their infrastructure to service these new client needs quickly.

4.8.1.3 Fintech companies are more customer focused

Fintech companies design financial products and services entirely around customer needs and focus on making this as convenient as possible through using new emerging technologies. Banks became complacent and were not offering products and services that clients really needed. Banks were offering products and services that they had always given in the past and were designed around the bank's competencies rather than client needs.

Banks are now learning from the Fintech emergence and focusing more on their clients by investing in new technologies. Creating a culture of innovation within the bank has become important to them with innovation labs being set up where the bank can create a controlled environment to test Fintech.

4.8.1.4 Balance regulation between protecting the industry and creating an innovative environment

Regulators have the difficult task of trying to create an environment where incumbent banks, new banks and Fintech companies can compete in a fair and sustainable manner. The protection of the industry is paramount for regulators, but certain initiatives are being taken, both in South Africa and internationally to create a more innovative environment.

The strategy which seems to be used by regulators is to create a regulatory sandbox where new technologies can be tested in a controlled environment where regulators can view these technologies in real-time to best see how they can be regulated in future. South African regulators, such as the South African Reserve Bank has discussed introducing a regulatory sandbox but is yet to introduce it, bankers seem to view this in a positive light. A regulatory sandbox could be an efficient way for banks and Fintech companies to test collaborative technologies in an environment, whilst not disrupting the industry as a whole.

4.8.1.5 Competition in future will be fiercer, competition is good for the performance of the financial services industry

Competition in financial services has increased dramatically and shows signs of increasing in the South African context with new banks entering the space. Big banks will have to compete against both these new banks and Fintech companies in the near future. The financial services providers who create the most value for their clients will win market share and collaboration between competitors is one of the strategies that could be used to achieve this.

Bank's investment strategies need to be significant and in the right places to protect them in the future. South African banks seem well aware of the threats they are to face and are investing significantly to prepare for this future, although they have limited budgets compared to international banks. It remains to be seen whether these efforts will be sufficient.

4.8.1.6 Fintech phenomena is positive for the banking industry

The Fintech phenomena has been good for banking in that banks can no longer be complacent. Fintech has created some competition and provided banks with a new perspective on financial services. With its focus on the customer, Fintech has forced banks to do the same and made them realise that they cannot rely on their sheer size and scale, they have to add value for their clients to retain them. Collaboration through Fintech has also enabled new ways of doing things and is creating new markets for banks. Banks have realised that they cannot do things on their own and need partners in innovation.

The Fintech phenomena is also forcing regulators to create a more open regulatory framework, as they have seen the advantages of greater financial inclusion. Fintech companies realise that they also need banks to achieve success. Collaboration between banks, Fintech companies and regulators will increasingly be needed in the future.

4.9 CONCLUSION

In this chapter the demographic analysis and empirical results from the interviews with respondents were presented. Data was collected from the 5 bankers in one-on-one interviews. Coding was used for data analysis of the interview transcripts. The data collected from the five South African bankers gave an in-depth insight into their perceptions on the Fintech phenomenon.

4 out of the 5 bankers interviewed had more than 20 years of experience in the banking and financial services industry. Three of the interviewees were the head of their divisions, with another being a Chief Operating Officer.

A number of themes developed from the interviews included that all of these bankers believe there is progress with the regulators, but that Fintech companies have an advantage over banks with regards to current regulation. Numerous positive advantages were listed during the interviews that gave the perception that the Fintech phenomenon is very good for banking.

All bankers interviewed believed that Fintech could help their bank enter new markets through effective collaboration which could add to their value proposition. The data indicates that no significant market share is currently being lost to Fintech up-starts. The future of financial services elicited many different views, but most respondents agreed that it involved fast changing technologies; and that if banks do not invest in the right technology they could be disrupted by other financial services players.

The next chapter provides a detailed discussion around the results, as well as conclusions and recommendations based on the findings of this study. The limitations of this study, as well as potential future research angles are also deliberated.

CHAPTER 5

FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

Chapter 5 is the final chapter and provides an overview of the study. The chapter summarises the literature review, the research methodology and how research objectives were achieved. Discussion of emerging themes follow. Conclusions are reached, based on the literature overview and empirical findings. Recommendations are made. Lastly, the limitations of the study are deliberated, as well as recommendations for any future research to be conducted on this topic. To conclude the chapter and study, final remarks are made regarding it.

5.2 OVERVIEW OF THE STUDY

The primary objective of the research was to examine banker's perceptions regarding the disruptive potential of the Fintech phenomena on the financial services industry in South Africa. The attainment of the primary objective was supported by several secondary objectives.

Table 5.1 summarises the achievement of the various secondary objectives to achieve the primary objective as presented in chapter 1.

Table 5.1: Achievement of research objectives

	OBJECTIVE	CHAPTER ADDRESSING OBJECTIVE
SECONDARY	ONE: To provide a literature review for the Fintech concept and related factors that could be disruptive for the South African financial services industry	Chapter 2
	TWO: To create a Fintech “frame of reference” incorporating uncertainties and disruptions related to the concept	Chapter 2 (section 2.8)
	THREE: To create a questionnaire on the basis of the study of the literature	Chapter 2 (section 2.9)
	FOUR: To use the questionnaire to empirically evaluate by way of interviews, banker’s perceptions regarding the nature of the Fintech concept and related factors that could be disruptive for the South African financial services industry	Chapter 4
PRIMARY	Understand the perceptions of bankers, regarding the disruptive potential of the Fintech phenomena on the financial services industry in South Africa	Chapter 5

Source: Researcher own construct

A brief summary of Chapters 2 to 4 addressing the secondary objectives of the study will be presented in the following sections.

5.2.1 Overview of chapter 2

Chapter 2 commenced with a review of various definitions of the Fintech concept. It was found that there is no specific agreed-upon definition for the term Fintech. However, recurring themes were identified in various definitions, namely: evolution, disruption and revolution and that the Fintech concept merges the two big industries of finance and technology by using technology to make finance more convenient and accessible to a greater market.

The literature review on the South African financial services industry gave an insight as to how financial services in South Africa is one of the industries that is considered world class and important to the country's GDP. It was noted that Fintech companies has achieved success in emerging markets where parts of the population were unbanked or underbanked. Furthermore, South Africa is seen as a gateway to access the African market and therefore South Africa could be a prime market for international investment into Fintech companies. Lastly due to the financial services industry in South Africa being world class, collaboration between banks and Fintech companies could yield impressive results.

5.2.2 Overview of chapter 3

The research methodology and design employed to address the fourth secondary objective, namely to empirically evaluate bankers' perceptions regarding the nature of the Fintech concept and related factors that could be disruptive for the South African financial services industry was described in Chapter 3. The research methodology can be described as qualitative research. In-depth semi-structured in-person interviews was be used for data collection, Coding and comparing the codes assisted the researcher to identify themes in all the participants' accounts.

5.2.3 Overview of chapter 4

In chapter 4 responses to open ended interview questions was used to gain insight into the participant's perceptions on the Fintech phenomena under study. The participant's perceptions were grouped according to six themes. First, Fintech is positive for the banking industry. Second, collaboration can create new markets and

increase market share. Third, investing in Fintech to overcome legacy infrastructure by going digital. Fourth, Fintech companies are more customer focussed. Firth, balance regulation between protecting the industry and creating an innovative environment. Lastly competition fiercer, however good for the performance of the financial services industry.

5.3 DISCUSSION OF EMERGING THEMES

The themes that emerged during the data analysis process will now be elaborated on and discussed in conjunction with the literature review.

5.3.1 Theme 1- Collaboration can create new markets and increase market share

South African bankers believe that effective partnership between banks and Fintech companies can enable them to venture into new markets and or increase existing market share over other banking competitors. This sentiment also exists in the literature in which banking giant JP Morgan's strategy was for Fintech start-ups to work alongside their employees in order to develop innovations (Lee & Shin, 2018, p. 40). Bankers seem to realise that they simply cannot innovate alone, and collaboration gives them a way of innovating a lot faster than they would have using their slower processes. One new market that Fintech companies can assist banks in was felt to be that of financial inclusion. This is both in South Africa and international markets, where possible clients are either completely unbanked or under-served by their current bank. Collaboration is currently part of South African bank's strategies for the future. This seems to be keeping incumbent banks current and sustainable.

5.3.2 Theme 2- Investing in Fintech to overcome legacy infrastructure by going digital

Incumbent banks view legacy infrastructure as a hindrance in them being able to compete effectively in the technology space. Incumbent banks in South Africa all have strategies specifically designed to try and overcome the outdated infrastructure they have inherited. Most see the digitisation of their banks as the best possible strategy to

overcome this legacy hindrance. However, this is an extremely expensive endeavour but this investment into Fintech will keep banks relevant in future.

The literature provides examples of banks such as Citibank and Bank of America, who have immense legacy infrastructure but are spending vast amounts to stay ahead of the Fintech phenomenon. South African banks however, have limited budgets compared to these large international banks but it is the perception of bankers that if you can allocate these budgets into the right areas then these investments will prove successful.

Fintech companies do not have legacy infrastructure as their operating systems are easy and low cost compared to incumbent banks. There is a perception that the future South African banking customer is one that embraces technology and would rather engage with his or her bank on a digital platform.

5.3.3 Theme 3- Fintech companies are more customer focused

Fintech companies starting point is targeting customer problems in financial services sector. Bankers believe that Fintech and Fintech companies are focused on providing a unique customer experience. The complacency of banks in their offering of products and services which was based on their core competencies rather than actual customer needs has provided an environment for Fintech to prosper. Fintech companies target niche markets where clients feel banks are not giving the best service.

In the literature, Fintech companies managed to attract customers through being user-friendly. Bankers felt that the customer focus of Fintech start-ups forced them to create better client experiences and add more value to their client's lives. The standards of customer service across financial services seems to be improving due to the Fintech emergence. The threat felt by South African bankers is if they do not create enough value, they will lose clients to competitors that do.

5.3.4 Theme 4- Balance regulation between protecting the industry and creating an innovative environment

This theme proved contentious as it entailed many different viewpoints from bankers. Some believed that regulation needed to be reviewed whilst others felt that the

regulators were showing promising signs of progress. It is clear however that regulation currently is primarily focused on the stability of the banking sector rather than providing an environment conducive to innovation. This view was echoed in the literature where it showed that there is a need to bring together technology companies and financial institutions which could enable better dialogue between stakeholders and regulators.

The South African Reserve Bank's efforts with Project Khokha and the creation of a Fintech unit is a sign of progress but whether this progress is keeping up with rapid technological innovation is still unclear. A regulatory sandbox was a method touted in both the literature and the data analysis as a potential solution to this problem. A regulatory sandbox is unique in that it is the only way in which innovation can be controlled whilst regulators can view the emerging technology in real time. This can provide regulators with insight into how they can regulate these technologies in future. With this scenario, innovation can be tested without it having an impact on the stability of the financial services sector.

Regulation needs to be provided in which banks and Fintech companies can co-exist and neither has an absolute advantage over the other.

5.3.5 Theme 5- Competition in future will be fiercer, competition is good for the performance of the financial services industry

Bankers believed that they will undoubtedly face increased competition in future and this will not only be attributed to Fintech companies. It seems that new competition is partly due to new Fintech technologies that lower the barriers of entry for new banks. These new banks use technology to lower their operating expenses. Competitors listed in the literature such as; Discovery bank, Tyme Digital and Bank Zero are all banks created entirely on a digital platform.

Bankers are well aware of this new threat and are investing in technology to neutralise this, however, some of them feel that these investments could be more progressive. Competition is viewed as good for South Africa especially for consumers who will receive lower fees whilst gaining an increased level of customer service.

Fintech companies through a collaboration with banks could prove to be the 'King Makers' in this competition. Bankers all agree that the competitor who provides the most value in the eyes of their clients will ultimately be successful. Fintech companies currently have not been able to achieve the scale to challenge banks, however there is a perception that this could change in future.

5.3.6 Theme 6- Fintech phenomena is positive for the banking industry

Fintech has revolutionised banking according to banker's perceptions through enhancing competition, focusing on customer specific needs and being focused on new technology. Technology has changed banking and given banks in South Africa and globally a wake-up call as to what their client's needs really are.

Banks globally are investing in Fintech because they no longer believe that scale and size are the only determinants to remain stable and have a competitive advantage. Technology, in particular Fintech, has lowered operational cost of financial services providers and this leads to cheaper offering to customers. Fintech and Fintech companies are believed to be the solution to increasing financial inclusion in South Africa and the world, financial inclusion creates a whole new market.

Fintech has led to an improved innovative culture within banking institutions as their employees are now allowed to think 'out of the box' when it comes to creating new products and services. South African banks are viewed as world-class in both the data analysis and literature and a collaboration between banks, Fintech companies and regulators, is needed to ensure this perception continues.

5.4 FINDINGS AND CONCLUSIONS

As was outlined in chapter 1, this study consisted of a literature study and an empirical component. General conclusions were drawn from the literature study, while more specific conclusions were drawn from the empirical study.

5.4.1 General

Based on the literature review the following conclusions were reached:

- Fintech has been positive for both banking and the industry as a whole.
- Fintech has solved specific financial services problems by being entirely focused on the customer experience.
- Fintech has many advantages, largely due to technology advancing rapidly and these technologies being speedily adopted by clients. It also has advantages in that it fulfils a specific need, creates a bigger market place and keeps bankers on their toes whilst allowing possible partnerships.

5.4.2 Empirical

In compliance with the research objectives stated in chapter 1, a questionnaire was developed to evaluate bankers' perceptions regarding the disruptive potential of the Fintech phenomena on the financial services industry in South Africa. Based on the interviews and coding process the following conclusions have been reached:

5.4.2.1 Regulations do allow for innovation in South Africa

Regulations do allow for some degree of innovation; however, they are mainly focused on the stability of the financial services sector. Regulators are starting to think about innovation and what more can be done in this regard, for instance; setting up a regulatory sandbox where banks and Fintech companies can test new innovations.

Regulators should keep a keen eye on what international regulators are doing and use this as a potential benchmark. The ability to innovate is essential to both banks and Fintech companies. Regulation that keeps up to date with emerging technologies is needed to ensure the future stability of the financial services sector.

5.4.2.2 Regulation is not biased towards banks

Regulations are not intentionally biased towards South African banks, banks due to their size, scale and market share are only burdened by strict regulations to ensure the stability of the sector. Fintech companies currently operate under the radar of

regulators and do not have to comply with all the regulations banks have to. Fintech companies can focus on specific regulations where banks have to focus on all banking regulations which puts them at a slight disadvantage.

A level playing field is needed in South Africa where banks are allowed to innovate in the technology space whilst still complying with regulations.

5.4.2.3 Banks innovate and collaborate through Fintech

Banks are partnering with Fintech companies under current regulation already but reviewing certain regulations which do not enhance the stability of the sector, should be looked at as well as specific collaboration regulations. A sandbox should be created where banks and Fintech companies can collaborate.

5.4.2.4 Fintech is positive for the banking industry

It is positive for the banking industry in that banks definitely became complacent with their product and service offerings. The emergence of Fintech forced banks to rethink innovation and what particular innovations their clients need.

Fintech has been able to facilitate faster payments whilst reducing the operational costs of banks. This means that Fintech and Fintech companies can add value to both banks and financial service's clients. The competition created by Fintech companies in certain niche markets has benefitted customers immensely.

The most positive aspect from the emergence of Fintech companies is the collaboration between them and banks. These allow banks to target new markets and creates a larger market place. Fintech companies are needed for banks to achieve higher financial inclusion, for example; the unbanked market.

5.4.2.5 South African banks are investing in preparation for Fintech

South African banks are investing in Fintech by either upgrading their technology infrastructure or investing in Fintech companies that can offer them certain services they might need. Technology focused strategies have currently become critical to banks and part of this is creating a culture of innovation within the banks.

Investing in technology is a continuous process and not merely a once-off. Creating a digital bank can be a complex process for banks who have legacy infrastructure. The level or scale of investment in rand terms remained unclear during this research study but it can be said that this is not on the same scale as that of other large international banks.

Most South African banks have created incubators which allow Fintech start-ups to innovate whilst having access to financial and other resources of the bank.

5.4.2.6 South African banks have limited budget for Fintech investment strategies

One aspect that is beyond debate is that the right investment into Fintech is critical for banks and that any budget needs to be allocated to the right areas whatever the level or scale of it.

South African banks have limited budgets in comparison to large international banks and it is not possible for them to invest in every new technology. It is difficult to ascertain whether current investments will prove successful in future but what is clear is South African banks are well aware of these threats and are focused on addressing them. Specific areas that have been identified are for example; the current main focus of digitizing their banking operations.

5.4.2.7 South African banks are not experiencing significant loss of market share to Fintech companies

Currently no significant market share is being lost to Fintech companies. This is mainly due to Fintech companies targeting niche markets and not necessarily markets banks operate in. Fintech companies in South Africa have not been able to achieve this scale of any incumbent bank. Fintech companies are especially dwarfed when compared to the five biggest banks in the country. Banks have two competitive advantages in South Africa; one being the size of their client base and the trust the public has in established banks.

The stability of the banking sector as well as the reputation of South African banks as world-class does make it difficult for Fintech companies which prefer to operate in

countries where the standard of financial services is low. The South African financial service's market is heavily regulated in order to maintain top international standards. South African banks thus have to comply with both national and international regulation.

Capitec has done better than the other South African banks when targeting the unbanked market segment and this has reduced the unbanked population in South Africa. Fintech companies achieve scale in countries like China as they have a large unbanked population.

5.4.2.8 Market share gained by banks partnering with Fintech companies

Collaboration can add value to both banks and Fintech companies in that banks can access new markets through Fintech, whilst Fintech companies can gain access to bank's resources. New markets such as in the financial inclusion space, can create a bigger market place for banks to operate in. Partnerships between banks and Fintech companies is increasingly occurring worldwide and South Africa is no exception. Collaboration allows parties to focus on what they are experts on.

Due to the risk involved, it is difficult for a South African bank to go into a new market without having a partner with experience in said market. Fintech companies can fill this void while bank's expertise in other areas, for instance; regulation, can assist the Fintech company.

5.4.2.9 Future financial services industry in South Africa

The intensity of competition is likely to increase with new banks entering the South African industry, each of whom will be targeting a specific market in which the large incumbents operate in.

Technological innovation and adoption are likely to continue to evolve rapidly. With these new technologies threatening to disrupt the financial services industry's status quo. Collaboration between Fintech companies and banks will increase in future as this strategy will become officially a part of all banks.

Financial services providers like banks and Fintech companies will need to experiment and invest in the right technologies in order to create value for their clients or they will end losing market share to competitors.

5.5 LIMITATIONS OF THIS STUDY

Limitations are potential weaknesses in the research study which are out of the researcher's control, limitations exist in all research studies and in everything we do (Simon, 2011 , p. 2).

5.5.1 FNB unavailability

Despite numerous efforts the researcher was unable to acquire an interview with a banker from FNB. FNB's input would have enhanced the research as then the top 6 bank's viewpoints would have been gained. FNB is the second biggest bank in South Africa by assets and the first to introduce a digital strategy under the previous CEO Micheal Jordaan. FNB has an innovation lab that is very focused on developing new Fintech companies called Alphacode and also has the Foundry which falls under Rand Merchant Bank.

5.5.2 Sample Size

A larger sample size with more interviewees could give more diverse viewpoints on the concept under study. Interviewing another five bankers including FNB and smaller banks would give more data to analyse and developed more themes describing the current environment.

5.5.3 Timespan of the study

Due to the limited timespan of this study the researcher was unable to view the effect of the phenomena of Fintech over an extended period. Fintech is constantly evolving and as the researcher is concluding this study new developments are happening globally in this area. The rapidness of technological advancement in the modern world means any study of technology over a short period is not as reliable as studying it over an extended period in which trends can be observed.

5.5.4 Limited South African literature

Limited South African literature on the concept being studied was available. Most literature is of an international viewpoint and difficult to compare the researcher's findings to other similar studies.

5.5.5 South African Fintech innovation labs

South African bank's innovation labs are not open to the public to access, it would have assisted the researcher to view how these research labs work. The standard of these research labs and the degree of collaboration between banks and emerging Fintech companies would have added to the research in that the researcher could conclude whether this is effective or not.

5.5.6 New banks entering the South African financial services industry

As mentioned in the study it would have added to the research study if new banks such as TYME Digital, Discovery Bank, Bank Zero and Postbank would have launched before completion of this study. These banks would offer interesting insights into how they will use Fintech or Fintech companies to gain market share over established competitors interviewed in this study.

5.6 SUGGESTIONS FOR FUTURE RESEARCH

Further research is suggested in the following areas:

5.6.1 New challenger banks changing the competitive landscape in South Africa

New banks such as TYME Digital, Discovery Bank, Bank Zero and Postbank will soon be entering the South African market, each one of these new challenger banks will be targeting certain niche markets and have the potential to disrupt financial services in South Africa. It would be interesting to research their strategies for entering the market and how they see themselves competing with the big 5 retail banks for market share.

5.6.2 Large technology companies entering and offering financial services

The larger technology companies such as Facebook, Amazon, Apple, Alibaba and Google are diversifying into other industries and financial services is one of these industries. Fintech companies in this study proved to be small nimble niche organisations targeting financial services but struggling to gain scale. The large technology companies however, have scale due to their existing client bases and the trust these customers have in their brands, if these brands entered financial services could they disrupt big banks and platform players negatively?

5.6.3 The impact of Fintech on financial services on the African continent

The banking infrastructure in South Africa is of a world class and Africa leading, however one can argue in the rest of Africa the standard is not the same. The potential exists as it was in the case of M-Pesa in Kenya for Telco's, Fintech companies or technology companies to increase financial inclusion in Africa and become the banks of the future.

5.6.4 How Fintech has assisted UK challenger banks to gain major market share

In the UK, companies that started out as Fintech companies became challenger banks, these companies like Monzo, Starling, Revolut and Atom Bank have managed to create services to rival major banks whilst quickly achieving scale without the legacy infrastructure. An interesting study would be to research how these challenger banks managed to achieve these successes and what lessons can be learned from this.

5.7 RECOMMENDATIONS

It is recommended that based on the study regulation should be reviewed to create an innovative environment for all industry players and regulations that do not directly contribute to the stability of the sector, should be reviewed.

It is recommended that a regulatory sandbox where regulators can test new Fintech innovations should be created. This will allow regulators to adequately view these innovations whilst learning and testing how to regulate them. Collaboration should be

encouraged between all industry competitors and also any possible new entrants to the sector.

The researcher argues that by implementing these recommendations, the regulators and banks need not fear new technologies because if regulation is done effectively it will ensure the stability of the South African financial services sector and it will remain of a world-class standard. Ultimately the South African consumer will be the greatest benefactor as financial services will improve whilst simultaneously decrease in costs. Financial inclusion cannot be completely achieved in South Africa unless Fintech companies, regulators and banks collaborate to find solutions to this problem.

5.8 CONCLUDING REMARKS

This research study was conducted to assisted with the lack of literature on the Fintech phenomena in the South African context. The primary objective of this study was to gain an insight into the Fintech phenomena by gauging the perceptions of bankers from the large South African banks.

A literature review was conducted into Fintech as well as the financial services sector in South Africa. A qualitative study was undertaken with a sample of five bankers from the six largest banks in South Africa. Structured interviews with ten pre-determined questions was held. Data analysis using Grounded theory was utilised to develop codes and form themes. Six themes emerged during the data analysis process which assisted the researcher in answering the ten research questions.

The main findings and recommendations of the study are that a collaboration between Fintech companies and banks can lead to an increase in market share as well as create new markets for them to operate in. South African banks are currently and should continue to invest in Fintech to overcome their legacy infrastructure by using a digital strategy. Banks in South Africa should learn to be as customer focused as Fintech companies are to create real value otherwise, they will lose out to competitors. It is also recommended that regulators need to find a balance for South African regulation in which both the protection of the financial services industry and room is

given for industry players to innovate. Innovation within financial services is necessary for South Africa to maintain its reputation of having world-class financial services.

The future South African financial services industry will have fierce competition as more banks and Fintech companies enter the market. The Fintech phenomena has largely enabled this future by decreasing the barriers of entry into this market and it is thought that if incumbent banks do not add more value to their clients, they risk losing market share.

Lastly, from the research study we deduced that the Fintech phenomena has had a positive impact on the South African banking industry. This is due to its ability to add value to both banks and financial service customers whilst challenging regulators to create an environment conducive to innovation.

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APPENDICES

1. DATA ANALYSIS

1. Do you believe regulations in South Africa do not allow for innovation?		
Participant 1	There is a conflict between regulation and what Fintechs are trying to achieve	Fintech and Regulation at odds, not currently conducive to innovation
	What I am seeing is that the regulator themselves are now pushing for innovation	Sign of progress with regulators
Participant 2	I don't believe they expressly do not allow for innovation	Not convinced regulations are hindering innovation
	I think in South Africa we pride ourselves on the soundness of our financial regulatory system	South Africa has world class financial services
	There are positive steps being made	Sign of progress with regulators
	Reserve bank setting up a Fintech unit	Example of a positive step by Regulator
	I will be interested to hear what they say on their proposed sandbox	Sandbox
	I do not think that it does not allow for innovation, but it is slow to adapt or formalise innovation	Regulations struggling to keep up with changing times
Participant 3	Regulations do allow for innovation but I think insufficiently so I think there is scope to change the regulations to allow for more innovation in banking	Current regulation needs to be adapted for innovation
	Stability of the banking sector is paramount and that is generally the starting point of the regulators	Stability of industry currently more important than innovation
	There are some regulations which do not contribute to the stability of the banking sector but which do prevent innovation	These are the regulations that need to be reviewed
Participant 4	Regulation, it creates a lot of innovation	Current environment sufficient
	It is a golden opportunity to be innovative	Legislation giving innovation opportunities
	Opportunity for banks, start ups, anyone as long as you are quick	Equal opportunities for Fintechs and banks
	I have always believed through regulation you can completely set yourself apart from the rest	Innovation within current regulation can give competitive advantage
Participant 5	It has been a hindrance but not necessarily a hard and fast block	Makes difficult but not impossible
	There is an openness for the regulators	Sign of progress with regulators
	Quite a constructive relationship we have with regulators	Sign of progress with regulators
	Whatever regulation you have is generally for good reason with regards to customers, markets and ourselves as a bank as well	Regulation is good for all especially SA

2. Do you feel regulations are biased towards banks and therefore place them at a disadvantage in terms of the technology space?		
Participant 1	The Fintech company is not necessarily governed by the regulations, strict regulations that financial institutions are held by	Fintechs have advantage over banks
	Playing field not necessarily level	Fintechs have advantage over banks
	I don't think banks have not innovated, they have innovated in that space that they could	SA Banks have done well under current regulation
	We have seen compliance costs go up by 20%	Disadvantage for banks
	You can stifle some of the competition just not by choice but by the regulations put in place	Effective competition stifled through regulation
Participant 2	What are regulations there to do? They are there to protect deposit holders	Regulations protect industry
	I don't think they are biased towards banks, I think they are there to protect the consumer	Regulations protect industry
	It does place a huge regulatory burden on the banks which some Fintechs do not necessarily have to deal with	Fintechs have advantage over banks
	Place us at a somewhat disadvantage when we are trying to move quickly	Disadvantage for banks
Participant 3	I don't think they are particularly biased at all	No advantage for Fintechs or banks
	Focus on stability has led to the banks particularly being over regulated	Regulations protect industry
	It makes it more difficult for the banks to innovate and compete with new upstarts who do not suffer under the burden of regulation	Fintechs have advantage over banks, Disadvantage for banks
Participant 4	Regulation is pretty hard on banks, we are the big bad wolf	Regulation biased towards banks
	Our regulatory spend is massive, the regulatory spend has gone up over the last 7 years close to 30% a year	Disadvantage for banks
	It is a bit biased towards us, it is not positive	Disadvantage for banks
	Fintech can focus on 1 piece of regulation	Fintechs have advantage over banks
	I think there is still space for everybody	Environment conducive for competition
Participant 5	I would not say its biased towards banks, I would say there is a lot of emphasis on banks	Banks emphasised more but not at a disadvantage
	There is often room for interpretation	Banks can test regulation

3. Do you feel regulation needs to be reviewed so that banks can innovate or partner through Fintech?		
Participant 1	Creates a level playing field so its not that it stifles innovation, it does also protect or try to protect	Protects the industry
	Central Bank ran a block chain proof of concept and the banks were part of that and a Fintech company	SARB new efforts with banks and Fintechs
	The question is Does the future generation actually want this	Future generations prefer innovation over protection
Participant 2	I think banks are already innovating and partnering in Fintech	Already happening
	There are certain areas of regulations where there is a lot less flexibility	Some regulation stifling partnerships
	I think there is always scope for the regulators to be more open	Regulators to decrease regulation
	The sandbox type environment where regulations don't necessarily apply is quite exciting	Future scenario sandbox
Participant 3	Yes	Agrees
	Some of the practicalities havent changed so you are still required for example to submit a report that contains particular fields and that report necessarily becomes de facto regulation	Some regulation stifling partnerships
Participant 4	No I don't think so, I think the SARB has been SA INCs savior	Current regulation sufficient
	International bodies that will grade us and rank us according to regulation	Protects the industry
	They will at some point run out of regulation	Regulators to decrease regulation
Participant 5	We are not prevented from partnering with Fintechs infact we are doing more and more of that by the day	Already happening
	Regulators initiate certain things like we found out with distributed ledger, Block Chain and so forth	SARB new efforts with banks and Fintechs

4. What are your thoughts and views on the emergence of Fintech?		
Participant 1	So we call it Fintech today, we used to call it IT in the past	Not new concept
	I have always believed that there has always been a construct of Fintech	Not new concept
	What used to take us 3 months to do could now take us 30 seconds to do	Positive advantage of Fintech
	I don't think its different to what we have always lived, its just become more popular	Not new concept
	I don't think its attributable to Fintechs but the rapid change of where technology is	Technological innovation
Participant 2	Its been around for a long time, its just that technologies are rapidly advancing and reducing in costs	Not new concept, technological innovation
	I think Fintech has been focussed on solving specific customer pain points	Fintech focussed on specific problems
Participant 3	It's a good thing	Positive view
	You have the client at the centre of everything	Positive advantage of Fintech
	What kind of technologies can we put in place that will give the best value to our clients	Positive advantage of Fintech, technological innovation
	Small technology firms who are interested in solving financial problems	Fintech focussed on specific problems
Participant 4	I personally am not a big fan of the word Fintech, its been around for many years, its just it is a different form now	Negative view and not new concept
	Fintech can only really exist if you truly understand the problem statement	Fintech focussed on specific problems
	It creates a bigger marketplace	Positive advantage of Fintech
	I think Fintechs make it easier, cause I can go after a very specific need	Fintech focussed on specific problems
Participant 5	It is a double-edged sword	Positive and negative view
	Disrupting our lives as banks in a big way	Negative view
	Keeping us on our toes, forcing us to stretch our imaginations a bit and get out of our comfort zones	Positive advantage of Fintech
	There's a synergy between Fintechs and banks	Positive view
	I like the idea of collaboration and finding the sweet spot	Positive view, advantages of partnership
	View Fintechs as prospective partners as opposed to direct competition	Collaboration with Fintech

5. Do you feel the emergence of Fintech is positive for the banking industry?		
Participant 1	I don't think banks lack innovation, I think some of the biggest innovation has come out of the banking environment	Banks can innovate by themselves
	I do believe what Fintech has done is force us to accelerate that thinking	Fintech has made banks more innovative minded
	Banks definitely got complacent	Fintech has made banks rethink their strategy
	I think the value Fintechs add to banking is we can make people's lives easier that's a win for everyone	Fintech adds value through convenience
	I think Fintechs is the greatest thing in banking, awesome, keeps me relevant	Fintech is good for banking
Participant 2	We are still working on a model that worked 50 years ago	Banks have outdated models
	Why Fintech does very well, they are designed entirely for the customer	Fintechs are customer-focussed
	Competition is good because it is good for the consumer, brings down the cost of financial services and increases inclusion	Competition improves the industry
	Is good for the bank because we are forced to make sure we are providing the best possible products	Fintech is good for banking
Participant 3	Positive in a number of different spheres	Fintech is good for banking
	Creates some competition	Competition improves the industry
	Creates possibilities for collaboration	Collaboration can add value to banks
	Allows us to potentially deliver value into the hands of our clients faster more effectively	Adds value through convenience and customer focussed
Participant 4	Yeah I believe so	Fintech is good for banking
	You've got a few Fintechs from an economic inclusion perspective	Brings more people into the market
	A lot of skills still come out of the banking industry	Creates more financial services skills
	Very positive thing for South Africa	Fintech is good for banking and country
Participant 5	Without a doubt about that	Fintech is good for banking
	We tend to get a bit complacent	Fintechs have made banks rethink strategy
	Fintechs gives us a new perspective and lens	Fintech has made banks more innovative minded

6. Is your bank currently investing in preparation for the arrival of Fintech?		
Participant 1	We have always invested in technology	Technology focussed
	We continually invest in technology	Technology focussed
	We have many investments in Fintech start-ups	Investing and acquiring Fintech companies
	We realise we cannot do things alone, we have to partner	Banks need Fintechs
	What does worry me is what will the big tech companies come up with	Big Technology firms could dominate financial services
	Fintechs are great and have great components of what we need, there isnt one that gives you everything that we do	Fintech is very niche focussed and only offers certain financial services
Participant 2	Yes our bank has a big focus on technology and strategy going forward	Technology focussed
	We have a strategy we call managed evolution which is looking at our Legacy and construction and how we can digitize the bank	Changing Legacy infrastructure by going digital
	We are looking at the eco-system as a whole and what is going on outside the bank in South Africa and gloably	Scanning the environment
	What technologies can be brought into the bank and used to either decrease costs or create whole new value propostions	Technology focussed
Participant 3	We are continuosly investing in trying to do a better job for our clients	Focus on client experience
	We continually invest in improving our technology	Technology focussed
	We do have an innovation team who looks at lets call it 2020, 2025, 2030 initiatives	Preparing for the future
	Everyone is responsible for innovation in their area	Innovation culture within the bank
Participant 4	We own shops, we pit equity in shops, its here its not coming, its arrived. What we are doing is we are partnering a lot closer	Investing and acquiring Fintech companies
	We just want to play together and help them where we can	Banks need Fintechs and Fintechs need banks
	We are not going to massively invest, we are not going to have an incubator for now	Only going to invest in certain areas
	We need to build in such a way where we are able to negate Legacy quicker	Changing Legacy infrastructure by going digital
Participant 5	The short answer is yes, we have done some work with Fintechs, we are doing some experimental work with Fintechs	Investing and acquiring Fintech companies
	We have invested heavily in refreshing some of that Legacy technology	Changing Legacy infrastructure by going digital
	We also have a dedicated function around alternate business models	Innovation culture within the bank

7. Do you feel the current investor strategy is sufficient?		
Participant 1	Money is always never enough	Limited budget
	The question is what you do with that money and the reality of the world we live in today is Learn Fast Fail Fast	Money needs to be allocated into the right areas
	At some point you realise you just cant keep up it is too costly for you	SA Banks cannot spend what International banks spend
	The amount of money they spend in IT would shame us	SA Banks cannot spend what International banks spend
	Money becomes relative as to what you are trying to solve	Money needs to be allocated into the right areas
Participant 2	Yeah there is so much going on and so much necessary work	Sufficient investment
	Making our infrastructure easy to intergrate into so we can develop rapidly	Money needs to be allocated into the right areas
	What more could we be doing	Sufficient investment
	Massive projects are necessary but sometimes frustrating but it is hard to see how you could do them any quicker or better	Process takes time whether investment is sufficient or not
Participant 3	On the one hand yes I think that it is sufficient	Sufficient investment
	I think there are still opportunities to leverage higher levels of investments	Should invest more in future
Participant 4	I always believe we can be more progressive	Investment could be more
	We should spend more on running a virtual bank next to our bank	Areas where investment should be in
	Its difficult because your shareholders look at that number and they go well you are spending too much	Shareholders are a barrier to sufficient investment
	You must spend otherwise you are going to fall behind	Investment in Fintech is critical
Participant 5	Technology holistically I think is okay	Sufficient investment
	Bigger challenge is how do we proportion it to the right place	Money needs to be allocated into the right areas
	We need to make this a much more official part of the bank	Investment in Fintech is critical

8. Are you currently experiencing any loss of market share due to the emergence of Fintech companies?		
Participant 1	Where you lose might be in the value that you could have added to the clients life you are not necessarily losing on the deposit side	Market share under threat but only in certain areas
	Trust still plays an important role and that is also being challenged	Banks have an advantage on trust but Fintechs are overcoming that now
	I think banks are under threat we have to adapt and change much quicker but it also depends what environment you work in	Market share under threat but only in certain areas
Participant 2	In very specific markets possibly but overall I would say South Africa hasn't reached that stage yet	Market share under threat but only in certain areas. SA has not reached high Fintech adoption yet
	I don't think any Fintech in South Africa has reached the scale to challenge a bank and also they are not necessarily starting out targeting the market share of banks	Fintechs in SA have not yet reached scale Targeting markets banks are not in
Participant 3	No.	No loss of market share by Capitec
Participant 4	I don't think so I think in actual fact throughout the technology advances we are putting into the bank we are gaining market share because we always think digital first	No loss of market share rather a gain of market share
	FX I can see my market share growing just purely because of digital	Area where market share is growing
	We have a very good, high tech drive	Why they are not losing market share
Participant 5	I don't believe so at this stage we haven't really felt it yet	No loss in market share
	Undoubtedly that would become a bigger risk in future	Fintechs will gain market share in future

9. Do you feel market share or new markets can be gained or created by partnering with Fintech companies?		
Participant 1	Most definitely right there is this construct or concept of financial inclusion	Financial inclusion can be created through partnership with Fintech companies
	I think in the true financial inclusion space there are solutions that have been done with Fintech companies	Financial inclusion can be created through partnership with Fintech companies
	We gain in what Fintech companies can offer you	Collaboration can add value to banks
	Fintech will solve a very specific problem and when they solve that specific problem they help you	Collaboration can add value to banks
Participant 2	Yes, I do I think we can partner smartly with Fintech companies to improve on the customer experience	Collaboration can add value to banks
	It is about absorbing these new data streams that are created by new and advancing technologies and how do we absorb that into something the bank can use to improve on it's value to customers	Using data to improve the customer experience
	All of a sudden that's a new market that no one is playing in and it creates a whole new value proposition	Fintech creating new markets
Participant 3	Certainly	Collaboration can add value to banks
	Unbanked are an example	Fintech creating new markets
	Getting people to take on other non-bank financial services who don't have access to those financial services at all	Fintech creating new markets
	Can potentially open up markets outside South Africa	Fintech creating new markets
Participant 4	Yes especially us we don't bank everyone we bank a very specific market	Fintech creating new markets
	We will never go in there from an Investec brand perspective	Collaboration can add value to banks
	We do believe the Fintech model or marketplace allows us to go into other areas where it is powered by Investec so our banking licence	Fintech creating new markets
	For example FX corss border remittances into Africa	Fintech creating new markets
Participant 5	Absolutely no doubt	Collaboration can add value to banks
	Alternate lending models	Fintech creating new markets
	Where us as a bank may not necessarily have a full appetite to lend to a customer based on our risk scoring methods where we can partner with a third party that takes a certain element of risk	Fintech creating new markets
	What do they bring to the table that us as a bank may not necessarily be experts at	Collaboration can add value to banks

10. What do you feel the financial services industry in South Africa will look like in the future?		
Participant 1	The uberisation of payments	Payments will be instantaneous
	I think the relevance of biometrics whether it's finger or retina will play a more important part	Biometrics
	Star Trek moments beam me up scotty I think will become a reality	Technology will continue to evolve rapidly
	All intergrated your ID to your bank account to your mobile how you would transfer irrelevant if you own a wallet or account doesn't matter	All personal data integrated into one database
Participant 2	if Financial services industries does not begin understanding their clients and computing their realities and what those realities will look like in the future we will be disintermediated	If banks not client focused they will be disrupted
	If you not involved in that process observing and experimenting within that process as a financial services company you risk losing the customer to the Fintech or technology layers sitting above you	If banks do not experiment or invest in the right technology they will lose market share to Fintech or technology companies
	We are deeply interested in technologies like VR, AR, simulated realities, biological technology, Nano technology all these things	Technology will continue to evolve rapidly
Participant 3	There will be an increase in the number of competitors in the banking market	Competition will be fierce
	More and more of our clients are comfortable transacting through remote channels	Technology adoption will increase
	I do not believe branches will stop being important in the lives of South African consumers	Branches will not dissappear completely
	The current explosion of the digital era will continue	Technology will continue to evolve rapidly
Participant 4	More distributed than it is today	Competition will be fierce
	You will have people outside of the banking industry coming up with structures which makes us special	Collaboration across industries
	You will get new banks	Competition will be fierce
	if you want to run a small specific bank for specific people I believe there is an opportunity	Niche financial services will be needed
	I do believe the industry is going to change but not as quick as people thought	Gradual change not rapid change
	Certain parts of it will be consumed by Fintech	Fintechs will gain market share in future
Participant 5	I don't think banks are going anywhere anytime soon but I think the role of the bank in the life of our markets and our customers will be altered	Role of banks will change
	Customers expect more of us	If banks not client focused they will be disrupted
	The emergence of Fintechs the largely untapped opportunity	Fintechs will gain market share in future
	We need to add real value	If banks not client focused they will be disrupted
	We do need to find a way through the red tape and slowness to respond	If banks do not experiment or invest in the right technology they will lose market share to Fintech or technology companies
	More branding out there bank X in partnership with or powered by	Collaboration will increase

Participant 1		
1	There is a conflict between regulation and what Fintechs are trying to achieve	Fintech and Regulation at odds, not currently conducive to innovation
	What I am seeing is that the regulator themselves are now pushing for innovation	Sign of progress with regulators
2	The Fintech company is not necessarily governed by the regulations, strict regulations that financial institutions are held by	Fintechs have advantage over banks
	Playing field not necessarily level	Fintechs have advantage over banks
	I don't think banks have not innovated, they have innovated in that space that they could	SA Banks have done well under current regulation
	We have seen compliance costs go up by 20%	Disadvantage for banks
	You can stifle some of the competition just not by choice but by the regulations put in place	Effective competition stifled through regulation
3	Creates a level playing field so its not that it stifles innovation, it does also protect or try to protect	Protects the industry
	Central Bank ran a block chain proof of concept and the banks were part of that and a Fintech company	SARB new efforts with banks and Fintechs
	The question is Does the future generation actually want this	Future generations prefer innovation over protection
4	So we call it Fintech today, we used to call it IT in the past	Not new concept
	I have always believed that there has always been a construct of Fintech	Not new concept
	What used to take us 3 months to do could now take us 30 seconds to do	Positive advantage of Fintech
	I don't think its different to what we have always lived, its just become more popular	Not new concept
	I don't think its attributable to Fintechs but the rapid change of where technology is	Technological innovation
5	I don't think banks lack innovation, I think some of the biggest innovation has come out of the banking environment	Banks can innovate by themselves
	I do believe what Fintech has done is force us to accelerate that thinking	Fintech has made banks more innovative minded
	Banks definitely got complacent	Fintech has made banks rethink their strategy
	I think the value Fintechs add to banking is we can make people's lives easier that's a win for everyone	Fintech adds value through convenience
	I think Fintechs is the greatest thing in banking, awesome, keeps me relevant	Fintech is good for banking
6	We have always invested in technology	Technology focussed
	We continually invest in technology	Technology focussed
	We have many investments in Fintech start-ups	Investing and acquiring Fintech companies
	We realise we cannot do things alone, we have to partner	Banks need Fintechs
	What does worry me is what will the big tech companies come up with	Big Technology firms could dominate financial services
	Fintechs are great and have great components of what we need, there isnt one that gives you everything that we do	Fintech is very niche focussed and only offers certain financial services
7	Money is always never enough	Limited budget
	The question is what you do with that money and the reality of the world we live in today is Learn Fast Fail Fast	Money needs to be allocated into the right areas
	At some point you realise you just cant keep up it is too costly for you	SA Banks cannot spend what International banks spend
	The amount of money they spend in IT would shame us	SA Banks cannot spend what International banks spend
	Money becomes relative as to what you are trying to solve	Money needs to be allocated into the right areas
8	Where you lose might be in the value that you could have added to the clients life you are not necessarily losing on the deposit side	Market share under threat but only in certain areas
	Trust still plays an important role and that is also being challenged	Banks have an advantage on trust but Fintechs are overcoming that now
	I think banks are under threat we have to adapt and change much quicker but it also depends what environment you work in	Market share under threat but only in certain areas
9	Most definitely right there is this construct or concept of financial inclusion	Financial inclusion can be created through partnership with Fintech companies
	I think in the true financial inclusion space there are solutions that have been done with Fintech companies	Financial inclusion can be created through partnership with Fintech companies
	We gain in what Fintech companies can offer you	Collaboration can add value to banks
	Fintech will solve a very specific problem and when they solve that specific problem they help you	Collaboration can add value to banks
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	I think the relevance of biometrics whether it's finger or retina will play a more important part	Biometrics
	Star Trek moments beam me up scotty I think will become a reality	Technology will continue to evolve rapidly
	All intergrated your ID to your bank account to your mobile how you would transfer irrelevant if you own a wallet or account doesn't matter	All personal data integrated into one database

Participant 2		
1	I don't believe they expressly do not allow for innovation	Not convinced regulations are hindering innovation
	I think in South Africa we pride ourselves on the soundness of our financial regulatory system	South Africa has world class financial services
	There are positive steps being made	Sign of progress with regulators
	Reserve bank setting up a Fintech unit	Example of a positive step by Regulator
	I will be interested to hear what they say on their proposed sandbox	Possible future scenario, hoped by interviewee
I do not think that it does not allow for innovation, but it is slow to adapt or formalise innovation	Regulations struggling to keep up with changing times	
2	What are regulations there to do? They are there to protect deposit holders	Regulations protect industry
	I don't think they are biased towards banks, I think they are there to protect the consumer	Regulations protect industry
	It does place a huge regulatory burden on the banks which some Fintechs do not necessarily have to deal with	Fintechs have advantage over banks
	Place us at a somewhat disadvantage when we are trying to move quickly	Disadvantage for banks
3	I think banks are already innovating and partnering in Fintech	Already happening
	There are certain areas of regulations where there is a lot less flexibility	Some regulation stifling partnerships
	I think there is always scope for the regulators to be more open	Regulators to decrease regulation
	The sandbox type environment where regulations don't necessarily apply is quite exciting	Future scenario sandbox
4	Its been around for a long time, its just that technologies are rapidly advancing and reducing in costs	Not new concept, technological innovation
	I think Fintech has been focussed on solving specific customer pain points	Fintech focussed on specific problems
5	We are still working on a model that worked 50 years ago	Banks have outdated models
	Why Fintech does very well, they are designed entirely for the customer	Fintechs are customer-focussed
	Competition is good because it is good for the consumer, brings down the cost of financial services and increases inclusion	Competition improves the industry
	Is good for the bank because we are forced to make sure we are providing the best possible products	Fintech is good for banking
6	Yes our bank has a big focus on technology and strategy going forward	Technology focussed
	We have a strategy we call managed evolution which is looking at our Legacy and construction and how we can digitize the bank	Changing Legacy infrastructure by going digital
	We are looking at the eco-system as a whole and what is going on outside the bank in South Africa and globally	Scanning the environment
	What technologies can be brought into the bank and used to either decrease costs or create whole new value propositions	Technology focussed
7	Yeah there is so much going on and so much necessary work	Sufficient investment
	Making our infrastructure easy to intergrate into so we can develop rapidly	Investing in the right area
	What more could we be doing	Sufficient investment
	Massive projects are necessary but sometimes frustrating but it is hard to see how you could do them any quicker or better	Process takes time whether investment is sufficient or not
8	In very specific markets possibly but overall I would say South Africa hasn't reached that stage yet	Market share under threat but only in certain areas. SA has not reached high Fintech adoption yet
	I don't think any Fintech in South Africa has reached the scale to challenge a bank and also they are not necessarily starting out targeting the market share of banks	Fintechs in SA have not yet reached scale Targeting markets banks are not in
9	Yes, I do I think we can partner smartly with Fintech companies to improve on the customer experience	Collaboration can add value to banks
	It is about absorbing these new data streams that are created by new and advancing technologies and how do we absorb that into something the bank can use to improve on it's value to customers	Using data to improve the customer experience
	All of a sudden that's a new market that no one is playing in and it creates a whole new value proposition	Fintech creating new markets
10	if Financial services industries does not begin understanding their clients and computing their realities and what those realities will look like in the future we will be disintermediated	If banks not client focused they will be disrupted
	If you not involved in that process observing and experimenting within that process as a financial services company you risk losing the customer to the Fintech or technology layers sitting above you	If banks do not experiment or invest in the right technology they will lose market share to Fintech or technology companies
	We are deeply interested in technologies like VR, AR, simulated realities, biological technology, Nano technology all these things	Technology will continue to evolve rapidly

Participant 3		
1	Regulations do allow for innovation but I think insufficiently so I think there is scope to change the regulations to allow for more innovation in banking	Current regulation needs to be adapted for innovation
	Stability of the banking sector is paramount and that is generally the starting point of the regulators	Stability of industry currently more important than innovation
	There are some regulations which do not contribute to the stability of the banking sector but which do prevent innovation	These are the regulations that need to be reviewed
2	I don't think they are particularly biased at all	No advantage for Fintechs or banks
	Focus on stability has led to the banks particularly being over regulated	Regulations protect industry
	It makes it more difficult for the banks to innovate and compete with new upstarts who do not suffer under the burden of regulation	Fintechs have advantage over banks, Disadvantage for banks
3	Yes	Agrees
	Some of the practicalities havent changed so you are still required for example to submit a report that contains particular fields and that report necessarily becomes de facto regulation	Some regulation stifling partnerships
4	It's a good thing	Positive view
	You have the client at the centre of everything	Positive advantage of Fintech
	What kind of technologies can we put in place that will give the best value to our clients	Positive advantage of Fintech, technological innovation
	Small technology firms who are interested in solving financial problems	Fintech focussed on specific problems
5	Positive in a number of different spheres	Fintech is good for banking
	Creates some competition	Competition improves the industry
	Creates possibilities for collaboration	Collaboration can add value to banks
	Allows us to potentially deliver value into the hands of our clients faster more effectively	Adds value through convenience and customer focussed
6	We are continuously investing in trying to do a better job for our clients	Focus on client experience
	We continually invest in improving our technology	Technology focussed
	We do have an innovation team who looks at lets call it 2020, 2025, 2030 initiatives	Preparing for the future
	Everyone is responsible for innovation in their area	Innovation culture within the bank
7	On the one hand yes I think that it is sufficient	Sufficient investment
	I think there are still opportunities to leverage higher levels of investments	Should invest more in future
8	No.	No loss of market share by Capitec
9	Certainly	Collaboration can add value to banks
	Unbanked are an example	Fintech creating new markets
	Getting people to take on other non-bank financial services who don't have access to those financial services at all	Fintech creating new markets
	Can potentially open up markets outside South Africa	Fintech creating new markets
10	There will be an increase in the number of competitors in the banking market	Competition will be fierce
	More and more of our clients are comfortable transacting through remote channels	Technology adoption will increase
	I do not believe branches will stop being important in the lives of South African consumers	Branches will not disappear completely
	The current explosion of the digital era will continue	Technology will continue to evolve rapidly

Participant 4		
1	Regulation, it creates a lot of innovation	Current environment sufficient
	It is a golden opportunity to be innovative	Legislation giving innovation opportunities
	Opportunity for banks, start ups, anyone as long as you are quick	Equal opportunities for Fintechs and banks
	I have always believed through regulation you can completely set yourself apart from the rest	Innovation within current regulation can give competitive advantage
2	Regulation is pretty hard on banks, we are the big bad wolf	Regulation biased towards banks
	Our regulatory spend is massive, the regulatory spend has gone up over the last 7 years close to 30% a year	Disadvantage for banks
	It is a bit biased towards us, it is not positive	Disadvantage for banks
	Fintech can focus on 1 piece of regulation	Fintechs have advantage over banks
3	I think there is still space for everybody	Environment conducive for competition
	No I don't think so, I think the SARB has been SA INCs savior	Current regulation sufficient
	International bodies that will grade us and rank us according to regulation	Protects the industry
4	They will at some point run out of regulation	Regulators to decrease regulation
	I personally am not a big fan of the word Fintech, its been around for many years, its just it is a different form now	Negative view and not new concept
	Fintech can only really exist if you truly understand the problem statement	Fintech focussed on specific problems
	It creates a bigger marketplace	Positive advantage of Fintech
5	I think Fintechs make it easier, cause I can go after a very specific need	Fintech focussed on specific problems
	Yeah I believe so	Fintech is good for banking
	You've got a few Fintechs from an economic inclusion perspective	Brings more people into the market
	A lot of skills still come out of the banking industry	Creates more financial services skills
6	Very positive thing for South Africa	Fintech is good for banking and country
	We own shops, we pit equity in shops, its here its not coming, its arrived. What we are doing is we are partnering a lot closer	Investing and acquiring Fintech companies
	We just want to play together and help them where we can	Banks need Fintechs and Fintechs need banks
	We are not going to massively invest, we are not going to have an incubator for now	Only going to invest in certain areas
7	We need to build in such a way where we are able to negate Legacy quicker	Changing Legacy infrastructure by going digital
	I always believe we can be more progressive	Investment could be more
	We should spend more on running a virtual bank next to our bank	Areas where investment should be in
	Its difficult because your shareholders look at that number and they go well you are spending too much	Shareholders are a barrier to sufficient investment
8	You must spend otherwise you are going to fall behind	Investment in Fintech is critical
	I don't think so I think in actual fact throughout the technology advances we are putting into the bank we are gaining market share because we always think digital first	No loss of market share rather a gain of market share
	FX I can see my market share growing just purely because of digital	Area where market share is growing
	We have a very good, high tech drive	Why they are not losing market share
9	Yes especially us we don't bank everyone we bank a very specific market	Fintech creating new markets
	We will never go in there from an Investec brand perspective	Collaboration can add value to banks
	We do believe the Fintech model or marketplace allows us to go into other areas where it is powered by Investec so our banking licence	Fintech creating new markets
	For example FX cross border remittances into Africa	Fintech creating new markets
10	More distributed than it is today	Competition will be fierce
	You will have people outside of the banking industry coming up with structures which makes us special	Collaboration across industries
	You will get new banks	Competition will be fierce
	if you want to run a small specific bank for specific people I believe there is an opportunity	Niche financial services will be needed
	I do believe the industry is going to change but not as quick as people thought	Gradual change not rapid change
	Certain parts of it will be consumed by Fintech	Fintechs will gain market share in future

Participant 5		
1	It has been a hindrance but not necessarily a hard and fast block	Makes difficult but not impossible
	There is an openness for the regulators	Sign of progress with regulators
	Quite a constructive relationship we have with regulators	Sign of progress with regulators
	Whatever regulation you have is generally for good reason with regards to customers, markets and ourselves as a bank as well	Regulation is good for all especially SA
2	I would not say its biased towards banks, I would say there is a lot of emphasis on banks	Banks emphasised more but not at a disadvantage
	There is often room for interpretation	Banks can test regulation
3	We are not prevented from partnering with Fintechs infact we are doing more and more of that by the day	Already happening
	Regulators initiate certain things like we found out with distributed ledger, Block Chain and so forth	SARB new efforts with banks and Fintechs
4	It is a double-edged sword	Positive and negative view
	Disrupting our lives as banks in a big way	Negative view
	Keeping us on our toes, forcing us to stretch our imaginations a bit and get out of our comfort zones	Positive advantage of Fintech
	There's a synergy between Fintechs and banks	Positive view
	I like the idea of collaboration and finding the sweet spot	Positive view, advantages of partnership
View Fintechs as prospective partners as opposed to direct competition	Future thinking	
5	Without a doubt about that	Fintech is good for banking
	We tend to get a bit complacent	Fintechs have made banks rethink strategy
	Fintechs gives us a new perspective and lens	Fintech has made banks more innovative minded
6	The short answer is yes, we have done some work with Fintechs, we are doing some experimental work with Fintechs	Investing and acquiring Fintech companies
	We have invested heavily in refreshing some of that Legacy technology	Changing Legacy infrastructure by going digital
	We also have a dedicated function around alternate business models	Innovation culture within the bank
7	Technology holistically I think is okay	Overall investment is sufficient
	Bigger challenge is how do we proportion it to the right place	Investments must be allocated to the right places
	We need to make this a much more official part of the bank	Investment in Fintech is critical
8	I don't believe so at this stage we haven't really felt it yet	No loss in market share
	Undoubtedly that would become a bigger risk in future	Fintechs will gain market share in future
9	Absolutely no doubt	Collaboration can add value to banks
	Alternate lending models	Fintech creating new markets
	Where us as a bank may not necessarily have a full appetite to lend to a customer based on our risk scoring methods where we can partner with a third party that takes a certain element of risk	Fintech creating new markets
10	What do they bring to the table that us as a bank may not necessarily be experts at	Collaboration can add value to banks
	I don't think banks are going anywhere anytime soon but I think the role of the bank in the life of our markets and our customers will be altered	Role of banks will change
	Customers expect more of us	If banks not client focused they will be disrupted
	The emergence of Fintechs the largely untapped opportunity	Fintechs will gain market share in future
	We need to add real value	If banks not client focused they will be disrupted
We do need to find a way through the red tape and slowness to respond	If banks do not experiment or invest in the right technology they will lose market share to Fintech or technology companies	
More branding out there bank X in partnership with or powered by	Collaboration will increase	

1				
Current environment sufficient				
Current regulation needs to be adapted for innovation	Participant 1	Legislation Sufficient	Sandbox	
Equal opportunities for Fintechs and banks	Participant 2	Participant 4	Participant 2	
Example of a positive step by Regulator	Participant 3	Participant 5		
Fintech and Regulation at odds, not currently conducive to innovation	Participant 4			
Innovation within current regulation can give competitive advantage	Participant 5	Legislation Insufficient		
Legislation giving innovation opportunities		Participant 1		
Makes difficult but not impossible		Participant 2		
Not convinced regulations are hindering innovation		Participant 3		
Sandbox				
Regulation is good for all especially SA		Sign of progress with Regulators		
Regulations struggling to keep up with changing times		Participant 1		
Sign of progress with regulators		Participant 2		
Sign of progress with regulators		Participant 5		
Sign of progress with regulators				
Sign of progress with regulators		Regulation protects industry		
South Africa has world class financial services		Participant 3		
Stability of industry currently more important than innovation		Participant 2		
These are the regulations that need to be reviewed				

2	Participant 1		
Banks can test regulation	Participant 2		
Disadvantage for banks	Participant 3		
Disadvantage for banks	Participant 4	Disadvantage for Banks	
Disadvantage for banks	Participant 5	Participant 1	
Effective competition stifled through regulation		Participant 2	
Environment conducive for competition		Participant 4	
Fintechs have advantage over banks			
Fintechs have advantage over banks		Fintechs have advantage	
Fintechs have advantage over banks		Participant 1	
Fintechs have advantage over banks		Participant 2	
Fintechs have advantage over banks, Disadvantage for banks		Participant 3	
No advantage for Fintechs or banks		Participant 4	
Regulation biased towards banks			
Regulations protect industry		Regulations protect industry	
Regulations protect industry		Participant 2	
Regulations protect industry		Participant 3	
SA Banks have done well under current regulation			

4								
Fintech focussed on specific problems								
Fintech focussed on specific problems	Participant 1	Fintech solves specific problems		Collaboration with Fintech				
Fintech focussed on specific problems	Participant 2	Participant 2		Participant 5				
Fintech focussed on specific problems	Participant 3	Participant 3						
Collaboration with Fintech	Participant 4	Participant 4						
Negative view	Participant 5							
Not new concept								
Not new concept, technological innovation		Not a new concept						
Positive advantage of Fintech		Participant 1						
Positive advantage of Fintech		Participant 2						
Positive advantage of Fintech		Participant 4						
Positive advantage of Fintech								
Positive advantage of Fintech, technological innovation		Advantage of Fintech						
Positive and negative view		Participant 1						
Positive view		Participant 2						
Positive view		Participant 3						
Positive view, advantages of partnership		Participant 4						
Technological innovation		Participant 5						
		Positive view on Fintech						
		Participant 3						
		Participant 5						
		Technology focused						
		Participant 1						
		Participant 3						

5					
Adds value through convenience and customer focussed					
Banks can innovate by themselves	Participant 1	Fintechs are customer focussed		Collaboration with Fintechs	
Banks have outdated models	Participant 2	Participant 1		Participant 3	
Brings more people into the market	Participant 3	Participant 2			
Collaboration can add value to banks	Participant 4	Participant 3		Financial inclusion	
Fintech adds value through convenience				Participant 4	
Fintech has made banks more innovative minded			Fintech is good for banking		
Fintech has made banks more innovative minded			Participant 1	Legacy infrastructure	
Fintech has made banks rethink their strategy			Participant 2	Participant 2	
Fintech is good for banking			Participant 3		
Fintech is good for banking			Participant 4		
Fintech is good for banking			Participant 5		
Fintech is good for banking					
Fintech is good for banking and country			Competition improves the industry		
Fintechs are customer-focussed			Participant 1		
Fintechs have made banks rethink strategy			Participant 5		

6				
Banks need Fintechs				
Banks need Fintechs and Fintechs need banks	Participant 1	Collaboration with Fintechs	Customer focused	
Big Technology firms could dominate financial services	Participant 2	Participant 1	Participant 3	
Changing Legacy infrastructure by going digital	Participant 3	Participant 4		
Changing Legacy infrastructure by going digital	Participant 4			
Changing Legacy infrastructure by going digital	Participant 5	Innovation culture within the bank	Fintech solves specific	
Fintech is very niche focused and only offers certain financial services		Participant 3	Participant 1	
Focus on client experience		Participant 5		
Innovation culture within the bank				
Innovation culture within the bank		Changing Legacy by going digital	Technology will continue to evolve rapidly	
Investing and acquiring Fintech companies		Participant 2	Participate 1	
Investing and acquiring Fintech companies		Participant 4		
Investing and acquiring Fintech companies		Participant 5		
Only going to invest in certain areas				
Preparing for the future				
Scanning the environment		Investing and acquiring Fintechs		
Technology focused		Participant 1		
Technology focused		Participant 4		
Technology focused		Participant 5		
Technology focused				
Technology focused		Technology focused		
Technology focused		Participant 1		
		Participant 2		
		Participant 3		

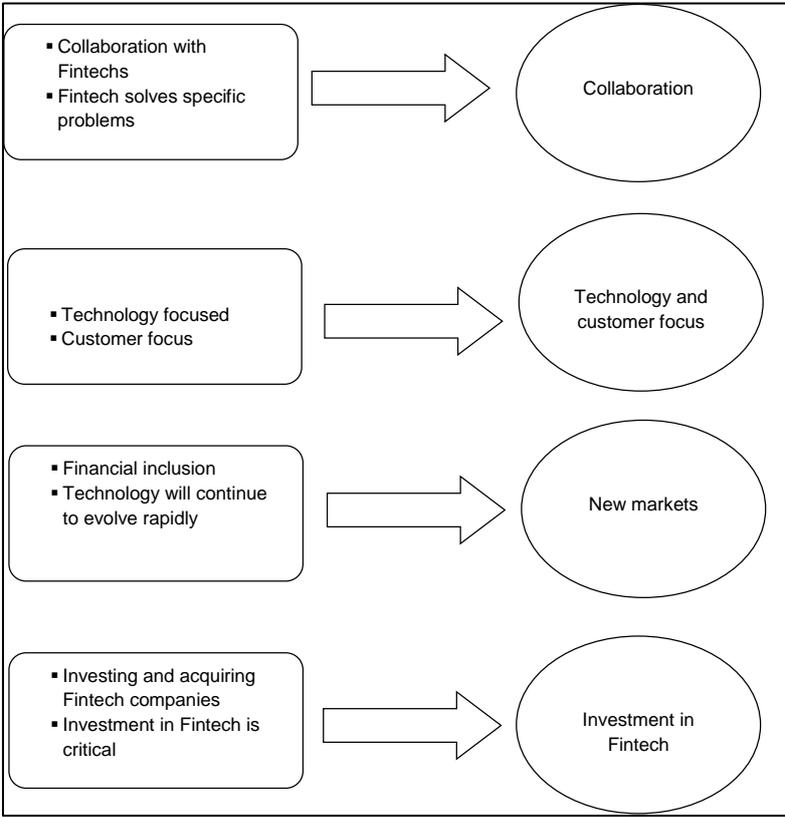
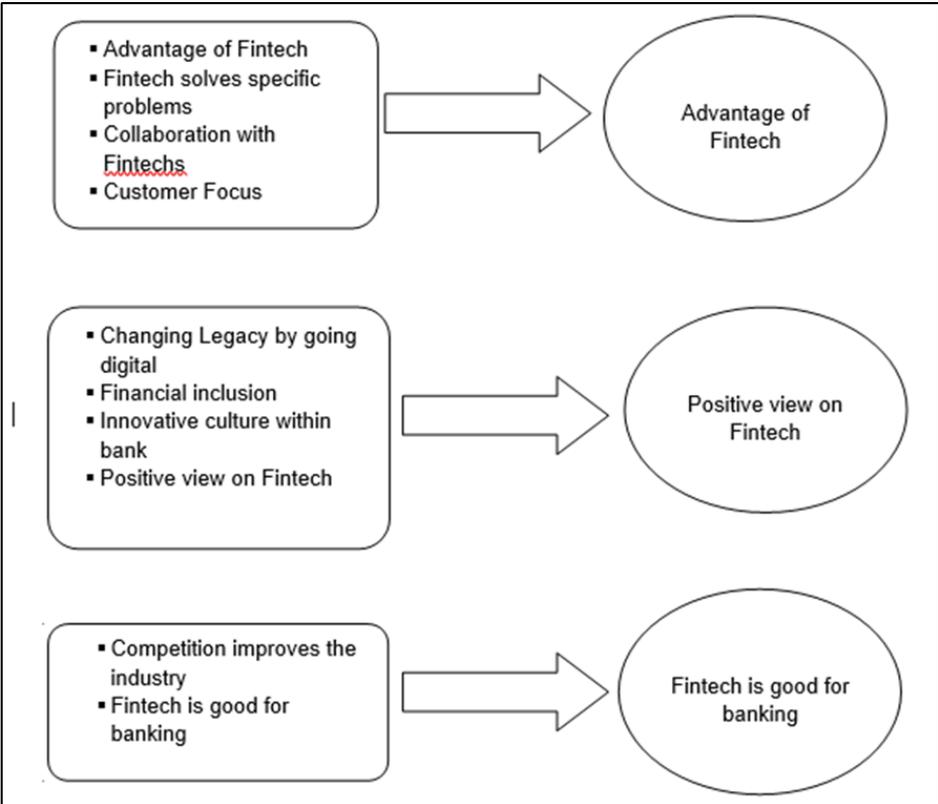
7			
Areas where investment should be in			
Investment could be more	Participant 1		Investment in Fintech is critical
Investment in Fintech is critical	Participant 2		Participant 4
Investment in Fintech is critical	Participant 3		Participant 5
Limited budget	Participant 4		
Money needs to be allocated into the right areas	Participant 5		Technology focused
Money needs to be allocated into the right areas			Participant 1
Money needs to be allocated into the right areas			Participant 2
Money needs to be allocated into the right areas			Participant 5
Process takes time whether investment is sufficient or not			
SA Banks cannot spend what International banks spend			Sufficient Investment
SA Banks cannot spend what International banks spend			Participant 2
Shareholders are a barrier to sufficient investment			Participant 3
Should invest more in future			Participant 5
Sufficient investment			
Sufficient investment			SA Banks cannot spend what International banks spend
Sufficient investment			Participant 1
Sufficient investment			Participant 4
			Participant 3

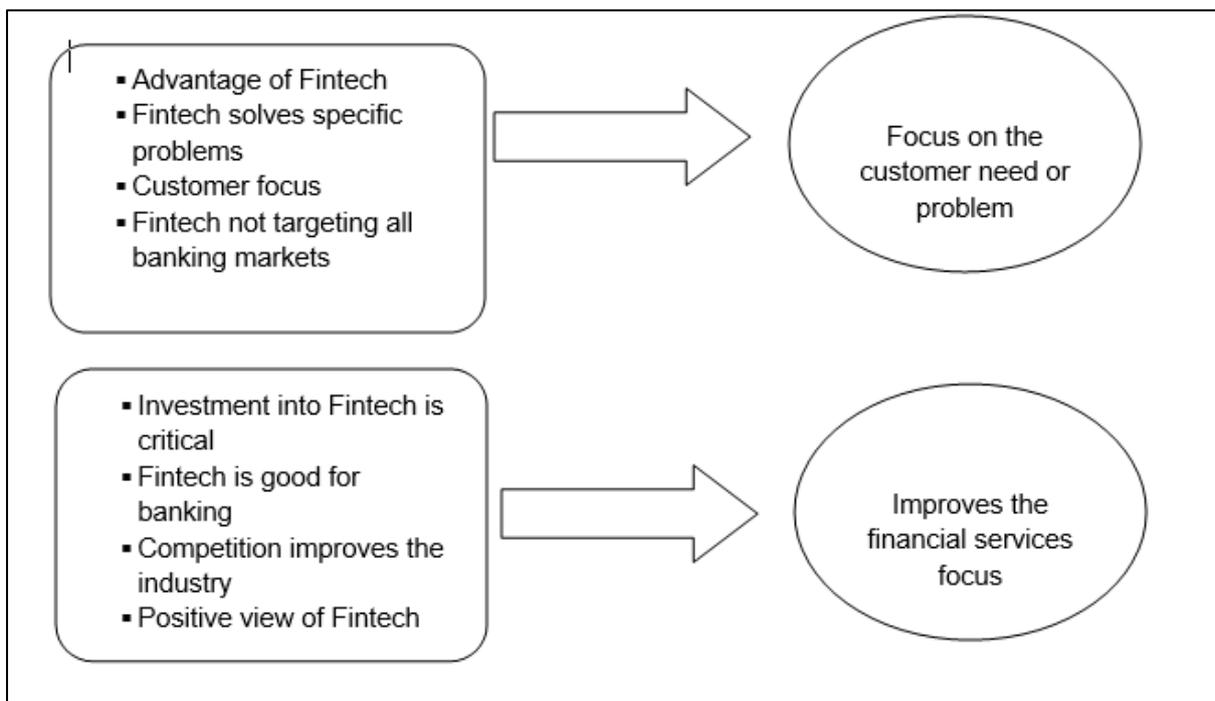
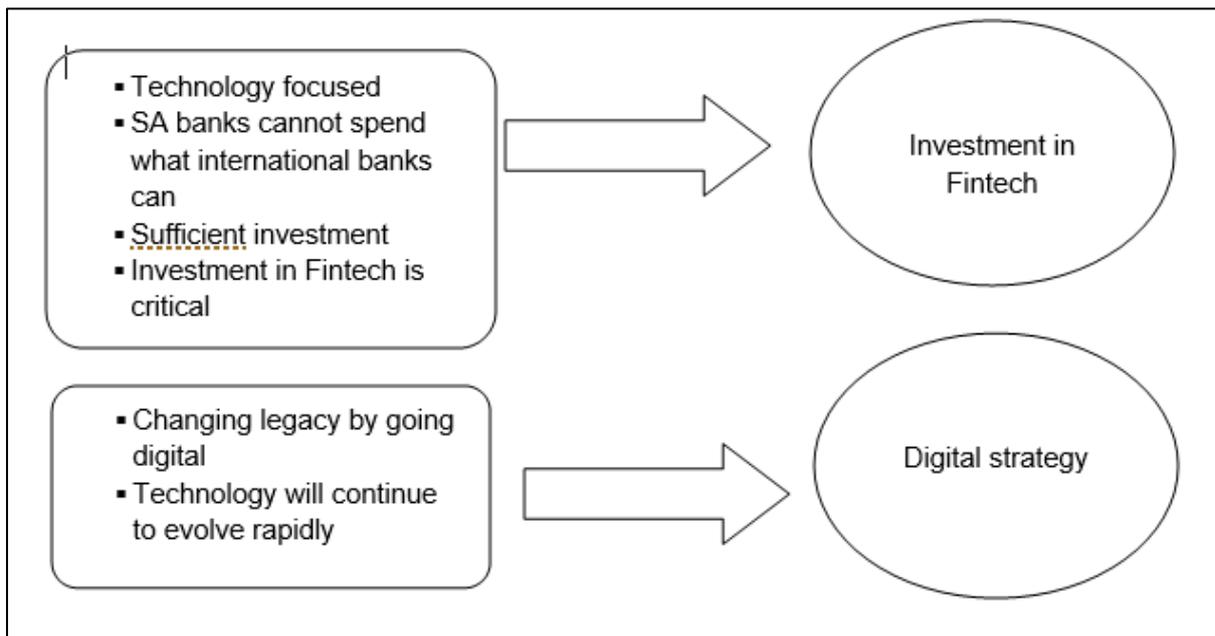
8			
Area where market share is growing	Participant 1		
Fintechs in SA have not yet reached scale Targeting markets banks are not in	Participant 2	Fintech not targeting all banking markets	
Fintechs will gain market share in future	Participant 3	Participant 2	
Market share under threat but only in certain areas	Participant 4	Participant 4	
Market share under threat but only in certain areas	Participant 5		
Market share under threat but only in certain areas. SA has not reached high Fintech adoption yet		No significant loss in market share	
No loss in market share		Participant 3	
No loss of market share by Capitec		Participant 4	
No loss of market share rather a gain of market share		Participant 5	
Why they are not losing market share		Participant 1	
		Participant 2	

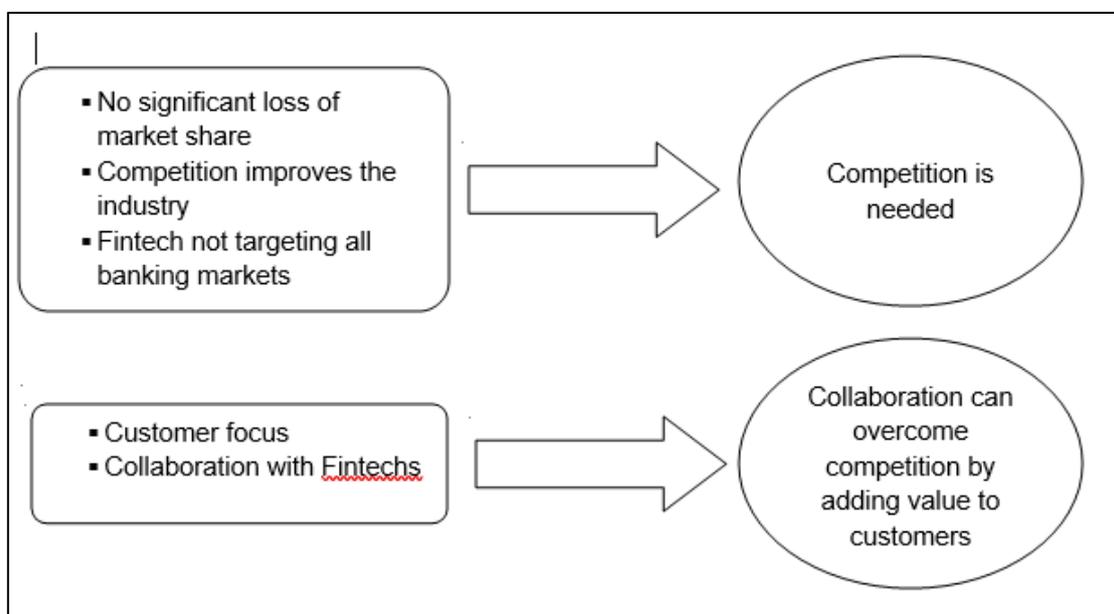
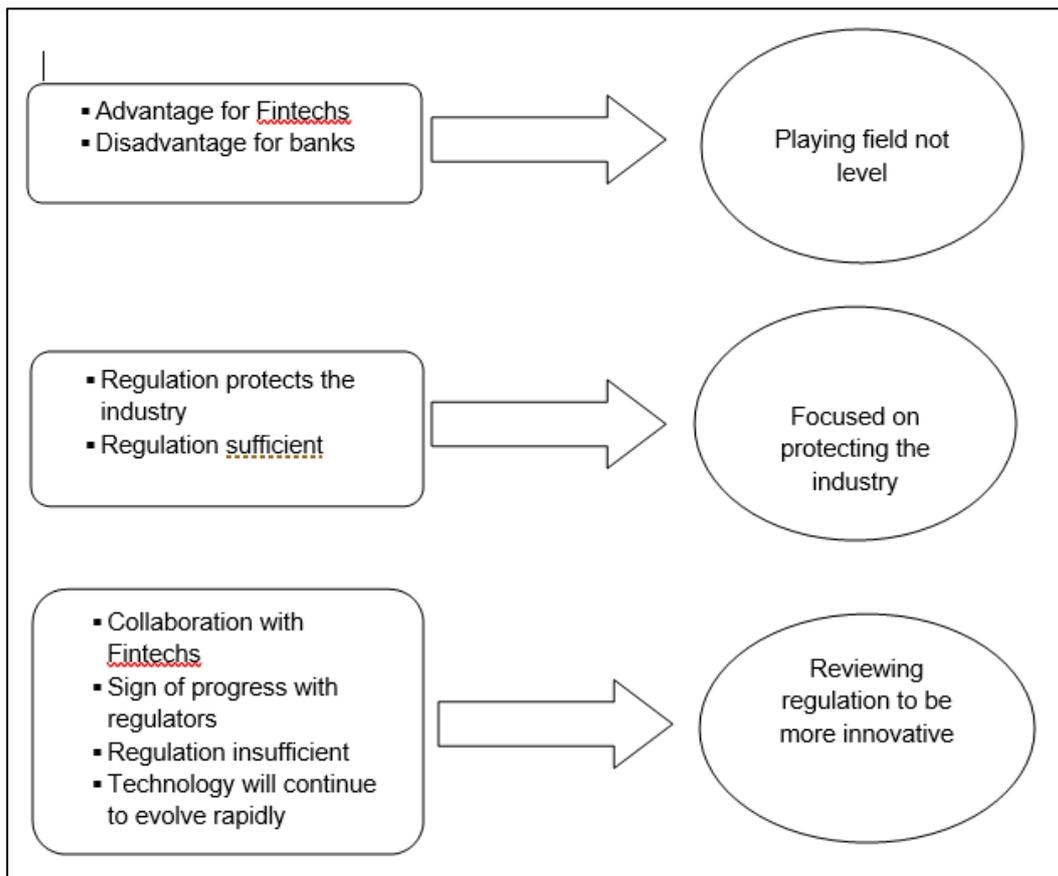
9			
Collaboration can add value to banks			
Collaboration can add value to banks	Participant 1		Collaboration with Fintechs
Collaboration can add value to banks	Participant 2		Participant 1
Collaboration can add value to banks	Participant 3		Participant 2
Collaboration can add value to banks	Participant 4		Participant 3
Collaboration can add value to banks	Participant 5		Participant 4
Collaboration can add value to banks			Participant 5
Financial inclusion can be created through partnership with Fintech companies			
Financial inclusion can be created through partnership with Fintech companies			Fintech creating new markets
Fintech creating new markets			Participant 2
Fintech creating new markets			Participant 3
Fintech creating new markets			Participant 4
Fintech creating new markets			Participant 5
Fintech creating new markets			
Fintech creating new markets			Financial inclusion
Fintech creating new markets			Participant 1
Fintech creating new markets			
Fintech creating new markets			Customer focus
Using data to improve the customer experience			Participant 2

10		
All personal data integrated into one database		
Biometrics	Participant 1	Collaboration with Fintechs
Branches will not dissappear completely	Participant 2	Participant 4
Collaboration across industries	Participant 3	Participant 5
Collaboration will increase	Participant 4	
Competition will be fierce	Participant 5	Competition improves the industry
Competition will be fierce		Participant 3
Competition will be fierce		Participant 4
Fintechs will gain market share in future		Participant 5
If banks do not experiment or invest in the right technology they will lose market share to Fintech or technology companies		
If banks do not experiment or invest in the right technology they will lose market share to Fintech or technology companies		
If banks not client focused they will be disrupted		Technology will continue to evolve rapidly
If banks not client focused they will be disrupted		Participant 1
If banks not client focused they will be disrupted		Participant 2
Niche financial services will be needed		Participant 3
Payments will be instantaneous		
Role of banks will change		Investment in Fintech is critical
Technology adoption will increase		Participant 2
Technology will continue to evolve rapidly		Participant 5
Technology will continue to evolve rapidly		
Technology will continue to evolve rapidly		Customer focus
		Participant 2
		Participant 5

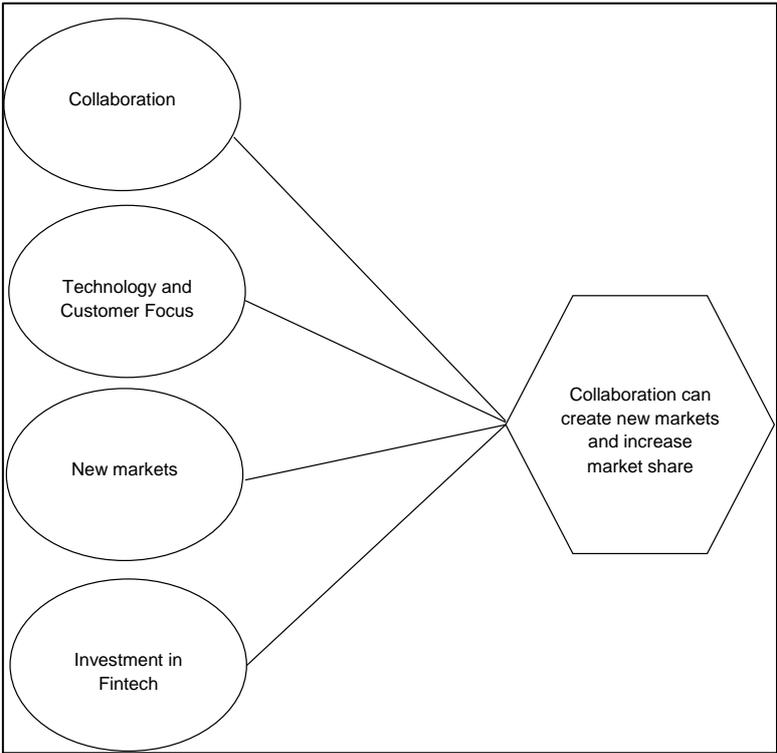
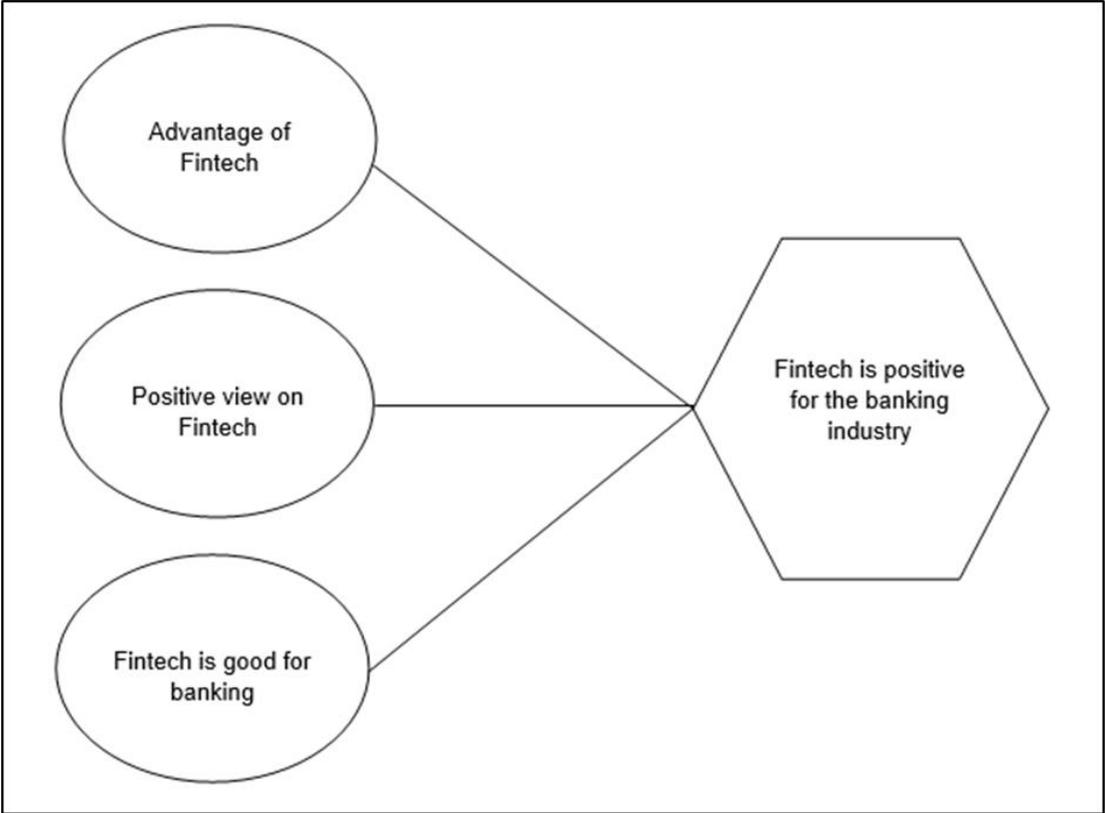
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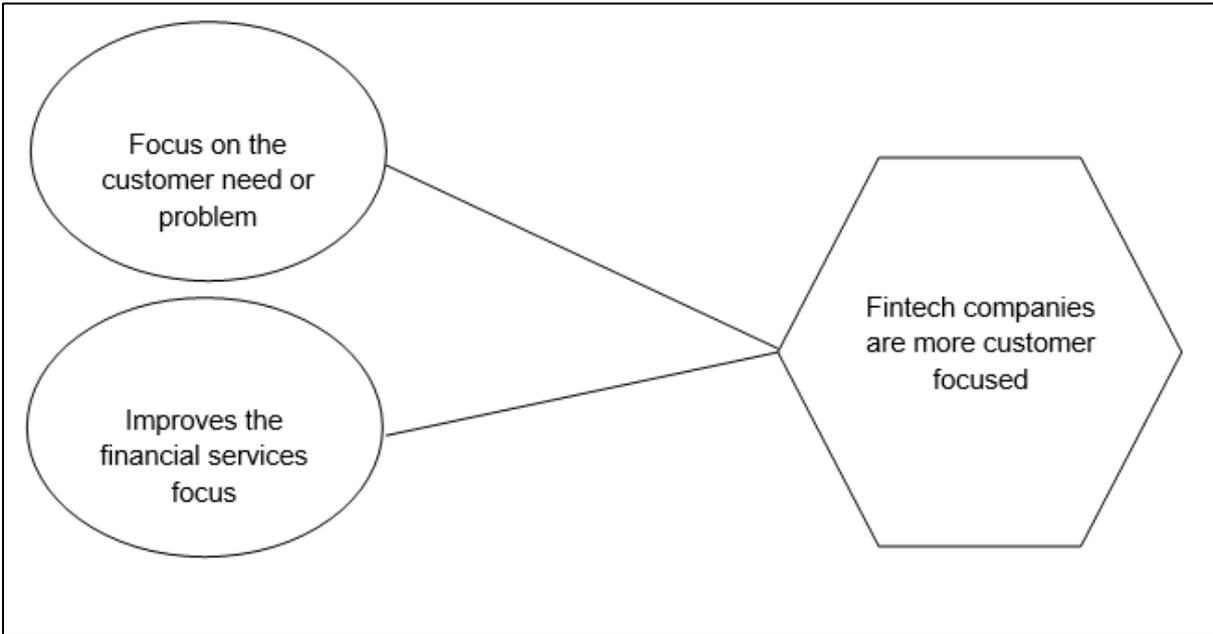
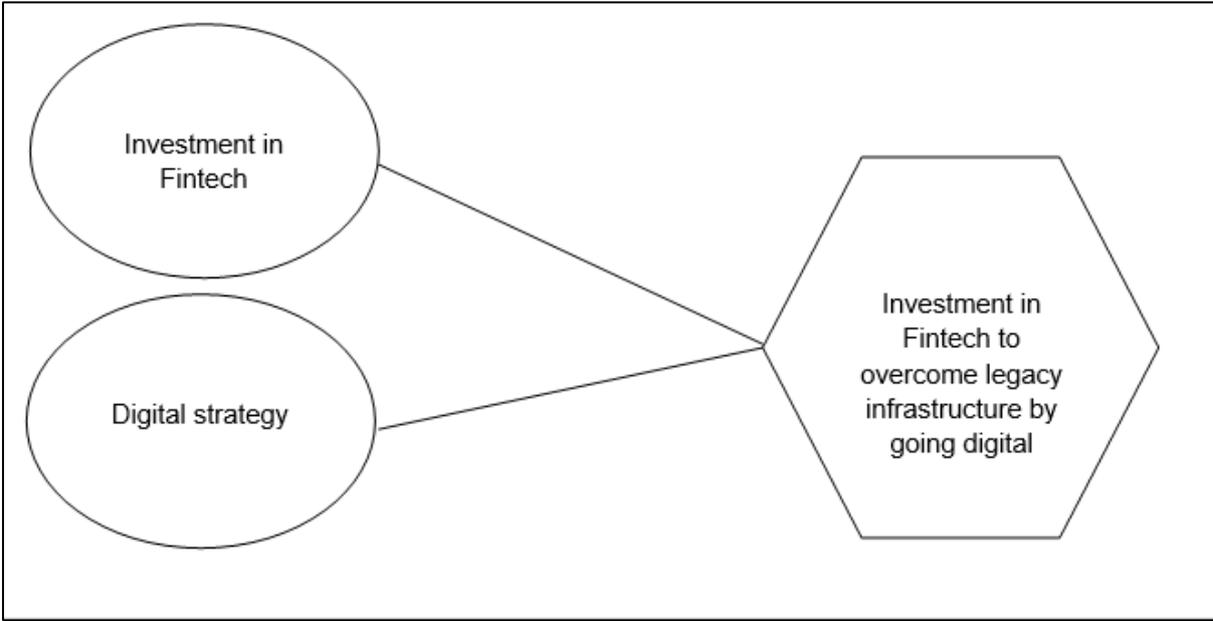


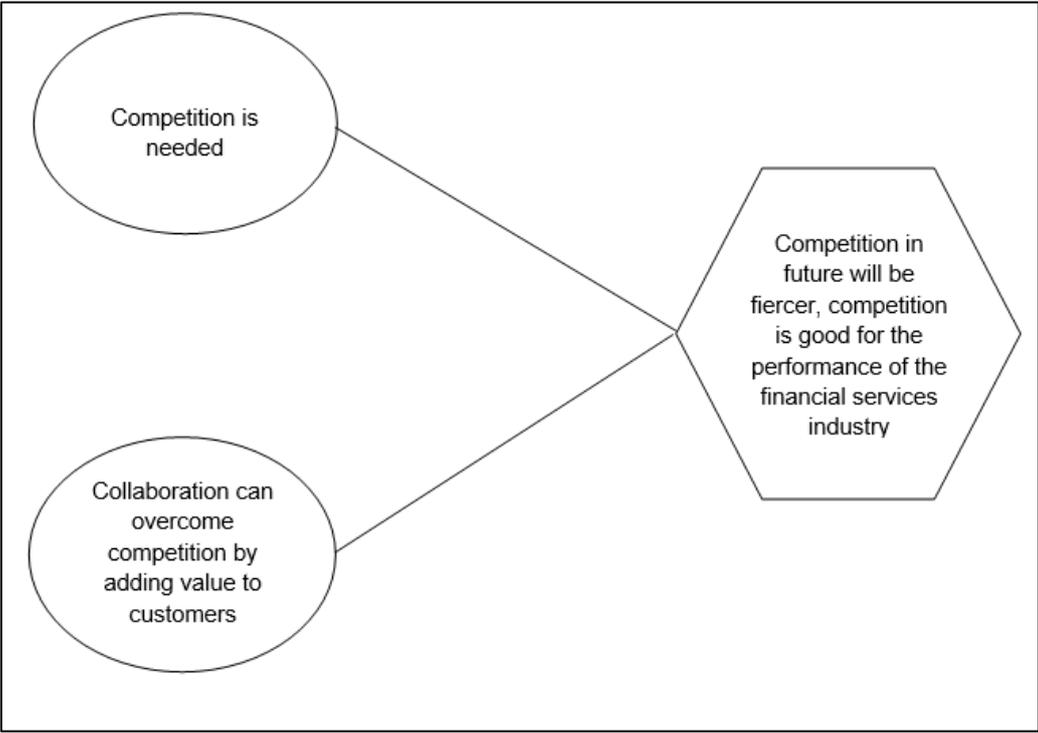
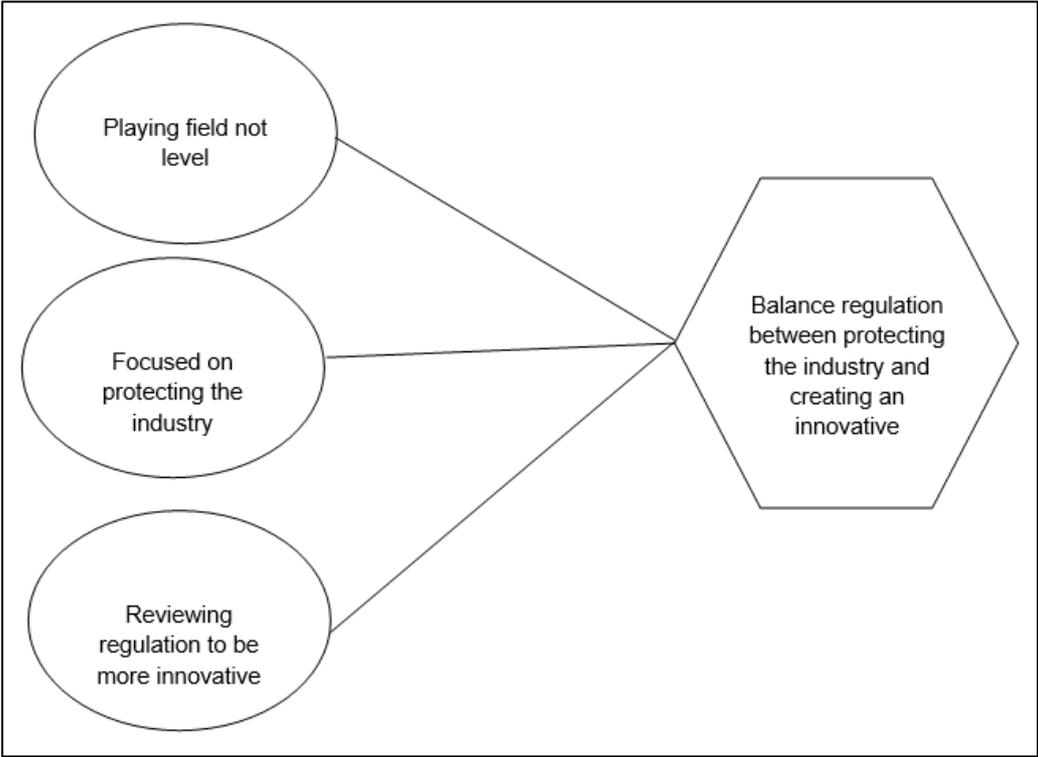




AXIAL CODES TO SELECTIVE CODES







(e) A sample from an institution (e.g. hospital/school)?		X
(f) Handicapped (e.g. mentally or physically)?		X
3. Does the data that will be collected require consent of an institutional authority for this study? (An institutional authority refers to an organisation that is established by government to protect vulnerable people)		X
3.1 Are you intending to access participant data from an existing, stored repository (e.g. school, institutional or university records)?		X
4. Will the participant's privacy, anonymity or confidentiality be compromised?		X
4.1 Are you administering a questionnaire/survey that		
(a) Collects sensitive/identifiable data from participants?		X
(b) Does not guarantee the anonymity of the participant?		X
(c) Does not guarantee the confidentiality of the participant and the data?		X
(d) Will offer an incentive to respondents to participate, i.e. a lucky draw or any other prize?		X
(e) Will create doubt whether sample control measures are in place?		X
(f) Will be distributed electronically via email (and requesting an email response)?		X

Note

- If your questionnaire **DOES NOT** request respondents' identification, is distributed electronically and you request respondents to return it *manually* (print out and deliver/mail); **AND** respondent anonymity can be guaranteed, your answer will be NO.
- If your questionnaire **DOES NOT** request respondents' identification, is *distributed via an email link and works through a web response system* (e.g. the university survey system); **AND** respondent anonymity can be guaranteed, your answer will be NO.

Please note that if **ANY** of the questions above have been answered in the affirmative (**YES**) the student will need to complete the full ethics clearance form (REC-H application) and submit it with the relevant documentation to the Faculty RECH (Ethics) representative.

and hereby certify that the student has given his/her research ethical consideration and full ethics approval is not required.

Adley
SUPERVISOR(S)

11 July 2018
DATE

HEAD OF DEPARTMENT

DATE

Jordan
STUDENT(S)

2 June 2018
DATE

Student(s) contact details (e.g. telephone number and email address):

0836020723 Jacques@scorpionts.co.za

Please ensure that the research methodology section from the proposal is attached to this form.

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