UNIVERSITY OF THE
WITWATERSRAND,
JOHANNESBURG

Incumbent response strategies

to disruptive innovation

in the South African banking industry

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A research report submitted to the Wits Business School in the University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Management in the field of Innovation Studies

Johannesburg, 2023

ABSTRACT

In the South African banking industry, five major banks have collectively maintained a 90% market share across retail and wholesale banking; however, new entrants are emerging with disruptive innovations that threaten the incumbents' dominance. The purpose of this study is to explore how these established firms perceive the threat of disruption and respond with their own strategies. It also aims to discover what factors influence these strategies, to understand why one strategy may take priority over another. The study investigates the problem statement posed by disruptive innovation theory, which is the potential failure of incumbent firms to respond appropriately to disruptive innovation. Findings have been assessed against a framework combining two theories and their extensions: disruptive innovation theory and response strategy theory.

From the population of incumbent banks in South Africa, the top five in terms of assets held were included in the sample. To ensure informed insights, purposive sampling was used to identify four participants from each firm who could comment authoritatively on the topics under consideration. The study employed a qualitative methodology, leveraging semi-structured interviews to gather primary data from participants. Supplementary secondary data was used to support findings where required.

Findings of this research include that disruption is occurring within this industry and to a high enough degree that incumbents have acknowledged disruptors and the threat of disruption. It is specifically found to be in the middle stage of the process of disruption, whereby the disruptive innovations are no longer insignificant, and are growing in performance and in presence across the industry; however, they are not considered to have penetrated incumbents' mainstream market yet. In response to this, incumbents have prioritised at least one, and a maximum of two, response strategies out of a possible five that are dominant in this industry. The research also identified 16 factors that fall into two categories, motivation and ability to respond, which influence the prioritisation of response strategies. These insights may be used to inform theory around incumbent responses to disruptive innovation, with extensions towards the banking industry. It also has the potential to support incumbents in understanding and modifying their strategies to maximise their response to disruption.

KEY WORDS: Innovation, disruptive innovation, incumbent response strategies, banking industry of South Africa, motivation to respond to disruption, ability to respond to disruption

DECLARATION

I, Nikhilia Ishwarlaal, declare that this dissertation is my own unaided work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master of Management in the field of Innovation Studies at the Wits Business School in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other University.

Signature: 

On this 23rd day of November 2023

Nikhilia Ishwarlaal

DEDICATION

I dedicate this thesis to my beautiful boy, Wilson, who has been with me every step of the way.

ACKNOWLEDGEMENTS

Thank you to my mother and father, Vimla & Pops, and of course, to my brother, Akhil, for your unconditional love and support throughout my life that has allowed me to tackle this massive undertaking with confidence. Your words of encouragement and ability to see the best in me are what have helped me to push through on some of the harder days. You are my inspiration and I hope that I have made you proud.

To my partner, Malcolm, thank you for taking care of me so that I could give this research my all. I am forever grateful for the beautiful meals; the pep talks and the badminton breaks that made this journey not feel like work at all.

Thank you to the programme director Dr Diran Soumonni, my supervisor Dr Pelayo Omotoso, and all the leaders involved in this programme for sharing your passion for innovation with me. The late nights and countless revisions all feel completely worth it to be a part of something so special. I always knew the programme would be powerful, but I never would have guessed how much it would open my mind to a new way of thinking. I will be forever grateful for that and for all your help in getting this study to where it is today.

To Fiona and Molahadi, my mentors, thank you for opening this door for me to further my education. I am proud to know two inspiring women who are so willing to help another. Without your guidance and advice, I may never have gotten to where I am today, and I certainly would never have been able to do it as soon as I did. Thank you for taking the time to make this possible for me.

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DI: Disruptive Innovation

SA: South Africa

SME: Small and Medium-Sized Enterprises

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CHAPTER 1: INTRODUCTION

1.1 PURPOSE OF THE STUDY

There have historically been five leading banks within the South African banking industry, which are Absa Bank, FirstRand Bank, Investec Bank, Nedbank Limited and Standard Bank. These five banks are still considered to be the primary competitors within the industry as they continue to hold a combined 90% of the existing South African banking market. However, entrants such as Capitec (operating since 2001), Tyme Bank (operating since 2015), Bank Zero (operating since 2018), and Discovery Bank (operating since 2019) have all began gaining their own share of the existing market and introduced the threat of disruption into the industry through new business models and technology. This research study seeks to understand how the incumbent firms within South Africa's banking sector have perceived this threat of disruption and responded through their own strategies related to their business model, processes as well as product and service offerings. To build on this purpose, this investigation is presented to understand what factors influence these strategies and if these enhance the understanding of disruptive innovation responses in the banking industry, within the emerging market of South Africa.

The findings from this study will be able to inform existing theory around incumbent responses to disruptive innovation with extensions towards the banking industry. In this way it is capable of adding to the research on banking industries in emerging economies. It can also be used to trigger further research in similar industries to enhance the understanding of incumbent responses to disruptive innovation within their context. The findings also have the potential to support banks practically within the South African banking sector, such that they may better understand and modify their strategies in order to maximise their responses to disruption.

1.2 CONTEXT OF THE STUDY

The banking sector in South Africa plays a critical role in the country's economy. In the first quarter of 2021, the finance industry contributed 1.5% annualised growth to GDP (GDP growth in total was 4.6% annualised), with a total banking sector asset value of just under R6.5 trillion (StatsSA, 2021). Not only does it have a direct and significant contribution to GDP, but it also uplifts the economy through distributing resources and capital through other industries, which allows these industries to contribute to the overall GDP. The banking industry also employs over 150 000 people, which is over 3% of all personal income taxpayers. Banks also contribute billions each year in corporate tax (Carrim et al., 2017). This highlights how important the stability of the banking industry is to the stability of the South African economy.

Historically, the banking industry has had high barriers to entry due to Basel II and the further development of Basel III (post the 2008 financial crisis), which has three pillars within its framework. The first is that banks must have a minimum level of capital and liquidity to operate and provide credit; the second is that they will undergo supervisory review processes; and third, they must operate with enhanced market discipline and disclose more information (Van Vuuren, 2012). All of these pillars exist because the health of the economy is partly dependent on the banking industry, and so in order to avoid another financial crisis, these pillars are in place to protect economies, consumers, as well as the banks themselves. However, these requirements have also meant that new entrants must have the appropriate level of capital, liquidity, governance, and risk management processes in order to operate. This meant that only a few could operate in this well-regulated market, and in 2014, only 31 banks were registered with the South African Reserve Bank (SARB) (Norrestad, 2020). These regulations also meant that banks have leaned towards less risky operations that have been consistent with their core operations and core market. This has led to many areas within the banking industry and adjacent markets being unexplored, leaving the opportunity for new entrants to capture and create new demand (Mishi & Khumalo, 2019).

By December 2022, the number of registered firms with a banking licence in South Africa went up to 36, 14 of which are locally controlled; however, 67 banks in total operate within the country, some of which are representative offices of foreign banks (SARB, 2022). The increase in the number of banks indicates greater competition in the industry. New entrants include TymeBank, Bank Zero and

Discovery Bank, who were all granted commercial banking licences in the past eight years. Other new firms also entered the market, who did not qualify as a bank and were not granted a licence but were able to use open innovation through partnerships in order to provide new payment methods and new forms of lending. Examples of these new entrants are Yoco and Snapscan, who offer payment processing solutions for businesses and informal vendors (Kalan, 2016). These new firms signalled that the barriers to entry in the banking industry were being reduced, and therefore, it has become more important for the leading banks to respond to these threats of disruption in order to stay competitive and continuously grow. The outcomes of this study have the potential to guide banks towards appropriate response strategies suited for disruption within the South African banking industry.

1.3 RESEARCH PROBLEM STATEMENT

The problem statement being investigated through this study is the potential failure of incumbent firms to appropriately respond to disruptive innovation.

Christensen (2006), when exploring disruptive innovation, mentions that incumbents often have the resources and ideas to identify innovation projects, but because many radical innovations may not have explicit demand (as the market may not exist yet) or they have low profit margins at the start, the projects based on them are turned down and therefore incumbents fail to disrupt their market. Additionally, Christensen (2006) describes how incumbent firms' innovation selection processes lean toward financial assessment criteria and traditional market research, and this does not allow firms to properly evaluate innovations and identify their potential for long-term success (Christensen, 2006). This forces incumbent firms to remain within their existing value network and invest in existing products and services. For banks specifically, the focus is indeed on financial metrics, such as net present value analysis of projects and rate of return on the project investment (Kudratova et al., 2020). These characteristics within incumbents in terms of how they identify and invest in projects highlights that they may lack the capability to recognise the opportunities for disruption as well as the mechanisms to invest in them upfront. This may additionally impact their ability to respond to the threat of disruption and needs to be investigated further.

Disruptive innovation theory proposes innovations that provide a different mix of attributes than what is offered in the mainstream market, but the performance on traditional attributes within it is at a lower level than what existing firms offer. This is seen to happen when incumbent firms begin to offer continuously higher performance on traditional attributes to meet the needs of their most demanding customers but at a level much higher than what the majority need (Christensen et al., 2015). Incumbents during this process are assumed to overlook emerging needs in other segments, as their quest is to gain greater profitability from their well-established customer base. Disruptive innovation then enters the market, successfully capturing the overlooked segments and, overtime, improves performance to a such level that it can contend with existing offerings and satisfy the demand of mainstream customers (Christensen et al., 2015). This theory assumes that incumbents, such as banks within South Africa, will be replaced if a disruptive innovation enters the market. However, some researchers believe that incumbents can use disruptive innovation theory to respond in order to survive as well as find new avenues for growth. Kilkki et al. (2018) build on this by saying that an incumbent is only disrupted if it is required to redesign its strategy in order to survive, and it does not necessarily have to leave the industry (Kilkki et al., 2018). One suggestion on response strategies includes incumbents intentionally moving into higher-end markets, where customers value the extremely high performance of traditional attributes. Another suggestion is for the incumbent to create an autonomous business which is outside of their existing value network, that allows them to target new customer segments and become disruptors themselves (Kumaraswamy et al., 2018; Yu & Hang, 2010). Response strategies like these have not been found in any empirical studies within South Africa, and so the objective is to be able to identify the response strategies that exist within the banking sector of South Africa and what factors influence the successful implementation of these strategies, which may allow incumbents to discover long term growth in the face of disruption.

1.4 SIGNIFICANCE OF THE STUDY

This study is poised to assist scholars who are dedicated to the agenda of strategic innovation management, as by delving deeper into the realities of the threat of disruption and response strategies within banks in an emerging market, it may highlight specific industry and market nuances that

challenge the assumptions of existing innovation theories such as disruptive innovation, and prompt the need for extensions into emerging market industries such as the banking industry of South Africa.

In addition, it aims to assist those within the banking industry who wish to use innovation theory in order to face disruption within the industry and still grow their businesses. Specifically, the innovation managers, those involved in the project selection process who have influence and decision-making power on the types of innovations that will make up the firm's innovation portfolio in line with their proposed strategy as well as those involved in designing and implementing the firm's business model. By doing a deeper analysis of the banking industry within South Africa, these decision-makers will be able to use the findings of the study and the extensions of the innovation theory to review and adapt their response strategies in a way that is suited to their industry, and that will give them a better chance at surviving disruption and growing their business. For other industries with similar characteristics, it is also a start in understanding how their response strategies can be enhanced based on the findings.

1.5 DELIMITATIONS OF THE STUDY

The empirical study is delimited in the following ways:

- To the financial banking sector of South Africa, specifically the top five incumbent banks based on rand value of assets held, which includes retail and wholesale banking. In South Africa, total banking assets are 90% owned by the top five banks (Prudential, 2020).
- To the response strategies within the banking firms. While there are many strategic initiatives that firms within the banking industries undertake, this study looks specifically at how firms have taken action in response to observing new entrants and the impact that has had on the industry.
- Comparison to only the theory of disruptive innovation. This theory has been chosen over others due to its relevance and observability in the banking sector.

1.6 ASSUMPTIONS

The assumptions made in this study are:

- Outcomes are representative of an emerging economy rather than being generalisable to all economies
- The sample of the top five leading incumbent firms allows generalisability to the industry
- The medium of online video calls to gather interview data does not impact the quality of data collected
- All research participants are able to comment authoritatively and knowledgeably about the topics under consideration
- All research participants have answered with honesty and candour during the interview process
- All research participants have a genuine interest in participating in the research and no other motives
- Views of the research participants are a valid source of data and collectively are able to form the findings for this study
- The methods used to sort, analyse and present the data have allowed for an accurate representation of information provided by research participants

1.7 DEFINITION OF KEY TERMS

Throughout this research report, several terms are used repeatedly. In order to promote a common understanding and bring clarity to the discussion the definitions of these terms are outlined in Table 1:

Term	Definition
Breakthrough Innovation	Products, services, and processes that undergo significant changes, such as through technology improvements or addressing unmet customer needs. This type of innovation assists firms in capturing adjacent market share over and above their core existing markets (Kovacs et al., 2019).
Disruptive Innovation	A product, service, process, or business model that provides a different mix of attributes than what is offered in the mainstream market, but the performance on traditional attributes (most valued by existing customers) is at a lower level than what existing firms offer. This innovation then enters the market successfully capturing overlooked segments, which are often only niche groups of customers that value the new mix of benefits such as being cheaper, smaller, simpler, and more accessible. Over time, the innovation also improves its performance on the traditional attributes, captures existing market share and changes the basis of competition (Christensen & Raynor, 2003).
Disruptor	A firm which targets the overlooked customer segments in low-end, niche, or new markets with products, services, processes, or business models that fit the description of a disruptive innovation. This firm is often characteristically a new entrant into the industry and is smaller, with initially fewer resources than existing firms (Christensen et al., 2015).
Incremental Innovation	Improvements to existing products, services, or processes that target an organisation's core customer base and existing market. This type of innovation can be used to grow the firm by acquiring a greater core market share (Kovacs et al., 2019).
Incumbent Firm	A firm that already holds an established and significant position in an existing market (Christensen & Raynor, 2003).
Innovation	The implementation of a new or significantly improved product, service, process, a new marketing method, or a new organisational method in business practices, organisation or external relations (OECD, 2010). An invention only becomes an innovation when it is adopted by one or more agents other than the inventor.
Radical Innovation	Products, services, and processes that are able to cater for needs substantially better than current innovations, this could include needs that do not exist yet within brand-new markets. This type of innovation often requires the firm to develop a new business model in order to capture value. This type of innovation is the most difficult to develop and has the highest level of risk from the three degrees of innovation (incremental, breakthrough and radical) (Kovacs et al., 2019).
Sustaining Innovation	Improvement on an existing offering through increased performance on traditional attributes. This type of innovation targets the existing core market of a firm and is often used by incumbent firms (Christensen & Raynor, 2003).

Table 1: Definitions of Key Terms

1.8 RESEARCH QUESTIONS

This research report aims to answer two questions that may be used to enhance the understanding and practice of innovation management in the South African banking industry, and specifically in how incumbents respond to the threat of disruption in order to sustain and grow their business. The first question is centred around the degree in which the industry is going through disruption. This question will identify whether the threat of disruption does exist and what stage of the disruption process the industry is perceived to be in, if any. The sub-question will additionally identify what observations are creating the perception, as this may also influence the type of responses being pursued by incumbents.

Research Question One: *To what degree is the South African banking industry undergoing disruption?*

Sub-Question One: *Why is this considered the case?*

The second question will centre around what exactly are the actions taken after an incumbent identifies a potential disruption threat, in order to remain in the industry as well as experience its own growth. This question will derive a shared understanding of what disruption response strategies look like in this industry and identify whether it is fundamentally different from what existing theories assume. The sub-question also aims to identify any influencing factors driving why banks choose specific strategies over others and factors that influence the implementation of response strategies. This will also assist in identifying any factors that are not highlighted in existing literature and whether it may be extended with the findings related to banking, as the industry may have unique characteristics that differentiate its response strategies to the threat of disruptive innovation.

Research Question Two: *What is the nature of incumbent responses to the threat of disruption?*

Sub-Question Two: *What factors are influencing these responses?*

1.9 OUTLINE AND STRUCTURE OF THE REPORT

This research report contains six chapters in total, which includes this first introductory chapter. A short description of each of the five remaining chapters are provided in this section.

Chapter two presents the literature review, which consists of comprehensive descriptions and developments of both disruptive innovation and the typical position of incumbents when disruption occurs. This is followed by how the theory can be used to develop response strategies such that incumbents can continue to remain and grow within their industry. Criticism of disruptive innovation theory is also presented within this chapter.

Chapter three presents the research methodology, which describes the research design used in the study, how the data has been gathered and analysed, as well as the overall quality of the study. This section also includes a breakdown of the population and sample that has been used to derive findings.

Chapter four presents the summary of the data collected from the interviews held with participants who are each involved within and represent one of the top five incumbent banks. The results are presented in relation to the research questions in section 1.8. Some contextual setting secondary data, on the current position of the banking industry within South Africa, is found at the start of this chapter. This provides the reader with a knowledge foundation on the industry, such that the results may be interpreted more easily.

Chapter five is an analysis of the results where a contrast of the findings in chapter four with the literature presented in chapter two can be found. This is done in order to generate insights and answer the research questions proposed within this study, and so is positioned in terms of outlining the degree of disruption within the banking industry, the characteristics driving the degree of disruption, incumbent response strategies and influencing factors to incumbent response strategies.

Chapter six presents the study's conclusions and recommendations. This final chapter contains the key research findings with an overview of the implications for the banking industry of South Africa, especially incumbent banks, as well as direction on where future research may be valuable to both researchers and the industry.

1.10 CONCLUSION

The purpose of this study is to investigate the strategies used by incumbents in response to the threat of disruption within the banking industry of South Africa. This was done by interviewing managers involved in innovation and/or strategy management amongst the five top incumbent banks to understand their perception of disruption occurring within the industry and their firm's response approach. The methodology used has allowed the researcher to answer the two research questions; *'To what degree is the South African banking industry undergoing disruption?'* and *'What factors are influencing these responses?'* together with their sub-questions, which has allowed for recommendations to be generated for those in industry.

CHAPTER 2: LITERATURE REVIEW

With increasing competition within existing markets, the threat of disruption has prompted incumbents to take faster action and accelerate their innovation strategies. Innovation is seen as a way to achieve long and short-term success; however, many incumbents are left behind due to their reliance on their existing value network. Incumbents require their own set of actions in the face of disruption in order to ensure their resources are allocated effectively and the result is not only survival but sustained growth (Cooper & Edgett, 2003). In relation to this, this chapter begins with a literature review on failures within incumbents as the contextual setting to the frameworks that follow. The second section then presents disruptive innovation as a theoretical framework, which includes the core concepts proposed by Christensen & Bower in 1995 and further developments to the core theory together with its critiques. It then is followed by the extension to the original theory in terms of the framework on incumbent response strategies. Finally, all of this is culminated to form and present the conceptual framework and propositions which underpin the rest of this study. The literature presented is based on academic publications, industry publications and books relevant to each topic.

2.1 INNOVATION MANAGEMENT FAILURES WITHIN INCUMBENTS

It is proposed that a significant downfall of incumbents is their inability to enable, manage and control creative destruction within their organisation (Christensen & Raynor, 2003; Hill & Rothaermel, 2003; Raynor, 2011). Creative destruction is a term coined by Joseph Schumpeter which describes the process whereby innovations enter the market and compete with old ones, replacing them over time and rendering them obsolete (Schumpeter, 1942). Incumbents are observed to be focused on their existing market and how to capture value by incrementally improving their current offerings. However, the market does not prioritise a particular product or service but instead prioritises the value received by consumers. This allows new entrants to enter by meeting the needs of consumers in new ways, which overall creates more customer value. Foundationally, this means that incumbents who do not

allow for creative destruction may endure but not reap rapid growth, while others also do not survive. It is also said that to generate growth from creative destruction, businesses and the industry at large will need to endure many failures along with few successes (Kerr & Nanda, 2009). The successes will be difficult to identify *ex-ante*, and so their business model must allow for new opportunities for demand and revenue to be generated.

In any firm, there will be multiple projects to choose from, so firms have to decide which projects should proceed and how much resources to allocate amongst them. This means that decision-makers first have to decide on which projects will provide the firm with the most value. Second, they have to ensure that the group of projects or the innovation portfolio is in line with their organisational strategy (Cooper & Edgett, 2003). Selecting projects is a dynamic process as projects change and evolve over time and so further decision-making is needed on which to let go of, which to delay and which to proceed with. The mix within a company's portfolio will be dependent on the company strategy; however, a typical company looking to grow will include a mixture of incremental, breakthrough and radical projects. This stage within a firm's innovation management process is critical as without appropriate selection methods, a firm could get caught in an incremental trap, whereby they only choose projects that are low risk, low effort and aligned to their existing core business (Nowak, 2013). This often happens as much of the information for breakthrough and radical projects is unknown or uncertain at the start. Managers within incumbents are also typically risk-averse. This means that they avoid projects that are less guaranteed, because if the project fails, they risk losing the firm money and putting their own careers on the line (Christensen & Raynor, 2003). This further leads the incumbent to lean towards projects catering to their current market and towards their current capabilities. They reject projects where the demand is currently small, and profit margins are slim even if they may have the potential for rapid growth in the future, so the process favours short-term over long-term growth and leaves incumbents open to disruption. These failures that happen within incumbents, through how they prioritise and manage innovation, lead to a gap in the markets in which they operate. These make incumbents themselves susceptible to disruption, as it subsequently creates opportunities for new entrants, who are willing to take on more risk and who do not have to make the same priority trade-offs as incumbents, to enter and capture the value that incumbents overlook (Heising, 2012). This highlights the need for incumbents to have appropriate strategies to guide them towards innovation projects and business models that can create disruptiveness within their industries as well as respond to disruptiveness in a way that allows them to retain market share and sustain demand.

2.2 DISRUPTIVE INNOVATION

The theory of disruptive innovation was originally based on the research done by Christensen and Bower (1995) when they analysed the developments in the disk-drive industry and proposed the theory in their article *Disruptive Technologies: Catching the Wave.* At the time, it was known as *disruptive technology* and focused on introducing products in order to disrupt incumbents and capture markets. As further researchers used and challenged his theory in new markets, Christensen recognised the importance of not only products disrupting markets but also services, processes, and business models, which were not necessarily based on new technology, and the theory evolved to be known as *disruptive innovation* in 2003 (Christensen & Bower, 1995; Christensen et al., 2018; Christensen & Raynor, 2003).

Using his fundamental research, Clayton Christensen identified through interviews with managers in the disk-drive industry, that they leaned towards low-risk innovations that supported their core markets. These are known as sustaining innovations, whereby the performance of existing products and services are improved along the trajectories of what mainstream customers currently value (Christensen & Raynor, 2003). This meant that firms, through their selection processes, were focusing on innovations that targeted existing large markets and offered high profit margins. They were overlooking smaller markets if they had smaller margins or potential markets that did not exist yet. Christensen also found that resource-dependency existed in these firms, which was an existing theory where businesses are dependent on their most critical source of resources, which includes customers who provide them with revenue, and so lean towards projects that maintain and nurture these relationships (Christensen et al., 2018). By studying the disk drive industry closely, Christensen identified a pattern to why incumbent firms lost their positions, which was that low-end underperforming innovations were entering the market but providing a new mix of benefits for the consumer. These low-performance innovations then captured niche markets and over time developed better performance and surpassed existing technology while also creating a new baseline for what attributes drove competition (Christensen & Raynor, 2003).

2.2.1 CORE CONCEPTS AND DEVELOPMENTS

Disruptive innovation theory proposes that there are two types of innovation: disruptive innovations and sustaining innovations. Sustaining innovations target the incumbent's existing core market and are based on improvements on existing products and services (Christensen, 1997). The degree of impact of an innovation can range from incremental to radical. Nevertheless, they are targeting the largest, most profitable market spaces. Sustaining innovations also provide the features in which mainstream customers already value the most, and projected demand is less uncertain (Christensen, 1997). Disruptive innovation is different from sustaining innovation as when first introduced it is inferior to what incumbents already offer. The innovation offers a different mix of attributes, which attracts small segments of the market who are usually at the lower end of the demand, or they attract demand where none existed before (often referred to as 'new market footholds') which can also include small groups of customers from new industries who use the innovation in new ways (Christensen et al., 2015). Christensen et al. (2018) propose that a disruptive innovation can be smaller, cheaper, more convenient, and more accessible, or a combination of these, which is more attractive than incumbent offerings to these small segments. From the incumbent's perspective, these small segments are also unattractive due to their smaller size and smaller profit margins (Christensen et al., 2018). The mix of benefits is also irrational to an incumbent as it would not be attractive to its existing customer base. Once a disruptive innovation gains momentum in these emerging smaller markets, it will focus on enhancing its performance on traditionally valued mainstream attributes as well, until it meets the requirements of the majority of the market. However, it has now also provided the mainstream market with the new mix of attributes and so has disrupted incumbents and changed the basis of competition (Christensen et al., 2004). A disruptive innovation does not need to get to the performance level of incumbents, it only needs to get to a level where it has attracted the majority of the market in order to shift what is most valued by consumers (see Figure 1 for the trajectory of disruptive innovations).

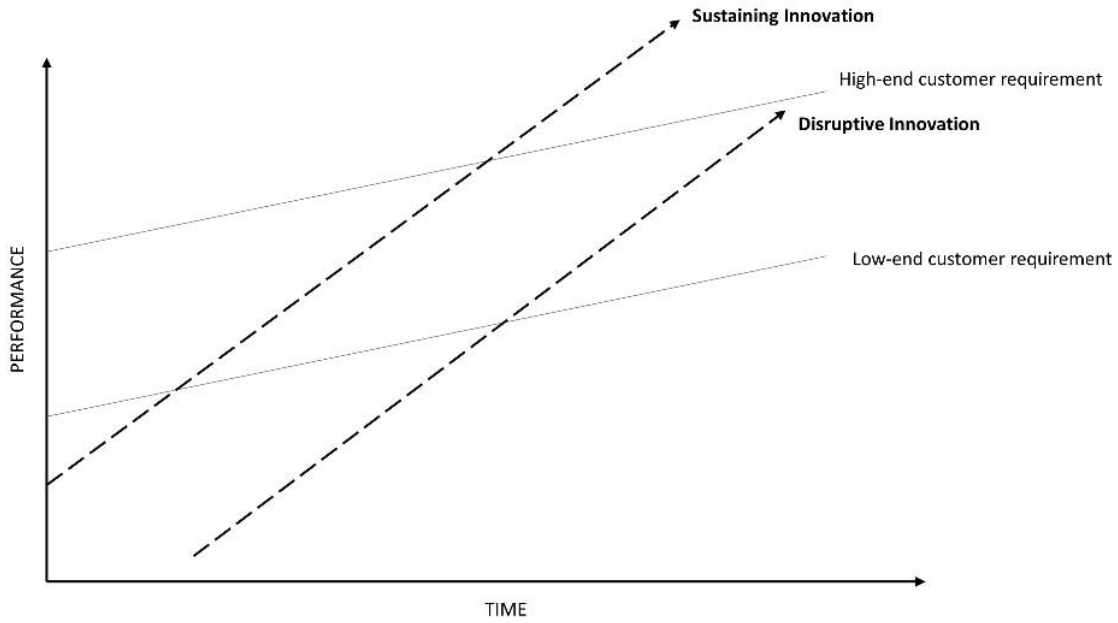

Figure 1: Trajectory of a Disruptive Innovation vs. a Sustaining Innovation (Christensen & Raynor, 2003)

Some debate around the core concepts include that some researchers have interpreted the theory to mean that incumbent firms will be replaced if a disruptive innovation enters the market, but others believe that this is not the case as incumbents can move into higher-end markets where customers value the extreme performance on traditional attributes and profit margins are still significant (Kumaraswamy et al., 2018; Yu & Hang, 2010). Christensen also supports that disruptors can catch up to the mainstream market quickly since the rate of improvement on innovation is faster than changing demands in the market. However, other researchers say that this is not the case in all industries (Christensen et al., 2018). Another issue of disruptive innovation theory is that disruption is also relative, as for one firm already doing similar activities, an innovation may be considered sustaining (for example, Dell selling computers over the internet, as they were already selling via phone and mail) but for others whereby the innovation disturbs their existing markets it can be seen as a disruptive innovation (for HP and IBM selling computers via the internet disrupted their retail stores and so from their viewpoint it was not a sustaining innovation) (Yu & Hang, 2010). These debates and relative understanding highlight that practitioners need to interpret the theory carefully within the context of their own firm and industry in order to make adequate use of it.

Christensen describes some phenomena that need to exist for disruption to occur. The primary phenomenon is that overshooting in the market needs to exist (Christensen et al., 2015). This means that incumbents within the market are offering innovations that are exceeding performance rates than what their mainstream market demands. This creates a gap in the market at the lower end where customers will accept products and services that are lower performance and cannot or will not access what is currently available. Firms that are able to identify these overshoots can successfully select projects within its innovation project selection process that cater for the overlooked market segments (Christensen, 1997; Christensen et al., 2018). Other researchers such as King and Baatartogtokh (2015) argue that this is not the case, that in some industries, incumbents were overtaken by disruption even before they could overshoot on the performance attributes of existing products and services, and so debate on the phenomenon still exist.

Another assumption of the theory is that disruptors will easily be able to compete against incumbents as their innovation has changed the basis of the competition in favour of the disruptor (Christensen, 1997; Christensen & Raynor, 2003). However, researchers like Druehl & Schmidt (2008b) say that this is not the case, that many incumbents move to the higher end of the market by choice and the disruptors who face competition with incumbents go through many hurdles as they attempt to maintain their new mix of benefits (including price advantages) while also scaling up and improving on their innovations. Incumbents also may respond aggressively by lowering their costs and providing the same mix of attributes and so some researchers argue that the theory leans towards successful cases of disruption, therefore, having only ex-post explanation and not having ex-ante prediction power (Danneels, 2004; Nagy et al., 2016). Christensen defended this argument with case studies where companies successfully used disruptive innovation theory to defend their positions as well as support their growth (Christensen et al., 2018).

Similarly, Raynor (2011) conducted a study on the predictive accuracy of the theory's core concepts with 48 ventures within Intel. Not knowing the outcome of the ventures, the researchers found statistically significant results that indicated that an innovation would succeed if it were a sustaining innovation and the incumbent targeted existing mainstream customers. It would also succeed if it was a disruptive innovation and delivered through an autonomous business unit, which is a strategy proposed by disruptive innovation theory (Raynor, 2011). This indicated that an incumbent may have success in proposing disruptive innovation but would require operations outside its existing business

model to capture the customer value it generates. Many other studies with similar outcomes have been conducted, such as by Christensen et al. (2004) and Burt & Ronchi (2007), where it has been shown that incumbents who succeed in defending against disruption have used disruptive innovation theory techniques, but findings have not been widely accepted as part of the theory.

In 2019 Christensen together co-authors Efosa Ojomo and Karen Dillon, apply the theory of disruptive innovation to impoverished nations, which showcases the ecosystem sustaining properties of disruptive innovation which facilitates economic growth. This development highlights the use of disruptive innovation for not only firm level development but also country development. The authors explain that enabling conditions such as regulation, education and infrastructure for a disruptive innovation is a more effective method to create sustainable prosperity rather than traditional economic interventions such as injections of financial and resource aid (Christensen et al., 2019). This is in line with the definition of disruptive innovation that emphasises its market-creating properties, and within the context of a country, its contribution to economic development through serving the poor who are often non-consumers. This creates a symbiotic and democratic relationship between the new market and the structures needed to support it, both of which insert long-term value creation for a country. This is seen as a better option than creating infrastructure and jobs that do not have foreseeable long-term demand. The limitation of this approach to country development is that it focuses on wealth creation as the definition of prosperity and oversight. Intervention will be needed to avoid adverse effects on the socio-economic conditions of a nation (Snyder, 2019). In general, the authors posit that new entrants are better placed to drive this type of sustainable development through disruptive innovation due to their greater flexibility compared to incumbents, from not having established processes and existing business models to support. They are therefore seen to be able to take on more risk and adapt to market feedback in a way that promotes new products and services that have the potential to disrupt markets while not implicating existing customers and revenue streams (Christensen et al., 2019). Incumbents who are looking to have a systemic impact within the countries in which they operate may be attracted to disruptive innovation for these national economic development properties.

2.2.2 THE PROCESS OF INDUSTRY DISRUPTION

Christensen et al. (2015) when recapping the theory of disruptive innovation, explicitly describes disruption as a process rather than a single event. It is also described as a phenomenon marked by specific market characteristics rather than referring to any change in an industry's competitive patterns as 'disruption'. The first market characteristic proposed by the core theory, that is at the start of observing the process of disruption, is that incumbents across the industry would be seen focusing on improving their products and services for their most demanding and often most profitable customers. This is referred to as overshooting performance on traditional attributes by incumbents as the needs of lower segments are exceeded, and some other segments are overlooked, as they attempt to retain their higher segment customers. Although incumbents are seen to be creating the opportunity for disruption by doing this, they are unaware of it, as all segments are still consuming the existing mix of attributes they are offering at this time (Christensen et al., 2015).

The second set of characteristics for disruption is that new entrants prove to be potentially disruptive by targeting these overlooked segments. Their market is initially small, but the new mix of attributes, which has lower performance on traditional attributes, is better suited to these niche and low segments. Raffi & Kampas (2002) argue this stage is not always compulsory, but they do agree that it can help the entrant develop momentum and size before being able to compete with incumbents. At this stage, incumbents are seen not to respond vigorously for a number of reasons, which include their more demanding segments still providing greater profitability, the uncertainty around the offering still being high and/or conflicts between business models and operations (Adner, 2002; Christensen et al., 2015; Markides & Oyon, 2010).

The third set of characteristics is that these entrants then move to higher segments of the market, delivering increased performance that higher segment customers within the industry require while preserving the advantages that drove their early success. These entrants are typically seen to dominate the lower and niche segments already, and demand is now growing outside of these low-end segments (Christensen et al., 2015). This is sequentially followed by these entrants reaching the mainstream market and actively acquiring customers that previously were served by incumbents with their new mix of attributes, that have also reached sufficient performance on traditional attributes still valued by this segment. The industry is finally considered disrupted when the innovation is adopted in significant

volume and provides the standard on attributes valued by the mainstream market (Adner, 2002; Christensen et al., 2015; Rafii & Kampas, 2002; Sood & Tellis, 2011).

Adner (2002) argues that disruption cannot be considered complete only when disruptors have sufficient performance for meeting the needs of mainstream customers but it must also be seen in a shift in market dynamics whereby there is a competitive effect within the mainstream market. Incumbents within the industry who have not adopted the new mix of attributes are then seen in the industry to lose significant market share and may exit the market (Adner, 2002; Christensen et al., 2015; Christensen et al., 2018; Rafii & Kampas, 2002; Sood & Tellis, 2011). These characteristics are similar to the process seen in Figure 1 but are at an industry's scale to identify disruption at an industry level. These market characteristics are observed to be sequential, forming a process rather than a single event. Due to the process taking time, it also allows incumbents the opportunity to respond before the disruption is complete. The process of disruption may also end before the final characteristics are observed as some disruptive innovations driving industry disruption may fail earlier in the process or remain in lower-end segments. Disruption is therefore seen to be at a higher degree when more of these market characteristics are observed, demand for disruptive innovations is growing, and incumbents can no longer ignore them (Christensen et al., 2016; Druehl & Schmidt, 2008b; Gilbert, 2003; Hüsig et al., 2005).

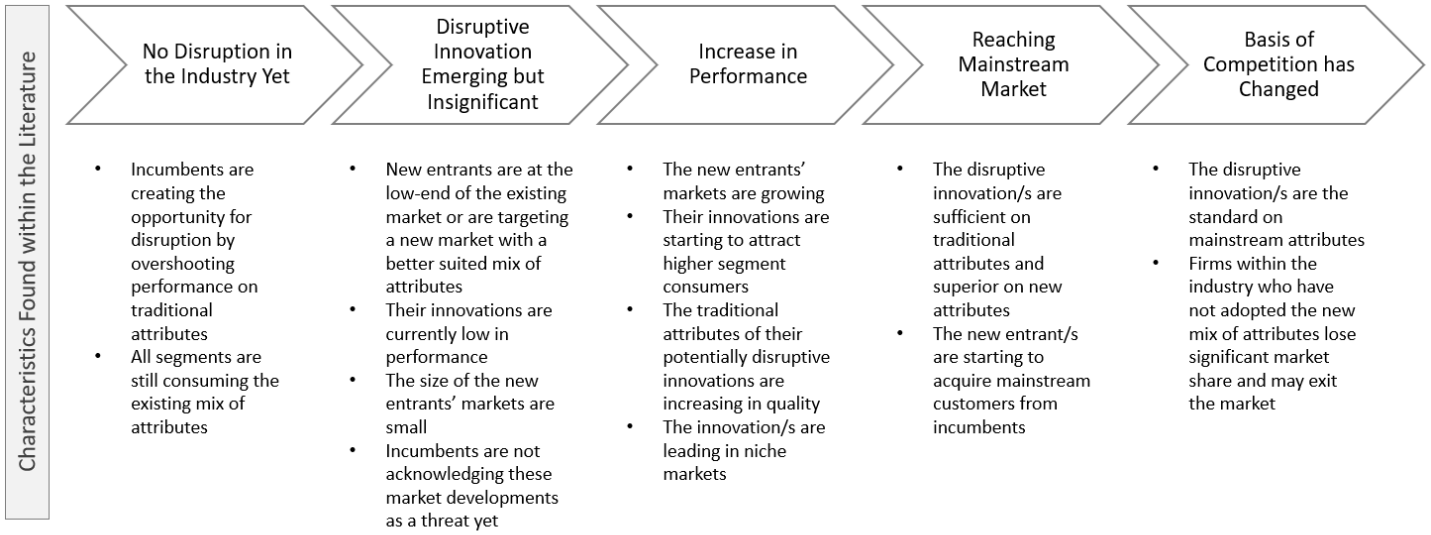

Figure 2: Visual Representation of the Process of Industry Disruption

2.2.3 APPLICATION OF DISRUPTIVE INNOVATION THEORY

The focus of this study is incumbents within the South African banking industry and the development of innovation theories to inform their responses to the threat of disruption. For this reason, there is focus on the application of the theory by incumbents and not new entrants.

In Christensen & Bower (1995) and then in Christensen's 1997 book *The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail*, the theory details how large profit-making firms are able to be overtaken by innovations that enter the market initially having lower performance (Christensen, 1997; Christensen & Bower, 1995). Christensen explains how the decision-making within these incumbent firms is rational as they are trying to retain and grow their largest market segments and invest in the technology and business model changes that allow them to do this. This is the same reason that causes incumbents to overlook the threat of a disruptor, as they strongly lean towards satisfying their existing customers, which the disruptor does not initially target (Christensen, 1997). Even if incumbents do identify the threat of the disruptor, many hesitate to act, as by matching the disruptor's offering, they may cannibalise their own market share. This is the dilemma that Christensen describes and proposes the reason many incumbents continue on their same performance trajectories, while the disruptor can continue to improve performance enough to capture the mainstream market from them (Christensen, 2006).

Govindarajan and Kopalle (2006) say that there are multiple reasons why an incumbent would avoid matching a disruptor, which include that the profit margins would be too low at the start, the targeted niche markets are too small, the innovation would initially perform poorly compared to its existing offerings and their mainstream market would not value the new mix of benefits at first. This is related to resource dependency theory, whereby firms need to keep satisfying their existing customers in order to survive (Govindarajan & Kopalle, 2006). This means that customers and their feedback have great power in directing how a firm selects projects. Listening to existing customers speak about the needs they know they have, rather than attempting to identify hidden and new needs, leads firms towards sustaining innovations.

Another issue within incumbents is highlighted by Christensen and Bower (1996a), which is that incumbents often have the right ideas and customer insights to generate disruptive innovation projects, often before the disruptor emerges. However, because these need to go through a project

selection process in order to get funding and resources, they do not get prioritised. They identified that firms select innovation projects whereby the demand is explicit, and where demand is uncertain or unknown, ideas were turned down. Christensen and Bower highlighted that incumbent firms' inability to select projects and dedicate resources to potentially disruptive innovations outside of their known mainstream market is part of their downfall (Christensen & Bower, 1996). Christensen (2006) also describes how firms innovation selection processes lean toward financial assessment criteria and traditional market research. These do not favour disruptive innovations which have low-profit margins at the start and uncertain market properties. These selection processes do not allow incumbent firms to properly evaluate disruptive innovations and identify their potential for long-term success (Christensen, 2006).

2.2.4 CRITIQUE OF DISRUPTIVE INNOVATION THEORY

The first and most recognisable flaw of the theory is the lack of consensus around disruptive innovation's core concepts (Christensen et al., 2018; Dan & Chieh, 2010; Danneels, 2004). This has meant that there are disparities in subsequent research. Christensen, as well as his co-authors such as Raynor and Bower, have attempted to clarify the terms, yet there has still been criticism around the vagueness of definitions, as well as its focus on market impacts while excluding other internal and external environmental factors of the firm (Danneels, 2004; Druehl & Schmidt, 2008b; King & Baatartogtokh, 2015). Christensen recognised that the word 'disruptive' may be associated with radical innovation and so clearly articulates that the two are not interdependent. However other authors, such as Gobble (2016), also connect the misunderstanding to the broader meaning of 'disruption', which is a break or interruption in the normal course of operations. This lack of consensus within the broader audience is seen to cause confusion for academics and those in industry (Gobble, 2016). Gobble (2016) states that those using the theory will face ontological and epistemological conflict, which will create hurdles for the theory to be extended in a meaningful way.

In his formulation of and extensions of the theory, Christensen gets critiqued frequently on the cases chosen to support the proposed ontology. Many authors suggest that cases are chosen to match the theory instead of the other way around (Danneels, 2004; Markides, 2006; Sood & Tellis, 2011). The

theory was derived from assessing the disk drive industry, and this too is criticised as the disk drive industry has unique market characteristics such that a theory based on it should not be generalisable to all industries. This highlights the need for further research on disruptive innovation within specific industries to validate and extend the theory.

Christensen had listened to much of the critique, and conceded some of his original points, where adequate research and consensus have been found (Christensen et al., 2018). Christensen and Bower (1995) initially proposed that established firms do not allocate resources to innovations that have disruptive innovation characteristics (such as small margins and targeting small niche markets); however, further research showed that for some incumbents, this was not the case (Govindarajan et al., 2011). This led to the extension of the theory to include threat framing, which is when executives position potential innovations as a future risk or loss of revenue if not prioritised now (Christensen et al., 2018).

An additional anomaly identified was that despite the theory proposing that incumbent managers do not have the ability to identify and face disruption successfully, there have been cases in which this has happened. An example of this is a study conducted on newspaper organisations, which found that one large firm maintained its leadership position by responding to digital media and transitioning from print through a very targeted venture early on (Christensen et al., 2018). This pattern has also been seen in other industries whereby when faced with disruption, incumbents have maintained their dominance. When analysing these cases, it was found that incumbents had created autonomous business units to overcome their existing processes that were geared towards sustaining innovations, and hence, this strategy has become a part of the theory going forward (Christensen et al., 2018).

The original theory of disruptive innovation also assumed that it only occurs at the low tiers of the market to capture customers that were very price sensitive, but cases emerged whereby disruptors were entering at the high-end of the market and creating all new markets (Weeks, 2015). An example is the cellular phone, which was initially very expensive but appealing to executives who valued portability and convenience. This led to the distinction between low-end disruptions and new-market disruptions. New-market disruptive innovations come about as incumbents may ignore or overlook them due to there being no initial consumption, allowing the disruptor to enter. Performance and price accessibility are then improved over time, allowing for the capturing of existing market from

incumbents. Cellular phones captured the landline market over time due to their superior mix of attributes (Yu & Hang, 2010).

These extensions highlight that disruptive innovation theory is still developing and that existing theory must be assessed in the context of specific industries and markets in order to assess its validity and identify anomalies. Christensen himself said that the disruption process might be very different depending on the specific industry and market, and so analysis is needed in order to support decision-making based on the theory in specific industries (Christensen et al., 2004).

2.3 INCUMBENT RESPONSE STRATEGY THEORY

Based on the realities of incumbents, Christensen, as well as many disruptive innovation scholars, have proposed guidelines for firms to not only protect their market share but also become disruptors themselves in order to promote rapid growth (Christensen & Raynor, 2003; King & Tucci, 2002; Yu & Hang, 2010). It is also important to first recognise the type of disruptive innovation occurring as this will also influence the response. Disruptive technology, business models and product innovations may cause incumbents to respond, but their influence on existing markets and developing new markets may differ (Markides, 2006). Charitou & Markides (2003) originally proposed five responses to the threat of disruption, and these have been further validated by additional studies:

1) **Further investing in the Traditional Business:** The first approach is for the incumbent to continue to extend the performance improvement trajectories of current products and services in order to delay disruption. This means that the incumbent invests more in sustaining innovations in order to improve their current offering to be able to be in a better position to compete with the disruptor's alternative offering. This approach is often taken when the incumbent has acknowledged the disruptor's offering as a threat but does not believe it is destined to overtake the majority of the market (Gemici & Alpkan, 2015). This strategy also supports incumbents wanting to capitalise on existing, significantly large investments in their existing business (Charitou & Markides, 2003; Dewald & Osiyevskyy, 2015).

2) **Ignoring the Disruptive Innovation:** Companies may choose to respond by ignoring the disruptor and the threat of disruption. The incumbent may notice that the disruptor is in the same industry but may not consider it a big enough threat to prompt a change to its existing operations (Charitou & Markides, 2003). This may be because the incumbent sees that the disruptor is in a niche market that does not necessarily have the same demands as its existing customers, and so the disruptor may be in the same industry but not in the same market segment (Markides & Oyon, 2010). It also may be because the new offering requires such vastly different skills and competencies that there is no way for the incumbent to connect it to its existing business. In this way it is also not an easy market to enter into to achieve quick growth (Yu & Hang Chang, 2008). This is different from the first response as in this response, the incumbent does not see the disruptor as a threat to their current business and so also does not need to respond by investing more than usual in sustainable innovation, and instead, they continue with business as usual.
3) **Disrupt Itself & the Disruptor First:** Incumbents succeed by emphasising traditional product and service attributes, while disruptors emphasise a new mix of attributes that attracts new demand. Over time, the disruptor becomes so good at providing the new mix of attributes that it attracts customers that value the traditional mix of attributes. A response for incumbents is then to find an even better mix of attributes to emphasise and therefore disrupt itself before being disrupted and/or pull back demand that has been lost (Charitou & Markides, 2003; Mao et al., 2020). This response strategy is considered a re-emergence whereby the incumbent relooks at the market and application of their existing offering. This allows incumbents to add a new dimension of performance to their innovation and potentially re-attract customers who absconded to the disruptor or retain customers before the disruptor has a chance to attract them. A mechanism to execute this strategy has been proposed by the core theory, which entails creating an autonomous business unit that is outside of the firm's value network and that is unconstrained by existing processes and demand, such that an incumbent may have a better chance to disrupt themselves (Christensen et al., 2018).
4) **Adopt the Disruptive Innovation:** The fourth response is to replicate the disruptor and provide the same mix of benefits that they are. This is especially true when the new mix of benefits has been validated in the market but also requires the incumbent to verify whether the cost-to-income ratio is low enough to support the decision. It also involves the incumbent taking on the

risk of potentially cannibalising their existing business (Charitou & Markides, 2003). A way to execute this response has been proposed by core theory and involves creating an autonomous business unit that runs parallel to its existing business without directly conflicting with its existing operations. This is also considered an ambidextrous organisation where exploitation of the core market is separated from the exploration of disruptive innovation. This suggestion is made because the existing core business is assumed to be focused on the needs of its existing customers and meeting demands through iteratively improving its current products and services (Yu & Hang, 2010). The autonomous business unit would be unencumbered by this pressure. It will be able to identify and select opportunities with margins and performance levels that the core business would find unattractive. For these reasons it is also a potential path in executing response three. Some also still share back-office activities in order not to duplicate operational costs; however, each company must form an approach to how it avoids conflict in processes, structure, incentives, and culture in order to provide decision-making autonomy to the new business unit (Kim & Min, 2015). Adopting disruptive innovation in a separate unit or organisation also comes with its own challenges, and Charitou & Markides (2003) only recommend separating the new business from the traditional business when the markets are strategically different and when their business models conflict, otherwise the entire entity could get 'stuck in the middle' and struggle to eventually integrate the two businesses. A way to also implement this strategy is to partner with or licence the disruptors to prevent disruption or be a close second with similar offerings (Christensen et al., 2004).

5) **Embrace the Disruptive Innovation Only and Scale:** This approach involves incumbents abandoning their existing value network and investing in the disruptive innovation completely. In this approach, the incumbent looks to not only replicate what the disruptor is doing but scale at a faster rate to win back and retain market share. The incumbent is seen to have expertise in scale, the large investments required, as well as the existing presence and brand credibility, and so may have the advantage in winning more customers quickly with the new offering. Incumbents in this way, have a good chance of establishing the dominant design in the market without having to produce the initial idea (Markides & Oyon, 2010).

The approach which is best suited for an incumbent can be dependent on several factors, such as the incumbent's core competencies, its position in the industry, the rate at which the threat of disruption is growing, the characteristics of the disruptor and the nature of the innovation. Charitou & Markides

(2003) summarises this into *motivation* and *ability*. *Motivation* is driven by factors such as the rate the demand for the innovation is growing, its level of competitiveness with the incumbent's business, and how related the disruptive innovation is to the incumbent's existing value network. If the demand is growing fast, the level of competition is high, and the innovation is very related to its existing operations, then incumbents are highly motivated to have an active response.

Other researchers, such as Dewald & Osiyevskyy (2015), also found that manager perception played a big role in incumbents' motivation to respond. They found that factors such as perception of potential threats and opportunities by managers, industry experience and risk appetite all influenced the response that an incumbent may take when a potential disruptor enters the industry (Dewald & Osiyevskyy, 2015). They found that when the perception of a threat is high, managers are more motivated to focus on their traditional business and there is no link to exploration or changing the current business model towards exploitation of the disruptive innovation. However, when the perception of an opportunity is high, this motivates managers to actively engage with the disruptive innovation within the incumbent's business. Higher risk appetite and less years of experience were also found to be positively correlated with managers actively engaging with the disruptive innovation.

In terms of *ability*, this is driven by capabilities such as the incumbent's existing competencies (skills, knowledge, and experience), its resources (finances and infrastructure) and available time capacity. Also included is how much the disruptor's business model conflicts with the incumbent's business model. If the business models are very different and in conflict with one another, it is more difficult for the incumbent to respond. The lower the degree of conflict and the more related the incumbent's capabilities, the better their ability is to respond actively (Charitou & Markides, 2003).

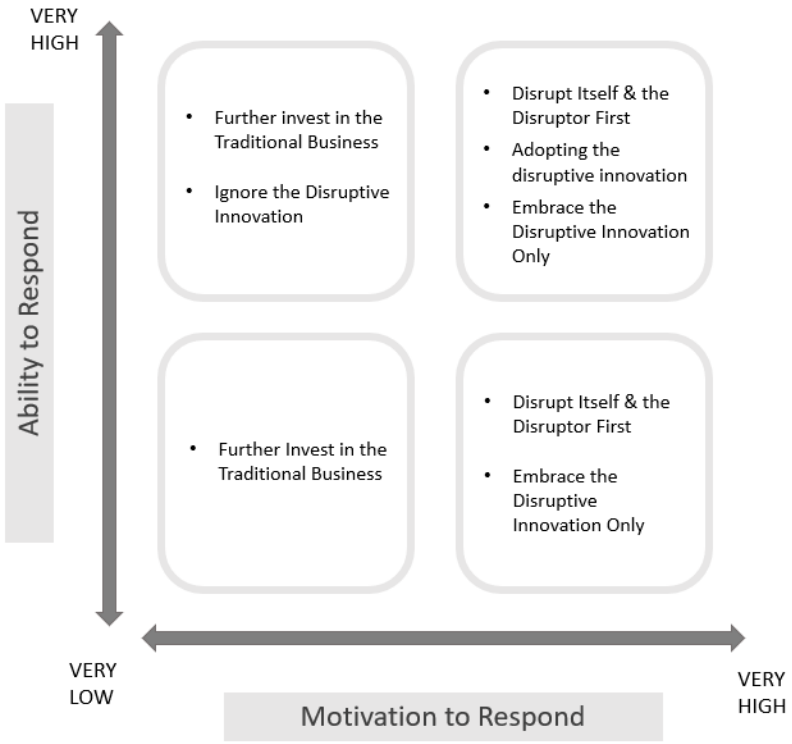

Figure 3: Response Strategies to Disruptive Innovation (Charitou & Markides, 2003)

These factors are seen to create a model for how incumbents choose their response strategies. Research is required on whether this, in fact, holds true in reality and whether variations in theory may occur based on the industry and market type. Charitou & Markides (2003) have based the theory on a number of studies, and more recent studies have successfully tested this framework against industries such as life and health insurance, online brokerage trading, air travel, real estate and online retail services, across North America and Europe. However, the critique against this theory is that it has not yet been reproducible across a significant number of industries and jurisdictions to be considered universally generalisable. Additionally, environmental nuances in the results have been found in each subsequent study that lends the framework to still being considered exploratory (Dewald & Bowen, 2010; Dewald & Osiyevskyy, 2015; Geurts, 2018; Habtay & Holmén, 2014; Osiyevskyy et al., 2020; Yang et al., 2022).

2.4 CONCEPTUAL FRAMEWORK

Five banks have historically dominated the South African banking industry, and more recently, a sixth bank has acquired a significant market share and become one of the leaders: Capitec Bank. The market is well regulated, which has previously been a high barrier to entry due to high capital, liquidity, and monitoring requirements, as well as the restriction of clearing activities and settlement activities to selected mandated firms (Makhaya & Nhundu, 2016). This has protected incumbent banks and allowed them to focus on their core markets and lean their innovation project portfolios to be incremental and sustaining innovation focused. The market is nevertheless becoming more saturated, with significant entrants who fulfil the capital, liquidity, and governance requirements and are now licenced with the South African Reserve Bank. These include Discovery Bank (a subsidiary of Discovery Limited), Bank Zero (started by former First National Bank CEO Michael Jordaan) and TymeBank (owned by African Rainbow Capital Pty Ltd) (Fourie, 2019a). Regulations regarding financial assets such as cryptocurrency, virtual currencies and digital wallets are also being developed and existing frameworks are being reviewed to allow for more competition in traditional banking activities. This will allow payment facilitators, aggregators and even retailers in other industries to start incorporating more financial services into their existing products and services, independent of banks.

Newcomers are targeting both new and existing markets in order to grow rapidly and gain a foothold in the industry. They are doing this by offering a range of products and services new to the South African environment, such as new personalised rewards programmes (Discovery Bank), a ‘no fee’ structure (Bank Zero) and self-service kiosks replacing the concept of branches (TymeBank) (Fourie, 2019b). These new entrants are growing rapidly, with Discovery Bank and TymeBank acquiring 0.19% and 0.03% of the market by 2021 respectively, three years after beginning their operations. Capitec is also seen as a dominant newcomer as it gained 2.3% of market share (measured by the value of assets held across retail and wholesale banking) and has reached the highest number of retail clients since its inception in 2001 by capturing much of the unbanked population (BusinessTech, 2022). This has triggered the process of disruption within the South African banking industry and forced incumbents to respond, relook at their operations and prioritise strategies that allow them to retain market share while also growing in new market segments.

Disruptive innovation theory has provided a framework for how new entrants are able to enter the market and grow their share of demand over time. With this is also an ability for incumbents to recognise the threat of disruption and use the resources at their disposal to respond in order to survive as well as grow. The purpose of this report is to understand if the threat of disruption does exist, what responses do banks within the emerging market of South Africa take in order to face the threat, and which factors influence the type of response taken.

This agenda has been evaluated with a qualitative methodology to examine the approach taken by incumbent banks and any influencing factors. Managers involved in innovation project selection or management and managers involved in business strategy, have been interviewed, and key findings are shared in line with the research purpose. The framework has been used as a guideline to understand to what degree the industry is undergoing disruption relative to the process of disruption proposed in the existing literature. Following this, the framework includes the why and what in terms of response strategies within incumbents in South Africa to the threat of disruption that the process of disruption initiates. The influencing factors and response strategies are a nexus between the guidelines proposed by core disruptive innovation theory and response strategy theories to explain the disruptive innovation response phenomena in this emerging market industry. Although these influencing factors and response strategies are considered to be exhausted in terms of what is currently available in the literature, the data collection allows for any previously unobserved factors and response strategies to be accounted for. These strategies are not mutually exclusive and so incumbents may potentially have more than one strategy as they are able to coexist.

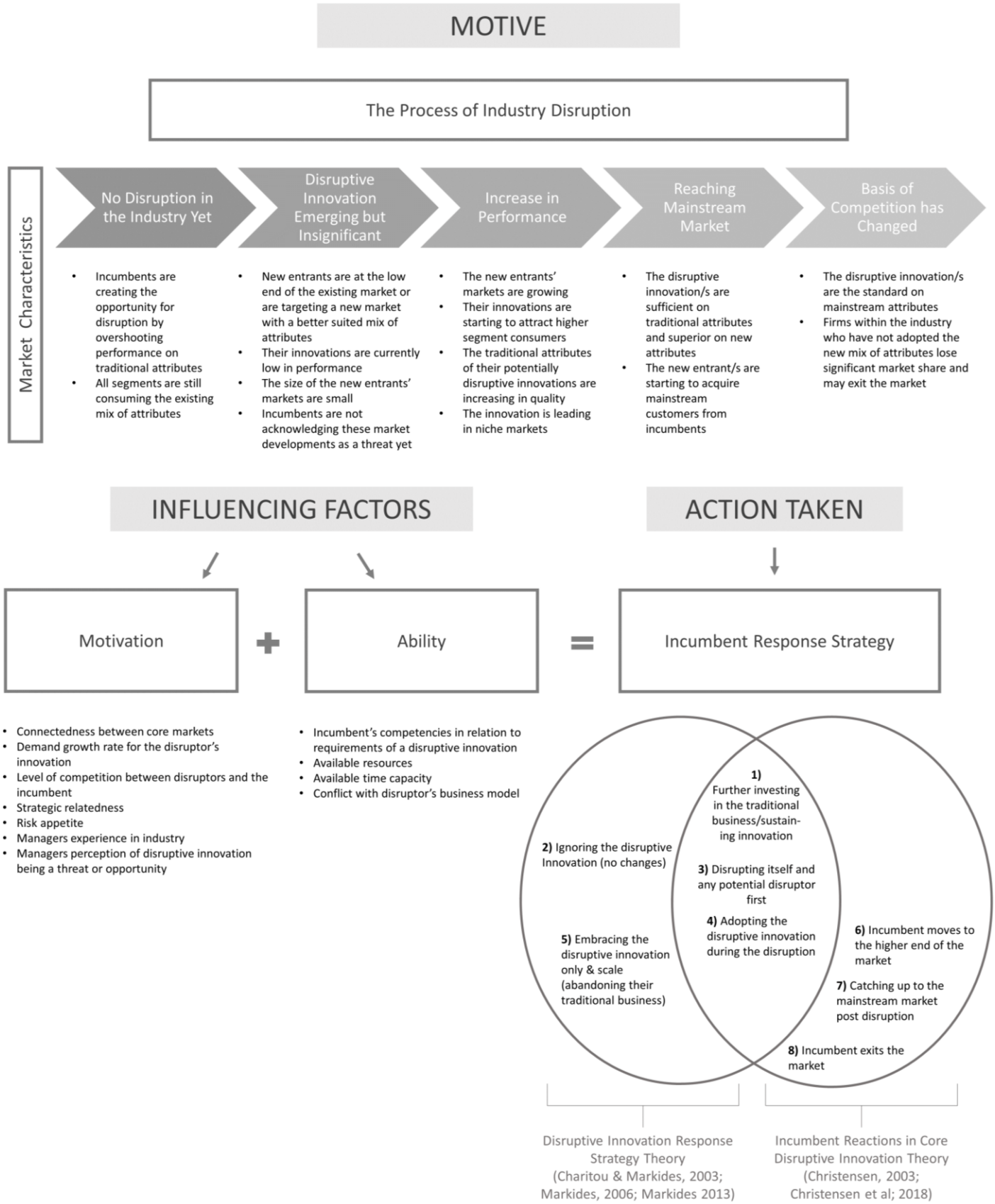

Figure 4: Conceptual Framework based on Theoretical Frame of References

2.5 STATEMENT OF PROPOSITIONS

There are four propositions based on the reviewed literature. Proposition one and two correspond to research question one, and proposition three and four correspond to research question two. The propositions have been outlined below relative to the theory that they have been referenced from.

Proposition One:

Disruption is occurring within the banking industry of South Africa, which is to a high enough degree that incumbents have acknowledged disruptors and the threat of disruption.

This proposition is derived from the process of disruption, described by Christensen et. al (2015), but also supported by other authors who describe that at earlier phases of the process where the degree of disruption is considered to be lower, incumbents overlook potential disruptors and the threat to their businesses, because at this stage the markets these new entrants are targeting are too small to be attractive to incumbents, there is high uncertainty around the innovation and/or there is a lack of synergies between operations and business models required to promote the same mix of attributes (Adner, 2002; Christensen et al., 2015; Markides & Oyon, 2010). The degree of disruption is higher at latter stages when incumbents have acknowledged disruptors and the threat of disruption to a point where it has stimulated a response strategy by incumbents (Christensen et al., 2016; Druehl & Schmidt, 2008b; Gilbert, 2003; Hüsig et al., 2005). This proposition would indicate that there is enough motive for incumbents to prioritise a response strategy.

Proposition Two:

There are specific market characteristics related to the phases and characteristics from the disruption process, that are driving this perception by incumbents. These characteristics are described below.

- **No Disruption in the Industry Yet**

  Recognised through the following two characteristics;

  - Incumbents creating the opportunity for disruption by overshooting performance on traditional attributes.

- All segments are still consuming the existing traditional mix of attributes.

- **Disruptive Innovation/s Emerging but Insignificant**

  Recognised through the following four characteristics;

  - New entrants are at the low end of the existing market or are targeting a new market with a better suited mix of attributes
  - Their innovations are currently low in performance
  - The size of the new entrants' markets are small
  - Incumbents are not acknowledging these market developments as a threat yet

- **Disruptive Innovation/s have Emerged and is Growing in Performance**

  Recognised through the following four characteristics:

  - The new entrants' markets are growing
  - Their innovations are starting to attract higher segment consumers
  - The traditional attributes of their potentially disruptive innovations are increasing in quality
  - The innovation is leading in niche markets

- **Disruptive Innovation/s have reached the Mainstream Market**

  Recognised through the following two characteristics;

  - The disruptive innovation/s are sufficient on traditional attributes and superior on new attributes
  - The new entrants are starting to acquire mainstream customers from incumbents

- **Industry Disruption has Occurred and the Basis of Competition has Changed**

  Recognised through the following two characteristics;

  - The disruptive innovation/s are the standard on mainstream attributes
  - Firms within the industry who have not adopted the new mix of attributes lose significant market share and may exit the market

These characteristics belong to five sequential stages and therefore by identifying if a current stage's characteristics is the current reality, together with the previous stages' characteristics being already observed and the following stages' being notably absent, it would confirm the specific stage within the process of disruption and therefore the relative degree of disruption within the industry. The validity of this proposition would indicate that disruption can be identifiable by incumbents and that there are characteristics to monitor to be able to identify and track the degree of disruption. These characteristics have been described in the original theory on disruptive innovation and supported by a number of authors when referring to the process of disruption within a market or industry. It additionally is

described to be sequential and over time rather than a single event (Adner, 2002; Christensen et al., 2015; Christensen et al., 2016; Markides & Oyon, 2010; Rafii & Kampas, 2002; Sood & Tellis, 2011).

Proposition Three:

The incumbent banks can choose between a range of strategic responses as identified by the literature, to mitigate the threat of disruption. This would indicate that there are strategies to choose from by incumbents that best lend themselves to responding to disruptive innovation. The strategic responses identified are listed and described below.

Response Strategy	Description with References
1) Further investing in the traditional business/sustaining innovation	This passive strategy is derived from the core theory of disruptive innovation summarised in Christensen & Raynor (2003) as well as new theories focused on response strategies as described in section 2.2.1.2. It describes how incumbents purposefully invest more competencies, resources and time into their existing products and services, incrementally improving them as a response to defend against the threat of disruption.
2) Ignoring the disruptive innovation	This passive strategy is based on Charitou & Markides (2003) and describes how firms purposefully make no changes to their existing strategy and operations after acknowledging the threat of disruption.
3) Disrupting itself and the disruptor first	This is a proactive strategy and is a nexus between an incumbent strategy described in core theory as well a strategy described in response strategy theory whereby the incumbent pre-emptively identifies and executes on a different mix of attributes than what is available in the market or what is being sold by potential disruptors, purposefully disrupting itself as well as any potential disruptor first (Charitou & Markides, 2003; Christensen et al., 2018).
4) Adopting the disruptive innovation during the disruption	This reactive strategy is proposed by Christensen et al. (2004) as well as Charitou & Markides (2003) and describes how an incumbent, after observing a potential disruptor, replicates the new mix of attributes proposed by the disruptor, in addition to its existing mix of attributes, as a response to the threat of being disrupted. This often involves the incumbent setting up an autonomous business unit or engaging in open innovation to support the new offerings' operational needs without impacting existing ones.

5) Embracing the disruptive innovation only and scale	Originally proposed by Charitou & Markides (2003) and further supported by Markides & Oyon (2010), this reactive strategy involves incumbents abandoning their existing mix of attributes offered to consumers in favour of the new mix of attributes. It often involves a new business model for the incumbent and investment in a new value network. Since the firm replaces the old technology with the new, there is less concern about managing both value propositions simultaneously (Kim & Min, 2015).
6) Incumbent moves to the higher end of the market	Proposed by core disruptive innovation theory, this reactive strategy describes when an incumbent acknowledges the threat of disruption and purposefully moves to higher market segments that still value the current mix of attributes and gain value from the incremental improvements to those attributes (Christensen et al., 2018; Druehl & Schmidt, 2008b).
7) Catching up to the mainstream market post the disruption	Proposed by core disruptive innovation theory, this reactive strategy is different to adopting the disruptive innovation during the disruption, as the new mix of attributes is now already valued by the mainstream market. Its value has been proven and the market can be considered disrupted. The incumbent may have lost customers during disruption but is now confident enough to use its scale and resources to catch up and pull back demand quickly (Christensen et al., 2018).
8) Incumbents exit the market	Described by Christensen & Raynor (2003) as a potential reality for incumbents, this passive strategy describes when an incumbent has lost enough market share to disruptors and the new mix of attributes that it is no longer feasible to continue operations. It then chooses to respond by leaving the market.

Table 2: Incumbent Response Strategies within the Conceptual Framework

Proposition Four:

Related to proposition three, there are factors identified in the literature, related to either the incumbent's motivation or ability to respond, that influence which response strategies an incumbent will prioritise. This would indicate that their decision on which strategies to opt into is limited and can be calculated rather than being unrestricted. These identified factors are listed and described below.

	Influencing Factor	Description with References
Motivation to Respond	1. Connectedness between core markets	When disruptor markets are aligned to an incumbent's core markets, the incumbent has more motivation to respond in order to avoid losing a significant source of profitability and where the opportunity cost of not responding is high (Charitou & Markides, 2003; Dewald & Bowen, 2010; Dewald & Osiyevskyy, 2015; Gilbert & Bower, 2002; Markides & Oyon, 2010). Level of connectedness is therefore positively correlated to motivation to respond.
	2. Demand growth rate for the disruptors' innovations	The growth rate of disruptive innovations in the industry is positively correlated to incumbent motivation to respond (Charitou & Markides, 2003). This is related to the market size growing to be more attractive to the incumbent (Christensen, 2006).
	3. Level of competition between disruptors and the incumbent	The level of competition between disruptors and the incumbent is positively correlated to an incumbent's motivation to respond. This is in line with disruptive innovation theory whereby disruptors are starting at low-end segments of the market with inferior performance which is often perceived as less competitive by incumbents but increases as disruptor offerings begin to be available as substitutes and is visible competition to the incumbent's mainstream offering (Druehl & Schmidt, 2008a; Sood & Tellis, 2005).
	4. Strategic relatedness	Strategic relatedness refers to the similarities between disruptors and incumbent's products, services, customer relationship channels, customer support channels, distribution channels and other strategic factors. The level of strategic relatedness is positively related to an incumbent's motivation to respond, as the higher it is, the more an incumbent may leverage existing competencies and resources to create synergies and potential competitive cost advantages (Charitou & Markides, 2003). This is related to incumbent unwillingness to cannibalise their existing business in the face of disruptive innovation as proposed by the original theory of disruptive innovation (Christensen & Raynor, 2003).
	5. Risk appetite	Risk appetite is positively correlated to an incumbent's motivation to respond. When managers are enabled to take on more risk, they are able to respond with active strategies with a higher risk of failure but will not be penalised for adverse outcomes (Charitou & Markides, 2003; Govindarajan & Kopalle, 2006).
	6. Managers' experience in the industry	Years of experience is negatively correlated to motivation to respond. Dewald & Osiyevskyy (2015) find that managers with more years of experience are less likely to engage in disruptive innovation and more likely to passively invest in

		sustaining innovations as this is how they have previously been successful within the incumbent.
	7. Managers' perception of disruptive innovation being a threat or opportunity	When managers perceive disruptive innovation as an opportunity, this increases their motivation to respond. Dewald & Osiyevskyy (2015) find that when disruptive innovation is viewed as a threat, it motivates managers to focus on their traditional business, and there is no link to exploration or changing the current business model towards exploitation of the disruptive innovation.
Ability to Respond	1. Level of competencies in relation to requirements of a disruptive innovation	An incumbent's ability to respond is positively correlated to the relatedness of its competencies with what is required to promote the disruptive innovation (Charitou & Markides, 2003). Disruptive innovations offer different value propositions and target different customers in comparison with the traditional business, and so an incumbent requires different more suited competencies to respond with disruptive innovation (Sood & Tellis, 2011; Charitou & Markides, 2003).
	2. Level of available resources for disruptive innovation	An incumbent's ability to respond is positively correlated to the available resources it has. When more investment is available for disruptive innovation, it allows an incumbent to prioritise it, in addition to the less risky investments, into its traditional business or adjacent markets. Responding actively to disruption requires considerable financial and managerial resources, which becomes less of a concern when more resources are available for utilisation (Charitou & Markides, 2003).
	3. Level of available time capacity for disruptive innovation	An incumbent's ability to respond is positively related to its available time capacity. When more time is available to utilise the resources for disruptive innovation, it allows an incumbent to prioritise disruptive innovation initiatives in addition to its existing profit-generating traditional business (Charitou & Markides, 2003).
	4. Conflict between incumbent and disruptor business models	The nature and size of the conflicts between the existing business and the new business is proposed to be the most constrictive factor in terms of an incumbent's ability to respond, and so this conflict is negatively correlated with an incumbent's ability to respond (Charitou & Markides, 2003; Osiyevskyy & Dewald, 2015). This includes not only the risk of cannibalising the traditional business but also risking the incumbent in terms of aspects such as brand recognition, culture and quality of service offered (Markides & Charitou, 2004).

Table 3: Influencing Factors to an Incumbent's Response Strategy within the Conceptual Framework

CHAPTER 3: RESEARCH STRATEGY AND METHODOLOGY

3.1 INTRODUCTION

Pragmatism is a paradigm developed in the late 19th century that focuses on practical consequences of theory. It arose over debate that a positivist approach, where achieving perfect knowledge is the aim, may not be possible in all cases (Ormerod, 2006). Pragmatism accounts for meaning and understanding to be influenced by experience (Peirce & de Waal, 2014). In Peirce (1992), a clarification rule was outlined called the 'pragmatic maxim', which speaks to clarifying the content of concepts, theories, and hypotheses by analysing the impact through practice and, in this way, accounting for individual experience. This work has been extended over the years to emphasise the subjective and personal aspects of understanding and meaning-making (Peirce et al., 2017). This does not mean that the paradigm discounts current literature; on the contrary, it is aimed at extending it by revealing gaps and issues not identified before through understanding how people process information (Peirce, 1992). This is especially important for innovation management, which involves human beings who will interpret the knowledge and, due to human nature, action it in new and different ways. Analysing actionable knowledge in this way could lead to greater understanding of the underlying theories (Morgan, 2007). There is some debate surrounding the pragmatic approach, as it does not give guidance on whether knowledge is valid or useful; however, it is still an effective way forward for questioning and evaluating ideas and theories in relation to their practical application (Morgan, 2014). The underlying guidelines of pragmatism are that it should contribute beneficial and actionable knowledge, derived from the unique experiences observed and, therefore, provide practical assistance to the case study organisations.

The pragmatist paradigm avoids debates on what is right or wrong but instead allows us to focus on unique understandings of reality. This paradigm emphasises the meaning and practical value of research by analysing its impact in the real world (Patton, 2005). Within an industry setting, such as the banking industry in South Africa, this paradigm is especially suited as each industry has unique characteristics, such as regulation, sensitivity to macroeconomic conditions, nature of the competition

and barriers to entry. This means that research may be interpreted differently in each industry, resulting in different learnings, knowledge, and actions (Morgan, 2014).

Through using a pragmatist paradigm and recognising that there may also be many more dimensions to be found that influence an incumbent's response that may not be accounted for in the theory, the aim is to not only look to literature but instead also explore new understandings and unique qualities not yet uncovered. Therefore, the pragmatist paradigm allows us to be flexible in our investigation approach and the categories of information gathered. Pragmatism looks to enhance both theory and practice, rather than just one feeding into the other. This study's objective is to understand influencing factors and the response strategies to the threat of disruption actioned by banks within the emerging market of South Africa, to identify if there are any industry and market specific phenomenon that may enhance or extend our understanding of innovation management theory. The focus is therefore on actionable knowledge and how knowledge and practice are interconnected.

3.2 RESEARCH STRATEGY AND DESIGN

This study has used a case study design as it looks to explain complex theories (disruptive innovation and related response strategies) within a specific context (incumbent banks within South Africa). This research design can be used to explore as well as develop existing theories. It provides the opportunity to explore individual and organisational outlooks in a way that can deconstruct theories and subsequently build them up with the new information gathered (Yin, 2009). Case study research is also seen useful not only for theory building, but also for practical application to inform industry (Yin, 2009). This research design recognises the contribution of human interpretation in the creation of meaning making. Allowing the researcher in-depth access to the case allows different views of reality and interpretations of theories to be acknowledged within the research (Yin, 2009).

The case study research design is appropriate for this study according to the guidelines provided by Yin (2011). Firstly, it is said that case studies should be considered when the emphasis of the study is on 'what' and 'why' questions. The research questions proposed here look to *what* is the current stage of disruption within the South African banking industry together with *why* this is considered the case as

well as *what* response strategies are used in the face of disruption together with *why* incumbent banks choose a certain strategy, which has been ultimately used to contribute to why current literature does or does not need to be extended. Secondly, Yin (2011) says that case study research is suited when you cannot manipulate participants and their behaviour. In this study, the aim is to observe the current realities of these firms, and not conduct an experiment and provide an intervention. Thirdly, it is suited when one wishes to understand contextual conditions (Yin, 2011). This is the case in this study, as the focus is specifically on responses when a threat of disruption is observed within the banking industry in South Africa. External and internal factors of industry and market influences could shine a contextual understanding of using innovation management techniques unique to this setting. Finally, Yin (2011) proposes that case study design is suited when the boundaries between the theory application and the context are unclear. This is again the reality of this study as it looks to evaluate the firm's decision-making as a response to the threat of disruption; however, decision-making cannot be separated from the firm's unique reality, such as its external environment and history, that would have influenced decision-making together with innovation theory, and so accounting for these factors needs to be included in the design.

The unit of analysis within this study and the focus of the case studies is the firm, as the study looks at overall strategy changes as a response to the threat of disruption within the industry. This is because part of the research is to understand how firms within the South African banking industry have adapted their businesses based on this threat together with their own innovation strategy and objectives. The research also looks at what can be gleaned from this specific unit of analysis within the industry that can inform the theory of disruptive innovation, which currently does not include deep research on response strategies by incumbents as part of the core theory and can potentially be extended. Due to the study only looking at the entire firm and not specific business units, the case study has a holistic approach rather than an embedded one. The study also seeks to identify patterns and differences between firms within the South African banking industry and so focuses on multiple case studies within its design. This also assists the study in presenting results that can be replicated and is considered more reliable than a single case study design (Scholz & Tietje, 2002). In terms of feasibility, it is considered very time-consuming and expensive due to the amount of data and the mechanisms in which it has been collected and analysed.

3.3 SELECTION OF PARTICIPANTS

The sample includes managers within each of the five selected firms' innovation portfolio management and business model strategy. Purposive sampling was used to choose participants. This sampling technique is used over probability sampling, which is often deemed more representative of the population, as no list of employees involved in the innovation portfolio management and business model strategy within banks is available publicly and so probability sampling was not possible. Purposive sampling, which is a type of non-probability sampling, is therefore conducted, and representatives have been chosen based on the researcher's judgement on which managers were most relevant to the subject (Etikan et al., 2016). This type of sampling is better suited for the study as the study aims to gain specific insight into response strategies to the threat of disruption and not firm strategy in general. The population of these employees is also small and specific, and so there is a clear rationale for why they have been chosen. Four participants for each case firm have been selected, with a total sample size of twenty participants. This sample size was carefully chosen to avoid being too small to certify variability as well as to remove bias and improve reliability. Due to the research design, a larger sample size would invoke much more time and cost expenditure to complete. Participants being from the same five firms also could lead to much duplication of data gathered that does not aid the outcomes of the study if the sample is increased. Twenty participants, therefore, are decided to be an appropriate sample size. Participants are all based in South Africa and have previous experience in the banking industry.

3.4 RESEARCH METHODOLOGY

This study is based on a qualitative research approach based on a cross-sectional analysis of five major banks. This approach is seen to be suited to a pragmatism paradigm as it allows experiences and perspectives to be represented in the data. This approach is suited for this study as the objective includes understanding the reality that these five firms have constructed when observing a potential disruptor enter the market and not only assessing the theories related to this scenario. The approach needs to be able to capture both subjective and objective knowledge. The focus, therefore, also

includes data collection on interpretations of theories and how individuals and the overall firm have made meaning of it in their context (Bell et al., 2018). In this way, the study is grounded in existing theories but uses data collected on the reality of firms' responses to guide the research on potential gaps or contradictions. A qualitative approach, therefore, is suited for this study as it also focuses on an exploratory analysis based on disruptive innovation theory in the context of incumbent response strategies. The qualitative approach would not be appropriate if the objective of the research outcomes was instead to make generalisable statements towards a large population. It is appropriate in this study, as the population is limited to firms within the banking industry in South Africa. As described in the literature review in chapter two, current mainstream literature on disruptive innovation is very general. Further studies have been done in specific industries in specific countries; however, few studies were found on cases within South Africa's banking industry (many of which were ex-post analysis of successful cases). None were found to specifically focus on response strategies in relation to these theories and so this study needs to explore this area broadly before predictions can be made, and therefore a qualitative approach is best suited to do this.

3.4.1 DATA COLLECTION AND INSTRUMENTS

This research has used both primary and secondary data. Primary data has been collected through semi-structured interviews to understand the participants and overall firm response to the threat of disruption. The boundary of this study is the banking industry within South Africa so a sample of twenty managers from the case firms have been involved in the interview process. Criteria for responders, therefore, include that they must be an employee of one of the five incumbents included in the cases, they must be closely involved in the innovation portfolio management and/or business model strategy of their firm, and thirdly, they must be involved in the process for a long enough time period to gain in-depth knowledge on the process (no less than six months). The interview guide to be used can be found in Appendix A. Although this study is looking at the banking industry within South Africa, it is more specifically looking at incumbent firms within the industry. The top five incumbent firms were therefore chosen as cases to create a conceptual map of incumbents within the industry due to their history, share of the current banking market, as well as influence on economic stability and

the overall industry within South Africa. Semi-structured interviews are seen to be the best method for the two research questions proposed, which are designed to inform both theory and practice. Although structured interviews may provide an increase in reliability and validity, semi-structured interviews are seen to be more flexible as interviewees can be encouraged and probed to gain a greater understanding of current realities. By allowing interviewees to speak freely, this type of data is able to uncover hidden themes related to the industry that are not initially identified by the researcher (Rashid et al., 2019).

Collection of the primary data in this study begins by engaging with chosen participants and sharing the purpose of the interview via email or telephone call. The research purpose of the study has also been shared and why their contribution aids the outcomes of the study. Interviewees have also been briefed that their personal information will remain anonymous, and their answers will be managed confidentially. All names and employee titles are therefore anonymised in this report's presentation of the data. Interviews have taken place via online video calls, whereby the interviewer and interviewee can see each other. While following the interview guide, asking follow-up questions was also a part of the data collection process to gain in-depth understanding and clarity on both questions and answers by both parties. Although 60 minutes is the minimum time allocated, no time limits were placed on the interviews. Time scheduled and speed of the interview were based on the interviewee's availability and preference to allow interviewees to speak freely and confidently. This also aimed to promote relationship building between the interviewee and interviewer in order to build trust and understanding. If found to be relevant, body language and tone of voice were also noted, and conversational interjections unrelated to the research topic were noted for potential influence on answers. Due to the sensitive nature of the information, the interviewer only probed for voluntary answers and did not force interviewees if they opted not to answer. Interviews were also recorded and although the potential risk of it reducing reliability was noted (as the interviewees may have focused on this during answers), it is still seen as beneficial as the interviewer can practice active listening during the interview and later use the recording for more accurate data capturing (Saunders et al., 2007). As the analysis evolved, the recordings were later accessed to relook at emerging themes. Recordings are stored securely on an encrypted OneDrive folder, and interviews have been transcribed with interviewer notes and sent to the respondents, allowing them to clarify any misinterpretations.

In section 4.1, secondary data (sourced from 'outside' commentator interviews, articles, website information and annual reports) have been used to provide background to the firms included in the sample and the environment in which they exist within. This is intended to provide a knowledge base on the industry and contextualise participant responses. Where applicable, the data has been triangulated with the primary data and referenced in the discussion of findings in chapter five.

3.4.2 SAMPLE

Out of the of 36 licenced banks within South Africa, the following five case firms, who collectively hold 90% of the banking industry, have been selected:

	Absa Bank	**FirstRand Bank**	**Investec Bank**	**Nedbank Group**	**Standard Bank**
Innovation Strategy	Digital innovation in financial services and other industries	Rapid growth through expanding into new markets with novel solutions	Serving select market niches as a focused provider of tailored solutions	Offering significantly enhanced experiences for all their existing customers	Innovation as a capability to generate future-ready solutions and new business models
Market Share 2019 (Jan)	21.3%	21.1%	7.6%	18.6%	23.5%
Market Share 2020 (Jan)	19.5% ↓	21.3% ↑	7.9% ↑	17.8% ↓	21.3% ↓
Market Share 2021 (Jan)	19.5% →	21.7% ↑	7.6% ↓	17.2% ↓	24% ↑
Return on equity 2018 FY	13.4%	23%	12.1%	17.9%	18%
Return on Equity 2019 FY	13.1% ↓	22.8% ↓	14.2% ↑	16.0% ↓	16.8% ↓

Return on Equity 2020 FY	7.2% ↓	12.9% ↓	8.3% ↓	6.2% ↓	8.59% ↓
Return on Equity 2021 FY	15.8% ↑ Up overall since 2018	20.1% ↑ Down overall since 2018	6.6% ↓ Down overall since 2018	12.5% ↑ Down overall since 2018	14.7% ↑ Down overall since 2018

Table 4: Overview of the Five Leading Firms within the South African Banking Industry

(Absa, 2020, 2021; Coetzee, 2018; FirstRand, 2020; Investec, 2020, 2021; Moshoeshoe et al., 2021; Natsas et al., 2022; Nedbank, 2020; Prudential, 2020; StandardBank, 2020)

3.4.2.1 ABSA BANK

Absa Bank is a part of Absa Group Limited, which is Pan-African, operating across 12 countries within Africa and has two headquarters abroad. Its largest presence is in South Africa, where it offers retail, business, wealth management, corporate and investment solutions with a 19.5% market share and over 27 000 employees (Absa, 2021). It was founded in 1991 through the amalgamation of four banks with a long history in South Africa. In 2005, majority stake of the South African bank was purchased by Barclays Group Limited, a British multinational bank with global subsidiaries. This allowed Absa Bank significant cash flow and capability sharing from its parent company; however, it also adopted British regulation standards and Barclay's business model (Maree & McKenzie, 2015). This forced Absa into a defensive strategy in order to retain market share and a low-risk-taking approach to new growth. In 2016 Barclays Group Limited announced its divestment of Absa Group Limited (formerly known as Barclays Africa Group) and in 2017 the separation began. Since this time, Absa Group Limited has begun transforming its strategy into a purpose-driven strategy, significantly investing in their innovation management processes and sourcing new ideas from internally and externally to the bank. Their strategy is now positioned towards a greater share of wallet growth through new and improved products and services offered, including those in new markets (Absa, 2021).

3.4.2.2 FIRSTRAND BANK LIMITED

FirstRand was formed in 1966 and has three divisions in South Africa; First National Bank, Rand Merchant Bank, and WesBank, which together provide wholesale and retail banking offerings to customers. It also operates in seven sub-Saharan African countries, with operations in the United Kingdom and India. Within South Africa, it has a 21.7% market share, the largest after Standard Bank (Prudential, 2020). It has over 30 000 employees (with a gradual reduction since 2019) and has had a presence in the country since 1838, making it the oldest bank out of the five cases. The bank is consistently recognised as innovative, ranking fourth in the 2020 Brand Finance® Banking 500 survey and winning the Best Mobile Banking App in Africa and Best Consumer Digital Bank in South Africa at the 2022 World's Best Consumer Digital Bank Awards (BusinessTech, 2022). The firm's strategy focuses on greenfield investments to derive product innovations and gain aggressive growth through its activities. Their business model and culture emphasise innovation, technology, and entrepreneurship in order to enable this (FirstRand, 2020). With increased competition, the firm is now attempting to grow in new customer segments and markets outside of traditional financial offerings to generate rapid growth. FirstRand is also the only case to generate consistent market share growth over the three-year period.

3.4.2.3 INVESTEC BANK

Investec Bank is a subsidiary of Investec Limited (an international organisation), founded in 1974 and is a specialist bank in South Africa. Investec offers private banking services to individuals, as well as investment, corporate, and institutional banking services. It holds 7.6% of the banking industry in South Africa and has over 8 000 employees globally (Investec, 2020). Investec focuses on client experience as a driver of its offering of speciality solutions. Although it has digital capabilities, it is also focused on offering financial services that have a different mix of benefits unseen by other banks in order to capture niche high end markets (Investec, 2021). Out of the five cases, they are deemed the most stable in their strategy, with no drastic changes in their business model. This can also be reflected in its market share position, which has been fairly stable in recent years.

3.4.2.4 NEDBANK GROUP

Nedbank Group is a subsidiary of Nedbank Limited and was founded in 1888. It operates in six other countries in Southern Africa; however, South Africa is its primary market. The group provides wholesale and retail banking services as well as insurance, asset management, and wealth management. Within South Africa, they hold a 17.2% market share of the banking industry and employ around 30 000 staff members. Nedbank's strategy focuses on providing consistent quality across its many offerings, and strengthening its brand recognition (Nedbank, 2020). Out of the five cases, they are seen to be historically slow to recognise the impact of innovation, with their focus leaning towards existing relationship-building competencies. This has quickly changed in recent years with increased competition and value placed on digital capabilities. The firm is now investing more heavily in their innovation management processes to catch up and lead in selected markets as part of their strategy (Oosthuizen & Scheepers, 2018). Nedbank, out of the five cases, is the firm to be losing existing market share within the banking industry consistently.

3.4.2.5 STANDARD BANK

Standard Bank is also a Pan-Africa bank, operating across 18 African countries and two headquarters abroad. It was formed in 1962 but has a presence in South Africa since 1862. Similar to Absa, it also offers wholesale and retail banking to a wide range of customers. It has a 24% market share within South Africa, with over 45 000 employees in the country (StandardBank, 2020). The company has consistently had a strategy towards growth and expansion, primarily through partnerships. Their focus now is on innovation through digital expansion and client experience, which can be seen through a consistent reduction in the number of employees and branches operated, as well as the introduction of new online services (Johnston & Gill, 2017). Their strategy is now focused on sustainable growth through transforming into a 'platform business' through product, service, and business model innovation. Their targets include 7-9% revenue growth and a return on equity between 17% and 20% (StandardBank, 2021).

3.5 DATA ANALYSIS

The following guidelines have been used to analyse the primary data sourced from the interviews with participants:

- **Creating a knowledge foundation:** Preparatory desktop research was required to develop the questionnaire and prepare the research methodology. This additionally served the purpose of creating a knowledge foundation of the area of research and the maturity of the industry in which the study is conducted. This information has been included in section 4.1 and allows for broad external conditions to be accounted for. This includes economic conditions, consumer trends and regulatory underpinnings (Corbin & Strauss, 2014). These have been acknowledged as conditions potentially influencing the data and are included in section 4.1 through secondary data sources of articles, websites, and market reports in order to acknowledge possible linkages to phenomena found in the primary data.
- **Concepts guide the analysis:** As events, activities and incidents are seen through the data, these can be viewed as indicators. As they are analysed within this study, they have been given labels, and if other phenomena arise that align, then these have been given the same labels. These labels/concepts form the basis of the insights generated (Corbin & Strauss, 2014).
- **Categories will be developed and associated:** Concepts that are closely related have been grouped into categories. Categories are at a higher level than concepts but are put together through the same process of comparison for similarities and differences. This process is called coding, and has been used to indicate the themes of response strategies by incumbents, as well as if further theory can be developed in relation to disruptive innovation theory. Categories have been developed in terms of their dimensions and properties related to the unit of analysis of this study and the outcomes it produces. This gives the categories their own identities in order for them to have explanatory power and for the discovery process of relating them together to expand on theory (Corbin & Strauss, 2014). Poorly formed categories are ones which have few uncovered attributes from the data and also have few explanatory concepts within it.
- **Comparisons throughout the analysis:** As events and incidents are noted, these have been compared against others to identify the degree of difference. They have then been labelled and, throughout the research, compared with new categories. This assists in removing researcher bias and encourages greater consistency and precision (Corbin & Strauss, 2014).

- **Patterns must be acknowledged:** By identifying patterns, the researcher can bring order to the data and enhance the outcomes of the research and subsequent theory derived (Corbin & Strauss, 2014).
- **Analysis must account for phases:** In this study, the unit of analysis is the firm, but within this, there are divisions of responsibilities such as managing the innovation portfolio and influencing business model strategy. Noting how changes and shifts in the various business units impact the firm has been an integral part of the analysis (Corbin & Strauss, 2014).
- **Memo writing:** Due to there being so much data, memo writing has assisted in keeping track of the thoughts that arise through the analysis process and has contributed to generating the theory. It has been done throughout the analysis stage such that any conceptual understanding was not lost (Corbin & Strauss, 2014).

3.6 LIMITATIONS OF THE STUDY

The study focuses on banks within South Africa. This means that the results of the study are only applicable to the banking industry in South Africa. Although the results may be useful for practices and further research in similar industries or the banking industry in other emerging economies, any interpretation outside the scope of the study should be approached with caution, as this study is not intended to be generalisable to the population of all firms.

The study also focuses on the five leading banks in South Africa in terms of market share, measured by assets held across retail and wholesale banking. There are 36 licenced banks in South Africa as of April 2023 so the portion included in this study is small (13.9%). Although these five banks hold 90% of the market, the outcomes of this study are skewed towards large incumbents within the industry, and so again, any interpretation by smaller firms and newcomers must proceed with care.

Another limitation is that this study focuses on incumbent responses to the potential threat of disruption within its industry. It does not focus on firm strategy in general or how incumbents may use disruptive innovation theory to their own benefit without the threat of disruption. Although

incumbents may also take a proactive approach in disrupting their industry first, if it is not done as a response to the potential threat of disruption, it is not included in the scope of this study.

An added limitation is the time constraint of this study. The response strategies and potential impact to the firm's overall strategy are observed at present; however, in order to observe the long-term success of these decisions and actions, a longitudinal study would assist in validating the effectiveness of these changes. Therefore, this study is limited to reporting on the response strategies that incumbents have invested in but not on which strategies are more successful than others.

The sample size of participants interviewed is twenty. This number is often deemed not significantly significant; however, for this study, there is a limitation on how many appropriate participants there are for interviewing, as the population of expert participants and those willing to participate in the interview process is small. With more participants, the results may have had more accuracy; however, a sample size of twenty in the context of the available pool of participants, as well as time and resource constraints, was deemed sufficient to draw inferences in this study. Within the pool of responses there also existed a fair amount of repetition, indicating that a saturation point was being approached in terms of further insights from additional participants. There still exists the opportunity for supplementary research on this topic, where more participants are included in the interview process, or a quantitative method on a much larger scale is used, to validate findings.

Although purposive sampling aligns with the research paradigm, it may have still introduced some selective bias into the results. The pragmatism paradigm also has the limitation of assuming that truth is not permanent. For implications for this study, it may mean that relative to time and contextual realities, the outcomes of this study may not be applicable if much change has occurred. This encourages further research in order to validate outcomes in line with changes affecting the banking industry in South Africa.

3.7 ETHICAL CONSIDERATIONS

Ethical research is voluntary and includes getting informed consent from the interviewees and disclosing fully on the consequences of the research. The research has been cleared by the University of Witwatersrand prior to proceeding. In order to meet the ethical requirements of this study in collecting primary data, written permission has been granted from participants involved in the interview process. Verbal permission has also been obtained to digitally record the interviews. Participants have been notified that they may withdraw from the study at any time if they wish, and withdraw any statements that they made throughout the process without any implications. Transcripts and notes have also been sent to participants for review.

This study focuses strictly on response strategies to the threat of disruption, and participants have been chosen based on their relevance to the research. The respondents are experienced managers who participate in this study by choice. As part of the interview, participants were notified of the confidentiality and anonymity of the study and that the information gathered from the research will only be used for academic purposes. Therefore, the data collected is kept anonymous and stored securely in an encrypted folder only accessible by the researcher. Case names of the companies have also been anonymised in the results to protect each firm's reputation and their employees who have participated in the study. Any confidential company documents provided by the interviewees are also unavailable to anyone outside the researcher.

No harm is predicted (physical and emotional) on the participants. Participants have been asked to identify factors that could create unexpected harm or any risk, as well as if any psychological preconditions exist for the participant. Participants have also been asked, at the completion of the interviews, on how the process of interviewing has been conducted and received. This was to ensure that they are left unaffected and that no harm has been caused, and to inform a better process for subsequent interviews (Saunders et al., 2007).

The researcher also adheres to the basic research principles. This is to ensure that the observations are free from personal bias and that the results accurately represent what respondents have observed and provided. This has been upheld through continued engagement in the phenomena under investigation and through iterative and constant analysis (Yin, 2009). This has been further supported through recording and transcribing the interviews and including revisions when requested by interviewees.

Triangulation has also been used through semi-structured interviews (primary data) as well as articles, company websites and annual reports (secondary data) where relevant. The trustworthiness of the research is further extended as outlined in section 3.8.

3.8 RELIABILITY AND VALIDITY

A reliability and validity overview of this study was done to measure the quality of the research. By doing this, the researcher was also able to identify potential pitfalls and ways to improve reliability and validity before the study was concluded in order to improve consistency and accuracy of the study.

Since this is a qualitative study, the measures of dependability, transferability, credibility, and confirmability indicate the overall quality of the research conducted.

3.8.1 DEPENDABILITY

Dependability of a study is high when results are similar if the research is replicated in other studies with the same results using the same methods, participants, and context. In this study the focus is on the response strategies to the threat of disruption within the South African banking industry (Saunders et al., 2007). Dependability in the long run is problematic as the environmental factors affecting this industry and process may change. However, the study has improved dependability by thoroughly outlining the research process to enable future researchers to replicate it. Within the study, an iterative approach to data gathering and analysis has been conducted to ensure consistency of results. Multiple participants from the same firm have also been interviewed such that results are not weighted heavily on a single individual's personal experience (Saunders et al., 2007). Secondary data in the form of articles, website information and annual reports has also been used to support primary interview data where relevant.

3.8.2 TRANSFERABILITY

Transferability checks that this study's results are generalisable to other applicable contexts (Saunders et al., 2007). Transferability in qualitative case study research is generally low if the number of cases is small and not representative of the population (Yin, 2009). In this study, transferability is slightly improved as it starts with a broader theoretical base from disruptive innovation theory, which is not industry and market-dependent. Findings have also been compared to the theoretical framework. However, the cases and intent in the study are still to focus on the banking industry within the emerging economy of South Africa, and any theory extensions are representative of this context, so although they may provide insight that triggers new research agendas in new industries and markets, it still has low transferability to other contexts. The study does have transferability to other firms within the banking industry with similar operations and context within South Africa and potentially other similar emerging economies. Using multiple cases instead of a single-case approach has improved transferability of this study's results (Scholz & Tietje, 2002).

3.8.3 CREDIBILITY

Credibility involves testing and ensuring that the study results are reliable. This can be compared to the concept of internal validity in quantitative studies (Yin, 2017). Through the iterative data collection and analysis approach, this study has high credibility in ensuring that results are consistent with the phenomenon being studied. The various steps within the data analysis (outlined in section 3.5) and the use of memoing has reduced some of the credibility risk of analysing large portions of data (Charmaz, 2006). Using a data triangulation approach with primary and secondary data has also worked to ensure that results are reliable (Scholz & Tietje, 2002).

Frequent debriefs with research supervisors has been used to aid the credibility of this study as inconsistencies and errors have been more quickly identified, as well as new insights generated that the researcher had overlooked. Credibility was also improved by having familiarity with the culture and workings of the case organisations. The researcher of this study is also part of the banking industry in South Africa and has experience working with the participating firms and within innovation

management. This has aided in building trust and understanding through the interviews as well as interpreting the data in the intention it was shared by participants.

Using semi-structured interviews as a data collection method comes with risks associated with credibility as participant answers cannot be guaranteed as honest. Open-ended and flexible questions are also generally difficult to analyse, and it is challenging to compare answers (Baxter & Jack, 2015). This risk has been reduced by allowing participants to decline a question if they wish. They have also been provided with the transcript afterwards to review and amend, such that answers have been confirmed to align with their intended message. This additionally contributed to building trust and promoting honesty. This also came by allowing participants to remain anonymous, as it was intended to give them more confidence in providing their answers without risk of backlash. Moreover, participants from different banks have been chosen based on their complementary characteristics such that cases can be more easily compared and having four participants from each case firm has ensured that no data is skewed based on individual experiences. The iterative analysis approach is also seen to best complement interviewing as a data collection approach, as the various steps work to ensure that interview data is accurately compared, resulting in reliable findings (Corbin & Strauss, 2014). Overall, this study is seen to have high credibility due to the various enforcement measures put in place to ensure completeness.

3.8.4 CONFIRMABILITY

Confirmability refers to how objective the researcher has been throughout the study. Walsham (2006) emphasises that confirmability enforces that the characteristics and preferences of the researcher do not influence the findings, but instead, it should be founded on the contribution of participants. The case study design and semi-structured interview collection do pose some risk to confirmability as it is open to researcher bias, and due to the volume of data, the depth of the analysis may be questioned (Walsham, 2006). Confirmability has been improved in this study as interviews have been recorded such that the exact responses of the interviewees are used in the analysis. Transcripts, together with interpretations being verified by interviewees, also ensures that the data collected is accurate and was not filtered through the researcher's interpretation. The data has been collected and managed

systematically, and through the coding process of identifying concepts and categories directly from the data, the researcher's ideas and beliefs is estimated to have had less influence on the study as the findings were derived directly from these categories (Shenton, 2004). Unfortunately, due to the sensitive nature of the data, there was no option for a second coder; however, collection and comparison of the data as well as triangulation with secondary data has enhanced the data quality to ensure confirmability of this study.

3.9 SUMMARY

Chapter three has detailed the research approach for this study. The pragmatism paradigm has been used in order to interpret actionable knowledge and promote a greater understanding of the underlying theories. The five case firms have been chosen based on which are seen to represent the incumbent banking industry in South Africa the most and allow this study to have the greatest influence and impact in industry and the economy. Purposive sampling has been used to ensure that participants are the most relative and can generate the most insight into the response strategies being analysed. This research process, together with analysis through qualitative content analysis and the ethical considerations, has ensured that the study has sufficient dependability, credibility, and confirmability, as well as high transferability to incumbent firms within the banking industry of South Africa.

CHAPTER 4: PRESENTATION OF FINDINGS

This chapter presents the data gathered through in-depth semi-structured interviews with innovation managers within the banking industry of South Africa, in addition to a view of the current state of the South African banking industry founded on secondary data. The focus of the data gathering initiative was to answer the two research questions posed; '*To what degree is the South African banking industry undergoing disruption?*' as well as '*What is the nature of incumbent responses to the threat of disruption?*'. Findings are therefore presented in the context of these two questions in section 4.2.

4.1 OVERVIEW

This section outlines the current banking market, its growth potential, the competitor landscape, regulation, consumer trends and technological advancements that impact the incumbents within the sample and that could potentially influence their response strategies to the threat of disruption. These insights are based on secondary data from journals, news publications, online databases, industry reports, government records and bank financial reports. This serves as a knowledge foundation for reviewing and comprehending the primary data in section 4.2 by providing an account of the current state of the South African banking industry in which the study resides, as well as any external factors that could impact respondents and their respective firms. The background profile of respondents and the process followed to obtain the primary data have also been outlined.

4.1.1 INTRODUCTION TO THE SOUTH AFRICAN BANKING MARKET

Banks are financial institutions that are regulated by government authorities and provide a range of financial products and services to individuals, businesses, and other organisations. They are primarily in the business of accepting deposits and lending funds, but with this comes a range of financial services to facilitate transactions and manage financial risks (Stulz, 2019).

The banking market within South Africa comprises of two distinct types of banking: retail and wholesale banking. Retail banking is made up of banking individual customers with services such as cheque and savings accounts, loans, credit cards and various savings and payment products, which are largely standardised and only get incrementally more personalised to customers with high and ultra-high levels of incomes (Natsas et al., 2023). This market only caters to small and medium sized transactions in terms of transaction sizes. Wholesale banking includes several categories, including business banking (which caters for small to medium-sized enterprises which have an annual revenue flow of less than R500 million), corporate banking (which caters to large enterprises which have an annual revenue flow of R500 million or more) and institutional banking (which also caters to large corporations, as well as other financial institutions, governments and investors) (Natsas et al., 2023). Business and corporate banking includes services to firms such as business lending, cash management, trade financing, deposit taking and treasury management. Institutional banking includes services such as markets trading (for example, foreign exchange and commodities trading), asset management (for example, pension fund, bonds, and real estate management in order to generate returns), and investment banking (for example, services such as managing mergers and acquisitions, underwriting and issuing securities, and providing corporate finance advice) (Natsas et al., 2023). Compared to retail banking, wholesale banking focuses on offering very specialised banking services to firms and institutions, and the transactions accompanying it are often complex and require bank advisory services. Retail and wholesale banking often have distinct and unique operations in order to serve their two markets, which is then interlinked by the group's strategy. However, even within these two types of banking, unique departments and procedures can exist, designed to create the intended customer value for each type of client (Simatele, 2015). This overview indicates how large and complex the banking industry within South Africa is and highlights this as a potential factor in how incumbents within this industry respond to disruptive innovation. All incumbents within the sample of this study manage value propositions in both retail and wholesale banking, and their responses are in the context

of the entire banking market. This correspondingly relates to a range of segments, from the lower-end retail segment all the way to the high-end institutional segment of banking clients.

The total estimated value of the South African banking industry was US$396 billion in 2020 and US$411 billion in 2021, with an estimated value of $564 billion in 2025. The industry is expected to grow at a compound annualised growth rate (CAGR) of 7.2% (ResearchAndMarkets, 2021). This is significantly higher than the compound growth rate of South Africa's overall GDP, which is currently 0.1% from 2019 to 2022 and 2.42% from 1994 to 2022 (TheWorldBank, 2023). This indicates that the growth potential of this industry is high in the South African economy, which would attract potential new entrants into the market and increase the threat of disruption. The only other industries in South Africa with expected CAGR that can be reasonably compared to the banking industry are the Freight and Logistics industry, which has an expected CAGR of 6.2%, Pharmaceuticals and Healthcare, which has an expected CAGR of 7.9% as well as the Information Communications Technology sector which has an expected CAGR of 9.3% (Mueni, 2022; Statista, 2023c). The growth in the banking sector is expected to be driven by increased inclusion initiatives through mobile and online banking aimed at replacing the currently high dominance of cash transactions (ResearchAndMarkets, 2022c). The unbanked population has already been reduced, with 84% of South Africans over the age of 15 now having a bank account (from 54% in 2011), which could be attributed to new entrants in these lower segments.

The appealing growth has already attracted additional new entrants, such as Discovery Bank, Tyme Bank and Bank Zero, as well as various third-party service providers, and this trend is expected to continue (ResearchAndMarkets, 2022b). This increase in competition is also expected to grow the market in terms of assets and number of customers, as many of these new entrants are seen to target new and adjacent consumers. All of these market characteristics and the increase in competition have a direct impact on the incumbents within this sample and potentially influences their perception of the threat of disruption, as well as their response strategies.

4.1.1.1 COMPETITOR LANDSCAPE & REGULATION

As of April 2023, there are 36 banks registered with the South African Reserve Bank (SARB, 2023b). This number would begin to indicate that the industry is highly competitive; however, the top five banks within South Africa and within this study's sample have continued to hold 90% of market share in

terms of total assets held across retail and wholesale banking (Statista, 2023d). Combined, they reached headline earnings of R100 billion in the 2021/2022 financial year, a 16.1% increase from the previous year (Natsas et al., 2023). This dominance by the five banks indicates an oligopoly in the industry. However, new entrants continue to enter the industry and are growing in market share held, such as Capitec, which is now sixth in market share in terms of assets held but is number one in terms of active retail customers, with 18 million active account holders. Discovery Bank, which is seventh in terms of assets held, has also grown by reaching one million active account holders and is holding 25% of all new credit card account openings (BusinessTech, 2021).

Bank	Market Share in 2021	Approximate Asset Value
Standard Bank	24.0%	~R1 550 billion
FirstRand	21.7%	~R1 400 billion
Absa	19.5%	~R1 260 billion
Nedbank	17.2%	~R1 110 billion
Investec	7.6%	~R490 billion
Capitec	2.3%	~R150 billion
Discovery bank	0.19%	~R12 billion
TymeBank	0.03%	~R2 billion
Other banks	7.4%	~R480 billion

Table 5: Market Share Distribution within the Banking Industry of South Africa (BusinessTech, 2021)

In terms of regulation impacting incumbents within the sample, South Africa has the Twin Peaks regulatory framework which contains the Financial Sector Conduct Authority (FSCA) and the Prudential Authority (PA) as the two pillars that coordinate and integrate to ensure financial stability, ethical market conduct and consumer protection (SARB, 2021). In terms of updates to the Twin Peaks framework, the FSCA is now officially regulating crypto assets, including cryptocurrency. All firms that manage crypto assets must apply for a licence from June 2023 to uphold operating compliance in 2024 (Deloitte, 2022). The increased oversight and risk management policies will allow incumbents to enter into crypto products more safely and for the banking market to potentially increase in asset size. It will

also allow existing crypto firms to begin formally entering the banking industry through licensing, increasing the formal competition in this industry.

The Conduct of Financial Institutions (COFI) Act also came into effect in April 2021 and is a new regulatory framework focused on financial services in South Africa. It aims to promote fair treatment of customers. It does this by providing conduct standards, governance requirements, customer protection processes and monitoring services to uphold the best interest of customers and penalise institutions that do not comply (Treasury, 2023). The Act also now enforces that all financial institutions must apply and be granted a licence from the FSCA to be able to operate, once again formally extending the industry beyond traditional banking. The FSCA may also revoke licences if an institution does not uphold the COFI Act (Schmulow, 2022). This additional regulation will both extend the formal banking industry and increase the cost of operating due to the procedures required to uphold the COFI Act. It also means that complying with regulation will become more of a commitment to non-banks in the financial industry, potentially impacting the rate and cost of disruption within the industry.

Another upcoming change in regulation is the amendment to the National Payment System (NPS) Act, originally passed in 1998. It regulates payment system participants, including banks and system providers like PayFast and PayPal. It allows the Prudential Authority (the second peak) within the South African Reserve Bank to oversee the system and ensure safety, resilience, and efficiency. The Act also encourages innovation and is now being reviewed to include non-banks being able to conduct their own clearing and settlement (Deloitte, 2022). In the original NPS Act, only South African registered banks were able to rand settle all the financial market transactions, interbank transactions, and the settlement of foreign exchange transactions with other banks. Additionally, only participants of the Payments Association of South Africa (PASA) who were designated to do clearing were able to clear payments between PASA members, so fintechs like PayFast and PayPal still used a traditional incumbent to complete their payment processes, limiting their ability to compete within the banking industry (Pretorius et al., 2022). This upcoming regulation change creates the potential for any firm and potential disruptor to be independent and have a better chance of eroding an incumbent's market share, prompting the incumbents within this study to potentially react at a different pace. The testing of this model can already be seen as until recently, only three non-banks (Postbank, Diners Club SA, and Retail Assist) were mandated as clearing participants, but in 2021, two additional non-banks (Efficacy Payments and Yoco Technologies) were selected as clearing participants (Deloitte, 2022). This

barrier to entry is purposefully being lowered by the regulation to drive innovation and greater competition in the industry.

4.1.1.2 ECONOMIC CONDITIONS

The banking industry and the economy in which it resides are co-dependent. This means that when economic conditions change, this directly impacts banking products and services for their retail, business, and institutional clients. Some of the conditions that have characterised the South African banking industry and incumbent strategy in the last five years are:

- **Slow Economic Growth:** Since the pandemic, South Africa's economic growth has been weak, with a 6.3% contraction of GDP in 2020, a 4.9% increase in 2021 and a low 1.6% increase in 2022. The average consumer inflation rate also increased by 6.9% in 2022. With the decrease in the power of the rand, South African incumbent banks' ability to lend and generate profits has also decreased. Banks only reached pre-pandemic profitability levels at the end of the 2022 financial year (O'Neill, 2023).
- **Increasing Unemployment Rates:** With unemployment rising it leads to an increase in non-performing loans. In the 2020 financial year, during the COVID-19 pandemic, impairments rose to 4.7%. This has led to better credit monitoring as well as origination and collection mechanisms by incumbent banks, which has allowed the credit loss ratio to decrease to 0.80%. However, this is expected to be an ongoing problem with the unemployment rate fluctuating around 33% (SARB, 2023a).
- **Rising Interest Rates:** An increase in interest rates reduces a bank's ability to lend and generate profits. It also increases the risk of credit impairments. The prime interest rate has increased from 7% in the second half of 2020 to 11.75% in the first half of 2023, negatively impacting incumbent banks' profitability gained from traditional lending value propositions (SARB, 2023c).

4.1.1.3 CONSUMER TRENDS

The following trends seen in South Africa will impact the potential for profitability, growth, and disruptive innovation within the banking sector of South Africa:

- The National Credit Regulator revealed that consumers in South Africa exhibited increased credit demand, with the number of credit-active consumers increasing by over 227,000 year-on-year, indicating increased demand for credit products. Existing banks, including the five incumbents within the study, are seen not be responding to this increased demand, opening up the space for new entrants to target this market (Buthelezi, 2022).
- Secured lending portfolios, which include property loans, are increasing at a rate of 8.3% per annum expanding the market for long-term retail debt. This increased demand primarily comes from the growth in the small to medium enterprise market, which has created the opportunity for new entrants to enter this market with a new mix of attributes that better cater to the segment. All five incumbents within this study are seen to respond to this growing low-end market (Falkena et al., 2022).
- Super-apps are becoming more common to consumers. With applications like WeChat and Grab (in which retail, banking and social media are found in a single user interface) already successfully operating in the East, this trend will also begin penetrating the South African market (McIntyre, 2022). This will require incumbents to choose a response, which may include creating their own super-app, white labelling their services in existing super-apps or not including themselves in the super-app market (Natanson, 2021). Nedbank is the only incumbent currently seen to be live with an iteration of a super-app by incorporating online retailers directly within their application called Avo. They also do not restrict other bank clients from using their app. Absa, First National Bank and Standard Bank are seen to be experimenting in this space through platformisation (Cranston, 2021).
- Corporate and institutional credit lending is increasingly being directed to clients that promote sustainability. This is due to external pressures from governments and the general public. This may impact the profitability of credit financing in the short run. All five incumbents are seen to be accounting for sustainability in their strategy and are the primary banks acknowledged by the National Treasury to be driving a sustainable economy through banking (Ward & Naude, 2019). This impacts how these incumbents will be looking to drive revenue generation in the future, as sustainability banking is currently a niche but growing market.
- Product innovation outside of traditional banking has become the norm, with firms like PayPal, Stripe and SnapScan being common platforms for consumers to use for payments. Banks will continually have to decide whether they collaborate with these firms or generate their own

competing products, especially as they target the National Development Plan target of 90% financial inclusion by 2030. Currently, 84% of South Africans have a bank account, but many of these individuals still rely on informal channels for their transaction needs, so incumbents are further incentivised to drive financial inclusion through new channels (PwC, 2022). All five of the incumbents have already been seen to use a level of open innovation to drive financial inclusion, and so it may be found to be a part of their response strategies to disruptive innovation.

- Consumers are now accustomed to various pricing structures for banking, such as monthly fees, pay-as-you-use, donations and penalties on late payments (McIntyre, 2022). This change in expectations of how pricing is applied may contribute to how incumbents respond through changes in existing products and services and their supporting business models.
- Having digital banking is beginning to move from being a performance feature for consumers to being a basic feature and so is no longer significantly driving loyalty; however, this is still found to be a core component of incumbent strategy within the industry (Thusi & Maduku, 2020). This overshoot of performance may be creating the gap necessary for disruptor entrants.

4.1.1.4 TECHNOLOGICAL ADVANCEMENTS

The banking industry has been undergoing significant advances in their digital transformation journey, which has transformed the way customers and banks engage with one another. These advancements have both been an opportunity for growth for incumbents and a risk in terms of losing dominance to competitors that also utilise these advancements. Some of the most notable technological advancements that have been seen to impact the incumbents within this study in the past five years are:

- **Online Banking:** Although this offering has been around since the early 2000s, it has recently evolved even further to include more benefits than physical banking can offer. Online banking has evolved to a state where physical interaction is often no longer needed, and so it has allowed banks to lower their operating costs and reduce their physical presence in terms of branches and ATMs. Some banks have now passed on part of this cost saving to customers in the form of higher interest rates and lower (if not zero) fees on their accounts (Mujinga et al., 2018). In 2022, 15% of all adults used online banking. This is expected to increase to 24% in 2023 and 31% in 2027, especially as the

internet penetration rate in South Africa is steadily rising (currently 79.7% and expected to be 90% by 2027) (Kemp, 2023). In 2023, digital payments are expected to reach a transaction value of US$17.2 billion (Statista, 2023b). These changes in customer behaviour will impact the incumbent's overall strategy and how they choose to respond to the threat of disruption, as they will need to account for this increased online demand.

- **Mobile Banking:** Related to the above, mobile banking has become a common way to digitally bank, particularly with the increasing use of smartphones in South Africa. According to global projections, worldwide mobile banking users are expected to reach 1.9 billion in 2023. However, in South Africa, the current adoption of mobile banking stands at 7.3 million users, which accounts for approximately 12% of the country's population (ResearchAndMarkets, 2022c). Nevertheless, the utilisation of mobile banking in South Africa is anticipated to experience a significant surge. This is primarily attributed to the implementation of Rapid Payments, an initiative jointly undertaken by the top six banks (including the five incumbents within this study), along with BankServ Africa, which serves as the financial sector's clearing house. Rapid Payments facilitates payments sent and received under R3000 (South African Rand) without the need for a traditional bank account. This novel approach to mobile banking is being integrated into the mobile applications of these banks, thereby enabling inclusiveness for the country's 50.4 million cellular phone users (Pugh, 2023). This is predicted to create disruption in terms of attributes valued by customers.
- **Artificial Intelligence (AI):** AI is being used for several use cases in banking, such as fraud detection, customer service and risk management. Chatbots in South Africa have empowered online and mobile banking to be more user-friendly by dealing with simple support cases (Toesland, 2022). This has allowed human resources to be reassigned to more complex tasks. The global artificial intelligence banking market is expected to be US$35.88 billion by 2027 with a compound annual growth rate of 36.31%. This is expected to attract more entrants specialising in AI into the banking industry (ResearchAndMarkets, 2022a). All five incumbents within the sample have announced their investments into artificial intelligence and this may also contribute to a change in the traditional mix of attributes valued by consumers which incumbents themselves drive (Darangwa, 2021; McIntyre, 2022).
- **Blockchain:** Blockchain technology is being explored by South African banks as not only a way to facilitate cryptocurrency transactions but also to improve security and streamline payments. Blockchain can reduce the number of intermediaries within a transaction, especially cross-border

transactions. The global blockchain market in banking specifically is expected to grow to $7.4 billion by 2025 (ResearchAndMarkets, 2019). All five of the top five banks in this study have research or initiatives in using blockchain, with Standard Bank Group and Absa Group already being live with blockchain-related products, which are promoting a new mix of attributes compared to their traditional products and services, such as greater autonomy and safer financial document management (Burger, 2022; Moyo, 2022).

- **Contactless Payment:** Contactless payments are becoming common in South Africa since the COVID-19 pandemic, with two-thirds of all transactions being cashless. Many banks (including the top eight) now offer contactless payment options such as tap-to-pay cards, cellular phone number-based payments and cardless mobile apps, which is increasing the performance of cashless transactions (Labuschagne, 2022).
- **Open Banking:** Banks in South Africa sharing data with each other and third parties, has become more common as a mechanism to improve products and services. It allows for personalisation and new use cases, such as budgeting tools and better pricing. Open banking in South Africa is expected to create an additional US$3.2 billion in revenue by the end of 2023, which is expected to attract more incumbents into using this as a mechanism for growth (PwC, 2022).

4.1.2. BACKGROUND PROFILE OF RESPONDENTS AND PROCESS FOLLOWED

Respondents were selected using purposeful sampling in order to identify specifically the managers involved in innovation project initiatives or innovation strategy management that would be aware of potential disruptive innovations within the banking industry and would have the responsibility in their respective roles to decide on and/or execute response strategies to what is occurring in the market.

Four respondents from each of the top five banks (in terms of assets held) were selected and interviewed online using Microsoft Teams. The interviews were semi-structured to allow participants to share their thoughts and beliefs on the questions and overall topics, and for open-ended data to be collected. A total of 20 interviews were conducted, and the roles of respondents included; Product Manager, Project Manager, Senior Business Analyst, Innovations Manager, Lead Innovation Disruptor, Growth Strategy Manager, Electronic Services Manager, Client Experience Manager, Head of Payments

Pan-Africa, Head of Online Channels, Head of Digital Transformation, Head of Client Solutions and Chief Operating Officer. Respondents were asked to share their years of experience in the role, the organisation and the banking industry to ensure that they held enough expertise to be able to answer on behalf of their organisation and industry, and all respondents were deemed to be senior managers involved in innovation management. The average years of experience within the banking industry among participants was 14.15 years, with the minimum number of years of experience of a participant being four years and the maximum being 25 years. Their insights and opinions were, therefore, appropriately relevant to the study.

All respondents provided written consent to being interviewed and gave verbal consent for the interview to be recorded. They were also informed that they may skip any questions if they so wish, and review, amend and retract any answers at any point prior to the study being completed. None of the respondents chose to skip any of the interview questions and all respondents chose to remain anonymous within the study. The banks in which they belong have also been anonymised to protect respondents further and to preserve each firm's public standing.

4.2 PRESENTATION OF FINDINGS AND DATA RESULTS

This section presents the results of the semi-structured interviews conducted with innovation managers, each representing one of the top five incumbent banks in the sample. For each research question, a description of the findings is presented with diagrams included where applicable to visualise the data.

4.2.1 DISRUPTIVE INNOVATION WITHIN THE BANKING INDUSTRY

This study aims to answer two research questions. The first question is '*To what degree is the South African banking industry undergoing disruption?'* with sub-question one being *'Why is this considered the case?'.* Proposition one, which was made to this question prior to data analysis, was that the

industry is going through disruption and to a high enough degree such that incumbents have acknowledged disruptors and the threat of disruption. Related to sub-question one, proposition two is that there are specific market characteristics (described in section 2.5) that are driving this perception by incumbents. This section is therefore focused on this first research question and its sub-question, and the findings are presented so it may be compared with the original propositions.

4.2.1.1 INCUMBENT INDUSTRY PERCEPTION OF THE DEGREE OF DISRUPTION & DRIVING FACTORS

By assuming that incumbent banks are responding to the threat of disruption, it is also assumed that there is at least a perceived threat of disruption. This assumption was tested by soliciting feedback from the interviewees on what degree they believed the South African banking industry is being disrupted. All respondents, except for one, believed that disruptive innovation has, at the very least, emerged. The most frequent response (the mode) was option three, with eight responses, which was that '*disruptive innovation/s have emerged and is growing in performance*. The second most frequent response, with six responses, was that '*disruptive innovation/s have reached the mainstream market',* which is a further stage of disruption than option three. The third most frequently chosen was *'industry disruption has already occurred and the basis of competition has changed',* which is the final stage of disruption.

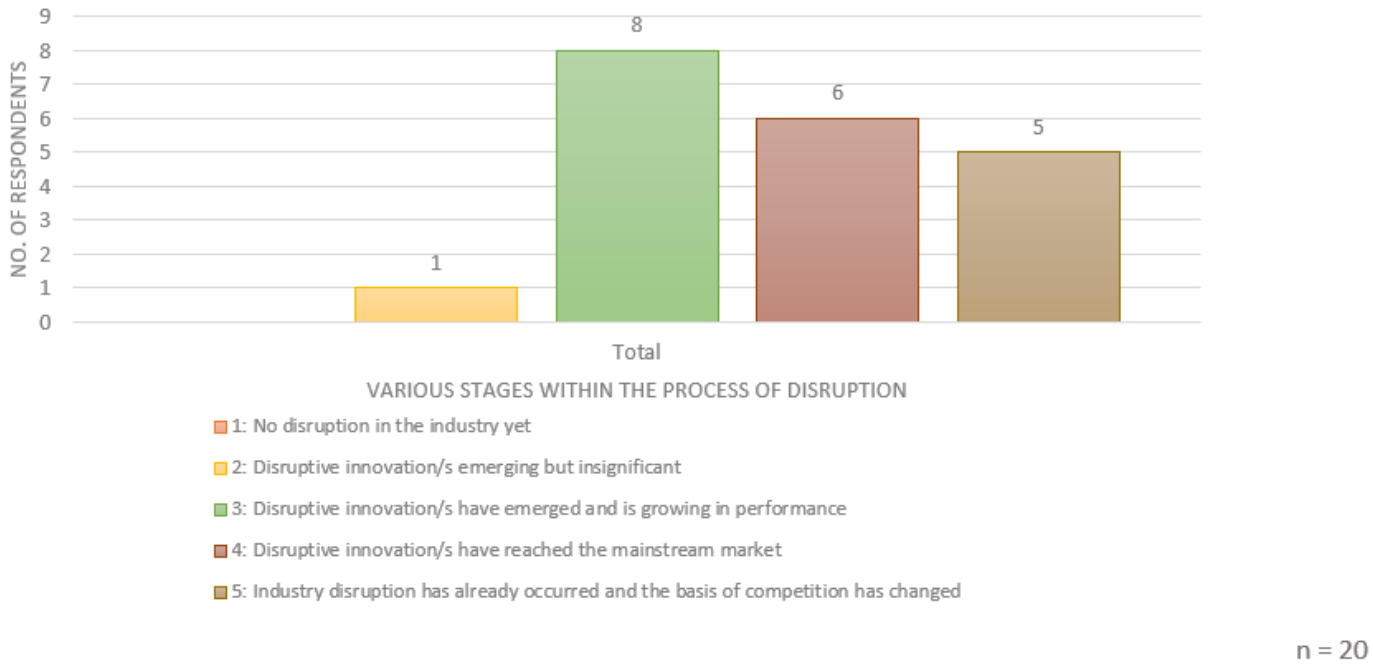

Figure 5: Incumbent Perception of the Degree of Disruption within the SA Banking Industry

The various factors driving this perception by incumbent banks can be seen in Figure 5. The two most frequently mentioned themes were '*Fintechs have a reliance on banks'* and '*New attribute: Digital operations',* which refers to a new factor in the basis of competition observed by respondents. Responses are further articulated below. Secondary data has been included to validate the information provided by participants where required.

- **Fintechs have a reliance on banks:** Respondents who mentioned this as a reason for their response said that firms who do not hold a banking licence and who are not provisioned by PASA to clear and/or settle payments still have to rely on banks and often specifically incumbent banks, to complete their payment processes (secondary data findings in section 4.1.1.1 support this). This has meant that new entrants that do not have a banking licence have had limited ability to replace incumbents and will continue to do so until regulations change. This was the most frequent response by those who chose '*disruptive innovation/s have emerged and is growing in performance',* which is a potential reason for not choosing a further stage. One respondent's comment on this is:

  "Some people might argue that there's already disruption from fintechs, but I would say that

that is not that material at this point in time because every fintech currently needs to make use of a bank for access to clearing and settlement and that fundamentally limits their ability to compete with us."

- **New attribute; Digital Operations**: This factor was tied for the most mentioned and was the most frequent factor mentioned by those who chose '*industry disruption has already occurred and the basis of competition has changed.'* Some respondents mentioned that banks such as TymeBank and Discovery Bank have been started with no branches and very little or no physical presence. The majority of their operations are run digitally and this has prompted a new dimension of competition as customer preferences are changing towards digital self-service through mobile and online channels. Incumbents have acknowledged this dimension and are actively responding by investing in digital channels and reducing their physical presence. This is supported by secondary data indicating that incumbents are indeed reducing their physical presence and acknowledging the shift in customer preferences, with at least 700 branches being closed by incumbents since 2011 (Labuschagne, 2021; Tarrant, 2019). It is also supported by the advancements and increased demand for online and mobile banking technology outlined in section 4.1.1.4. One interviewee adds to this point with the following comment:

  "Customers aren't just comparing us to other banks, they're comparing us to how they book a flight or how they buy their health insurance, which is mainly now done online, and we have to fit into their existing day-to-day activities rather than make them incur costs to travel to a branch."

- **Banking regulation slows down disruption:** Respondents mention that banking regulation slows down banks in terms of generating disruptive innovation due to the risk, compliance and monitoring obligations that go with any product or service from a bank. This enhanced regulation for banks means that non-banks have more agility and a lower cost of compliance than banks, potentially enhancing their ability to generate and commercialise disruptive innovation. On the other side, some interviewees mentioned that because banking regulation is currently so stringent regarding roles and responsibilities, it also means that non-banks have been limited in what they may do within financial services. This has allowed banks to hold onto core clearing and settling functions, which has allowed banks to move at a slower pace historically in their response. A comment by a respondent on regulation slowing down disruption by banks was:

"Banks are trying to create this pseudo personality where they are agile and compliant, but they're stuck by all the bureaucracy and legacy issues, which is just compounded by the legislations. They can't move as fast or seen to adopt ideas early."

- **Significant increase in the number of firms offering financial services:** Respondents noted that there are many new entrants and existing firms now providing financial services. This includes firms in other industries that include features of financial services in their existing products and services. A respondent described this by saying:

  "The trend that we're seeing is that they are technology-oriented companies that aren't necessarily competing directly with banks, but what they are offering is an element of financial services in their offering. An example is a furniture company offering their own loans as part of the purchase decision. It could also be a company moving from old physical infrastructure to online where they have an e-commerce strategy, so I don't see fintechs as narrowly defined as a business that looks a lot like a traditional bank. A lot of them are finding competitive advantages in other markets by embedding financial services in existing offerings."

- **Reduction in the boundaries of the banking industry:** Some respondents also shared that they have noticed a reduction in the boundaries of the industry and market, in terms of which firms form a part of the market as well as which customers. Respondents referenced this factor in terms of whom they consider competition and which products, services, and business models they review as a reference point for enhancing their own products, services, and business models. One respondent's comment on this was:

  "Just about anyone who has a payment solution right now can sort of enter the market. It's not your typical players in terms of competition, you see it with the telecoms [telecommunications companies] also starting to get into the market, so it's no longer a traditional market; entrants are coming from different sectors. It's so fluid."

- **Many customers now using both incumbents & new entrants:** Some respondents highlighted that just because there are new offerings and new entrants, it does not mean that market share must be lost, as firms can now share the market by offering different features. One respondent went into detail to describe the segments of multi-banked clients across both retail and wholesale banking, as well as how a single payment journey can touch multiple payment aggregators and banks before it is complete. This highlights that incumbents no longer have to be replaced; they can now

complement new innovations, especially those offered by non-banks. A respondent gave the following example in favour of this point:

> *"Most consumers have a traditional banking brand and at least one newcomer for their financial service needs. For example, retail businesses often have a banking account with an incumbent but use POS [point of sale] devices from a newcomer, especially SMEs [small and medium-sized enterprises], because they're so much easier to access and cheaper than our POS [point of sale] device, and so those newcomers have changed the basis of competition because you can just use your phone."*

- **Significant market share has not been lost:** Although respondents noted Capitec's rise in retail banking, many respondents also mentioned that across all segments, which includes retail, business, corporate and institutional banking, incumbents have held strong even in recent years. Respondents specifically mention that there is greater competition and a change in customer preferences in the lower segments of the market, specifically in retail and business banking, with less competition and disruption being seen in corporate and institutional banking. This is supported by the secondary data findings whereby Capitec is found to be number one in terms of number of active accounts in retail banking; however, the five incumbents within this study are still at the top five in terms of assets held, and when looking at deposits held, spanning all segments (Statista, 2023d). This was highlighted by some respondents as the core reason for choosing *'disruptive innovation/s have emerged and is growing in performance'* and not '*disruptive innovation/s have reached the mainstream market*', as a significant portion of incumbent revenue is generated in these upper segments of the market. One interviewee stated:

  > *"The new entrants that are not banks still need banks, and the new banks haven't taken away significant clients to warrant that the basis of competition has already changed. Incumbents are nowhere close to being replaced across both retail and wholesale banking."*

- **Customers have trust in incumbent brands:** Respondents mentioned that customers, especially high-value customers, look for well-known brands with a proven record of accomplishment to handle their funds. One respondent explicitly mentions that for corporate and institutional clients that look to banks to help them run their business and complete sensitive tasks such as paying suppliers and employees, clients are less likely to take a chance on a new entrant or even a new product or service. Only those who chose the state '*disruptive innovation/s have emerged and is*

growing in performance' mentioned this factor*,* which is a potential reason for not choosing a further stage. This aligns with industry findings whereby deposits held by each of the five incumbents within the study surpass any other bank, indicating that customers entrust them to hold their higher account values (Statista, 2023a).

- **Significant increase in the number of new products & services:** The inverse of the above was also mentioned by four respondents, that there are many new offerings in the financial services market, which highlights disruption is occurring. This was mainly mentioned by those who chose '*disruptive innovation/s have reached the mainstream market*.'
- **New attribute; Lower fees:** Three respondents explicitly mentioned that lower fees are a dimension driven by disruption. Respondents describe how digitally native banks are driving a new operating cost model that forms part of their business model and the types of fees and pricing structures they are able to offer. Although pricing has always been a factor in customer preferences, respondents note that the level that products such as bank accounts and private banking services are priced at has drastically dropped due to disruptors entering the market with new business models.
- **New attribute; Convenience of platformisation:** Some respondents noted that a new emerging trend is platformisation, which is the consolidation of many financial services onto a single offering and/or financial services being on a platform with other industries and their offerings. It often involves banks having to white label their products, prompting banks to relook at their strategy. This trend has begun outside of incumbents for both retail and wholesale banking; however, is now something incumbents have to include when designing and maintaining products and services in order to align to customer expectations. This is supported by the secondary data in section 4.1.1.3, whereby incumbents have openly communicated that their strategy includes platformisation and one incumbent is already live with a super-app platform. One respondent noted that:

  "There are platforms coming up that are aggregating banks onto a single platform, but they aren't replacing banks, which requires a different kind of strategy than when you are considering just replicating a competitor."
- **New entrants have earned trust in the lower market segments:** Three respondents mentioned this insight, but one specifically mentioned it by describing how her organisation struggled to enter the small to medium-sized enterprise (SME) credit market that was already dominated by disruptors. This was because the disruptor understood the needs of the SME market better than the

incumbent and had designed products specifically for that market. The result was that although the incumbent bank had the scale and resources to enter the market, SMEs were reluctant to leave the disruptor that had acknowledged them as a client in the first instance. The interviewee states:

> *"Banks also have not been able to use their scale to go back and properly get that market because the fintechs started in the SME space and understand it so well that the SMEs also trust them better to fulfil their needs."*

- **Underlying banking products & services are still the same:** Some respondents mentioned that although there are a lot of new features in the market, such as QR code payments and pay-later options on online retailer websites, the underlying product is the same. It is transactional accounts as well as credit products that underlyingly enable these new channels, and in the background, they work the same as they traditionally have and often require a bank to be involved. Only those who chose the state *'disruptive innovation/s have emerged and is growing in performance'* mentioned this as a factor. One interviewee stated:

  > *"Yes, disruptors have come in, and incumbents are using them to learn how to enhance their own products, but the underlying products and services are largely the same. Everyone still needs a bank account to make use of any of the new offerings."*

- **New attribute; Free rewards programmes:** Respondents noted that rewards used to be an additional feature of a bank account that came with a fee within their incumbent bank's offering, but now that some newcomers have offered it as a free feature, it has become a standard in which all incumbents are forced to prescribe to in order to meet customer expectations. This finding is supported by secondary data findings whereby three out of the five incumbent banks are seen to offer free rewards programmes (Schoeman, 2023).
- **New attribute; Banking on a Sunday:** One respondent noted how Capitec began operating many of their branches on a Sunday, prompting incumbents like First National Bank to also open on a Sunday in order to improve their ease of access and stay competitive.

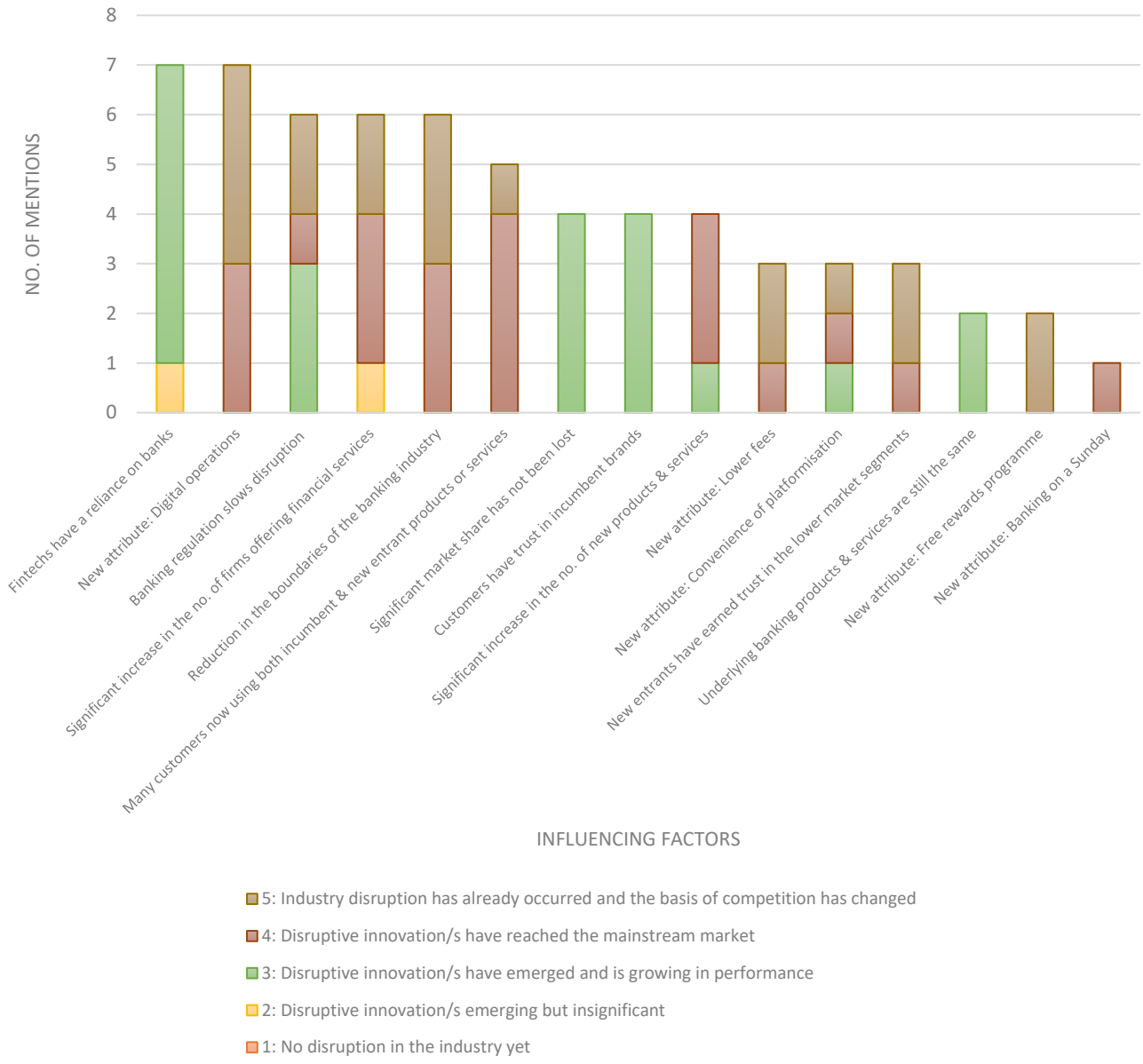

Figure 6: Factors Influencing Incumbent Perception on the Degree of Disruption

n = 20

4.2.1.2 INDIVIDUAL INCUMBENT PERCEPTION OF THE DEGREE OF DISRUPTION

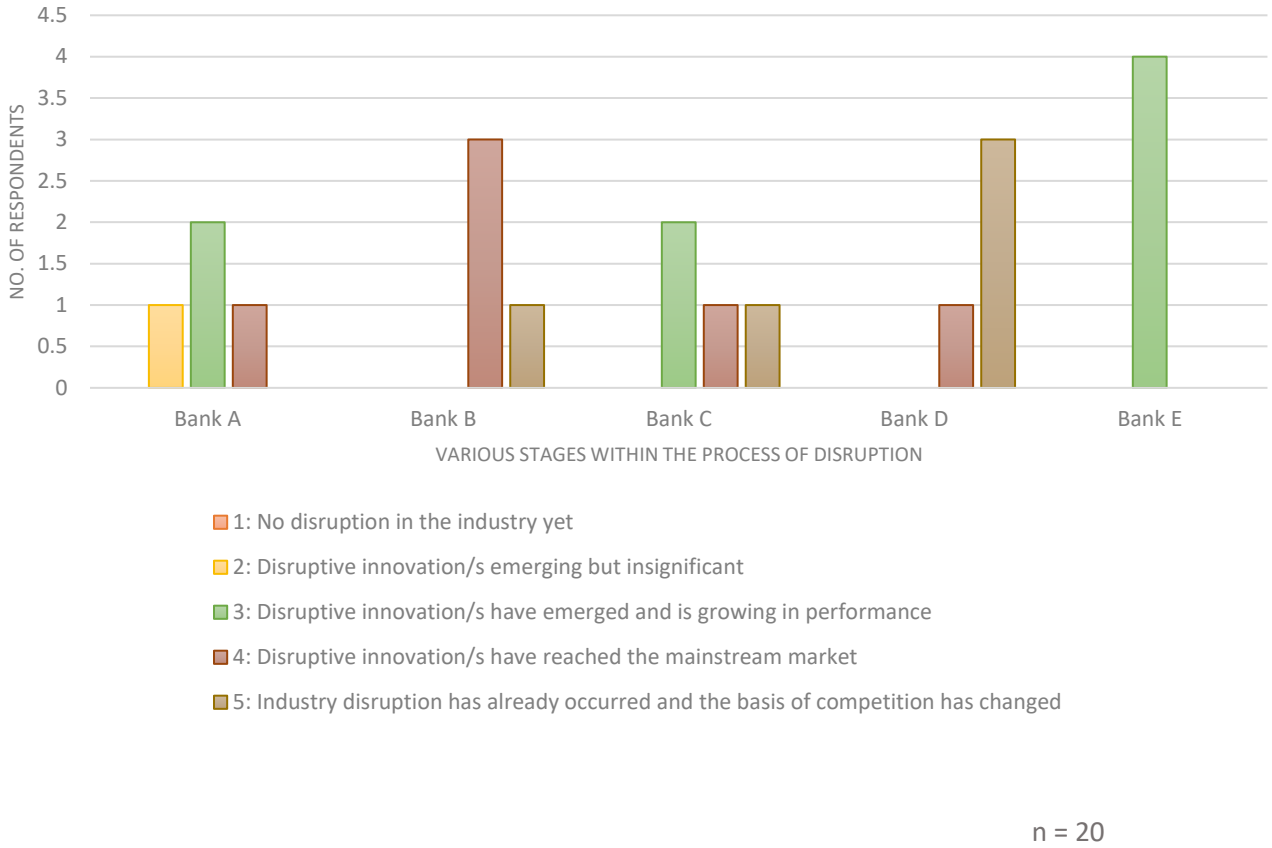

Figure 7: Individual Incumbent Bank Perceptions on the Degree of Disruption

When looking at each bank's response in isolation, Bank A is seen to have responses distributed across the three middle stages. Bank B has a mode of the fourth stage and, as an organisation, perceives that, at the very least, '*disruptive innovation/s have reached the mainstream market.'* Bank C, similarly to Bank A, has a mode of stage three but is more skewed towards the higher stages of disruption. Bank D has a mode of stage five, whereby most participants from this organisation believe '*industry disruption has already occurred and the basis of competition has changed*.' Bank E has a mode of stage three, with all of their respondents choosing this option, indicating a high probability that as an organisation, they believe that '*disruptive innovation/s have emerged and is growing in performance.'* These results have been compared with incumbent response strategies in Chapter Five in order to identify whether the perceived stage of disruption has an impact on the chosen response strategy.

4.2.1.3 THE POTENTIAL DISRUPTORS AND DISRUPTIVE INNOVATIONS

For the threat of disruption to exist, there must be disruptors in the industry aiding in the progression of the process of disruption. The interviewees were asked to name the disruptors or potential disruptors they have acknowledged and the innovations they have observed in the banking industry that are contributing to their perception of disruption within the industry. This section summarises their answers and groups them into types based on common characteristics. Where necessary, definitions and secondary data have been used to supplement the primary data, to add context and validate the information shared. This was done to promote greater interpretation and understanding of the results by the reader. Five types of disruptors were identified through the results; these results are presented below:

- **Newcomer Banks:** These are banks that have emerged within the last 25 years. More specifically, they are banks that do not have legacy systems to support. They were built after online banking (internet banking started in South Africa in 1996 by Absa Bank and became mainstream by the early 2000s). Without legacy systems to support or decommission, the respondents consider these newcomer banks more agile and faster to market than incumbents. This type of disruptor was mentioned by 100% of respondents.

  The newcomer banks considered disruptors or potential disruptors by respondents are Capitec Bank, Discovery Bank, Tyme Bank and Bank Zero.
  The innovations that respondents believe may or have already disrupted their core incumbent market from this group include:
  - **Free no-registration rewards programmes:** Capitec and Discovery Bank have created a free rewards programme that requires no additional sign-up for all of their account holders. By making rewards a core part of their accounts, respondents believe there is a new attribute of competition in bank accounts. Absa, Investec, and First Rand Group have responded by making their rewards programmes free for all retail account holders.
  - **Cheap or free bank accounts:** Capitec's R7 monthly fee for a transactional account and free additional accounts have pressured incumbents to revise their pricing. Other new entrants, which include Tyme Bank and Bank Zero, have further contributed to this trend by offering

free bank accounts. This has led all incumbents to create account offerings under R10, which is a drastic reduction in their pricing (Illidge, 2023).

- **Business model based on digital operating model:** With some new banks such as Discovery Bank, Tyme Bank and Bank Zero having a primarily digital operating model, participants believe it has allowed them to reallocate cost savings and time into innovation initiatives, digital accessibility, and affordable pricing to create greater value for the consumer compared to incumbent bank offerings. This is believed to have allowed for faster dissemination of new features, products, or services through digital channels rather than taking account of physical channels. Newcomer banks such as Capitec, Bank Zero and Tyme Bank are also using this model to offer business banking services in addition to their lower segment retail banking offerings and so are additionally putting pressure on incumbents in higher segments of the market (Moneyweb, 2023).

- **Payment Gateway Providers:** Payment gateways are needed to process electronic payments when doing online purchasing. It provides security and efficiency to both the customer and the merchant by connecting the customer's bank and the merchant's bank without one accessing the other's information. The gateway verifies the customer's account information and accepts or declines the transaction based on the verification response. If it accepts, it processes the transaction and informs the merchant that they may fulfil the order. They are a standard for e-commerce as payment gateway providers also now provide chargeback functionality, recurring billing, and fraud detection. Respondents note that payment gateway providers are increasingly adding new functionality to their products; however, they still have a heavy reliance on banks to conduct the clearing and settlement of payments. They do have much more flexibility in terms of new offerings as they are not constrained by requiring a banking licence and conforming to Basel III regulations, making them a threat due to their speed and flexibility in the market. Additionally, they are said to pose the risk of potentially taking up more of the payments value chain and replacing banks in terms of clearing and settlement if there are amendments to the NPS Act (the potential revision of the NPS Act is outlined in section 4.1.1.1). This type of disruptor was mentioned by 100% of respondents.

The payment gateway providers considered disruptors or potential disruptors by respondents are PayFast, Yoco, Ozow, Zapper, SnapScan, Mobicred, Payflex, PayGate, PayU, PayPal and Stripe. The innovations that respondents believe may or have already disrupted their core incumbent market from this group include:

- **Scan to pay:** Providers like Zapper and SnapScan have created QR payment functionality within their applications, replacing the need for cards. All incumbent banks have already responded to this threat by partnering with these payment aggregators and incorporating the functionality into their own mobile applications.
- **Buy now, pay later:** This is similar to interest-free short-term loans with high penalty fees provided by banks, but by offering them directly on e-commerce sites, payment aggregators like Payflex and PayU make credit more convenient and accessible to consumers.
- **Online credit facility:** This is similar to a traditional credit card facility, but since aggregators like Mobicred make it available online, with immediate verification and use on the e-commerce site, they make credit more convenient and accessible to consumers.

- **Any Product or Service Provider:** Any provider is a potential disruptor if they begin adding financial services onto their existing products and services and developing their own payment rails in order to provide greater convenience to the customer. Respondents describe the two ways they are a threat: by no longer needing incumbent banks for their business and corporate banking needs, and by capturing retail banking demand. This type of potential disruptor was mentioned by 85% of respondents. Respondents highlighted that although this potential disruptor has not significantly emerged in the market as yet, because many product and service providers are ahead in terms of their digital experiences for customers, and with potential changes to regulation as well as changing customer preferences in terms of convenience, there is cause for this type of disruptor being closely watched by incumbents.

  The retailers mentioned explicitly by respondents are WeBuyCars, who now offers their own vehicle finance; Pick n Pay, who manages their own digital wallets; Checkers and Pep, who both do shop-to-shop money transfers (locally and to selected African countries); as well as Vodacom who now offers business loans along with existing financial services linked to telecommunications (such

as airtime advances and contracts) and who has experience with transactions through its mobile money transfer service M-Pesa. Telecommunications companies in general, were named as potential disruptors due to their existing access to consumers and expertise in consumer needs gained from experience with existing offerings. Gambling companies were also mentioned due to their existing ability to handle large volumes of transactions.

- **Digital Asset Companies:** Digital assets include assets such as cryptocurrencies, digital tokens, digital art, and digital wallets. Historically, digital assets have not been formally included in the banking industry, and so the lack of financial regulation has allowed newcomers to develop and capture the digital asset market quickly. The FSCA is now mandated to monitor these digital asset companies through licensing, and so respondents note that this also means that these digital assets will formally fall within banking, potentially growing the market and forming a substitute for traditional banking. This type of potential disruptor was mentioned by 45% of respondents.

  The digital asset companies that are considered disruptors or potential disruptors by the respondents are Luno, Revix and VALR.
  The innovations that respondents believe may or have already disrupted their core incumbent market from this group include:
  - **Cryptocurrency & digital wallets:** This is a new way to store money and transact and so may create demand from those who do not want a traditional bank account and who want enhanced digital security. Over time, these offerings may attract existing retail and wholesale banking customers who value the new mix of attributes.
  - **Digital identities:** This digital representation of an individual's identity is considered an asset by itself. Firms familiar with digital identities can use them for authentication and authorisation, which can replace traditional transactions mechanisms like cards and pins.

- **Technology Companies:** Although this is quite a broad group, respondents mentioned technology companies in reference to the boundaries of banking being reduced and more firms being involved in the value chain of banking in order to create value for customers. Already, firms such as Amazon, Microsoft and Google provide cloud computing, data analytics and artificial intelligence solutions to

support the operations of banks. Respondents see the potential for these firms to contribute more directly in the banking industry and their ability to disrupt through their large-scale reach. This type of potential disruptor was mentioned by 25% of respondents.

The technology companies considered disruptors or potential disruptors by respondents are Apple, Samsung, Nium, Treasury One, Market Axis, Addendum Loan Platform and 360T Trading Platform. The innovations that respondents believe may or have already disrupted their core incumbent market from this group include:

- **Embedded banking:** Apple Pay and Samsung Pay have shown that a new payment channel can be launched and rapidly adopted when it is able to fit into a customer's existing journeys seamlessly. Technology companies have the scale and expertise to integrate financial services directly into their products or services, in order to provide a more seamless user experience and potentially increase customer loyalty. All incumbents within this study have partnered with embedded banking providers to respond to this innovation impacting the industry.
- **Platformisation:** Some respondents mentioned how some companies like WeChat have already combined banking with retail as well as with social media, and how this is the future of banking. Other respondents mentioned how platforms are coming up that are specifically consolidating financial services for customers such that it is easier to understand and consume, and they are able to grow quickly through consolidating users across firms. In institutional financing, there is also the risk of these platforms displacing the need for banks to connect firms with investors and for firms also to be able to manage their own treasury. Respondents acknowledge that these developments require banks to choose a path to capitalise on the new consumer trend and not be left behind.

4.2.2 NATURE OF INCUMBENT RESPONSES

This section goes into the response strategies taken by incumbent banks based on the threat of disruption. The second research question posed in this study is 'W*hat is the nature of incumbent responses to the threat of disruption?*' with the sub-question being 'W*hat factors are influencing these responses*?'. Proposition three is that there exist explicit strategies used by incumbent banks within South Africa. These strategies are described in section 2.5. Proposition four is that there are factors identified in the literature which are related to either the incumbent's motivation or ability to respond that influences which response strategies an incumbent will prioritise. These factors are additionally described in section 2.5. This section outlines the data collected related to this second research question and its sub-question, and has presented the findings so that it may be compared to the original propositions.

The incumbent banks were rated by respondents on the parameters within the conceptual framework. The modes found across the interview data were used as the final ratings on each of the parameters; however, all feedback from respondents has been acknowledged and included in the descriptions and is noted for the discussion of the findings in chapter five. Years of experience of respondents was the only variable that was averaged. Note that there is no positive or negative outcome within this research; the study aims to identify if incumbent banks gravitate towards certain strategies more than others and the reasons for this rather than rating the innovation capability of incumbents. Additional to note is that although related to proposition four, the findings related to each bank's motivation to respond and ability to respond are intentionally presented before their response strategy (which is related to proposition three), as some findings concerning proposition four created greater insights to proposition three.

4.2.2.1 BANK A

4.2.2.1.1 MOTIVATION TO RESPOND

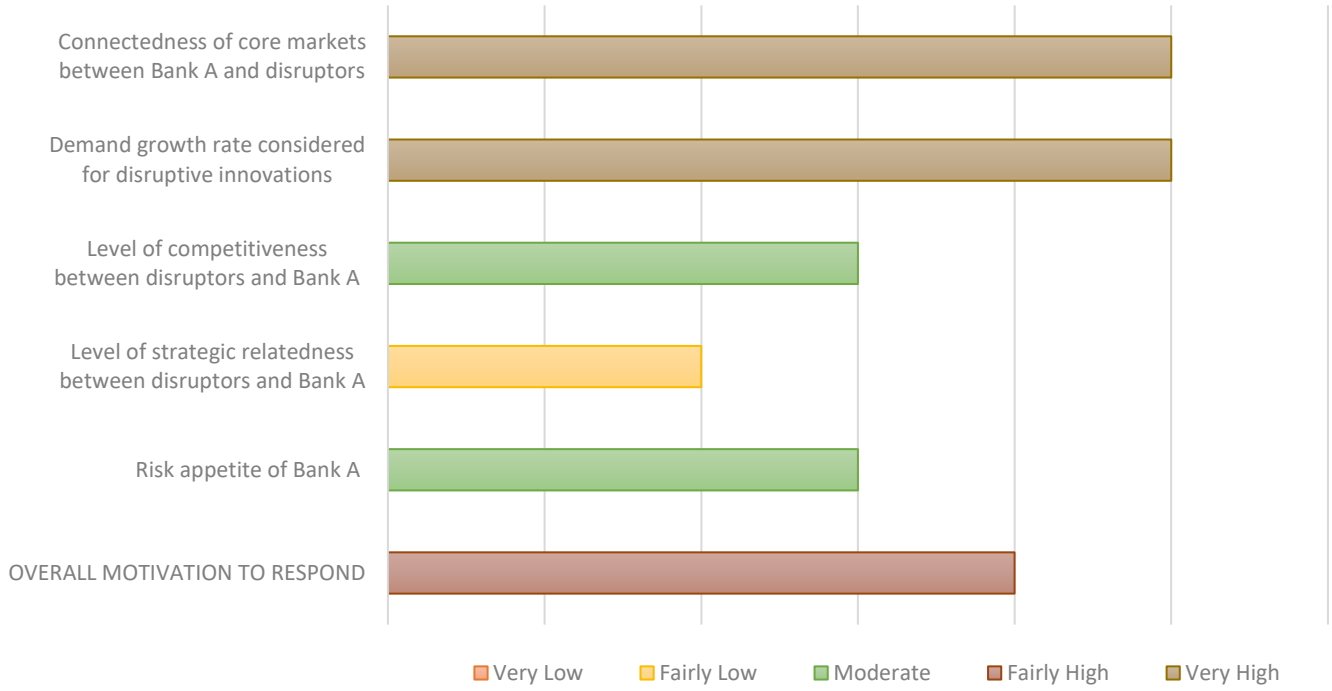

Figure 8: Influencing Factors & Bank A's Motivation to Respond

Based on respondent feedback from Bank A, Bank A's overall motivation to respond is Fairly High. Respondents from Bank A acknowledge the existence of disruptors and how connected they are to their firm's core market in terms of the potential to enter it with their innovations. They also see that the disruptive innovations in the market are gaining demand rapidly, adding to their motivation to respond. However, in terms of disruptors being competitive with Bank A, they believe that only a 'low' level of competition exists at present. This is because although some disruptors have gained a presence in the retail sector of banking, respondents do not believe it has impacted the overall position of incumbents. Respondents from Bank A stress the point that fintechs in the payments space still have a high reliance on banks for clearing and settling and so have not yet been able to be significantly competitive with incumbents. They also acknowledge that the disruptors have a 'low' level of strategic relatedness as they are still targeting lower segments of the market, with minimal signs of them moving to higher segments, and their operations and strategy are set up to support this. Bank A, on the other hand, is targeting a much broader market, and so correspondingly their strategy and operations

look much different. They mention that the disruptors operate much leaner, which allows them to lower their pricing but they do not have this flexibility as a bank. Bank A also has a 'moderate' risk appetite. This is because although the employees are highly motivated to take on risks that will promote disruptive innovation, they believe that the internal processes in terms of idea selection, budgeting and product management lean towards incremental innovation and do not allow for high risk-taking. They believe the bank requires separate processes that focus on long-term objectives and not only immediate profits, but this is not the current reality. A respondent describes the process by saying:

> *"Every year at the end of every year, we need to go and secure funding, and that funding is provided on the set of business outcomes or committed business value. If that's our funding model, how do we fund things like digital assets or virtual wallets or investing in figuring out digital identity because there is no business case. I'm pretty sure we're not going to make money on these things for the next four years. The governance and the way people think about these things doesn't allow for a lot of future proofing of our business."*

Some respondents also mentioned that as an organisation, disruptive innovation is often assumed to be a threat and then automatically replicated without understanding what value is intended to be created. This leads to time and resources wasted on change for the sake of change. One respondent gave an example by saying:

> *"Real-time cross border payments are trying to replace SWIFT, but the heavy documentation is still there, and so the biggest pain points for clients will still remain. Focus on client behaviour, value created and buying behaviour, but often we change for the sake of new technology, and then only assess disruptiveness once its implemented."*

Overall, respondents also viewed disruptive innovation as both a threat and an opportunity for Bank A. They see it as a threat because if regulation changes to allow more firms to complete the clearing and settling of transactions, then they do not have the luxury of moving at their own pace to preserve their market share and will have to improve their agility drastically. A respondent from Bank A comments on this by saying:

> *"Payment providers have had to find banks to partner with, which have allowed banks to be pretty lazy as you have to still come to a bank, but those regulations are being reviewed and I*

think there's a massive payments modernisation in South Africa that's looking to create more inclusion and competition, which I think will flip things on its head."

They do also view it as an opportunity because they recognise that among incumbents the offerings are very similar. The entire market across wholesale and retail has not been seen to grow significantly, so they note that disruptive innovation is a way to grow through new customer acquisitions. One interviewee said:

"Disruptive innovation is an opportunity to offer clients more value and gain new clients, not just existing ones but a materially different market share from what we have."

To note, the respondents for Bank A had an average of 17 years of banking experience amongst them. With the least years of experience being 12 and the most being 20.

4.2.2.1.2 ABILITY TO RESPOND

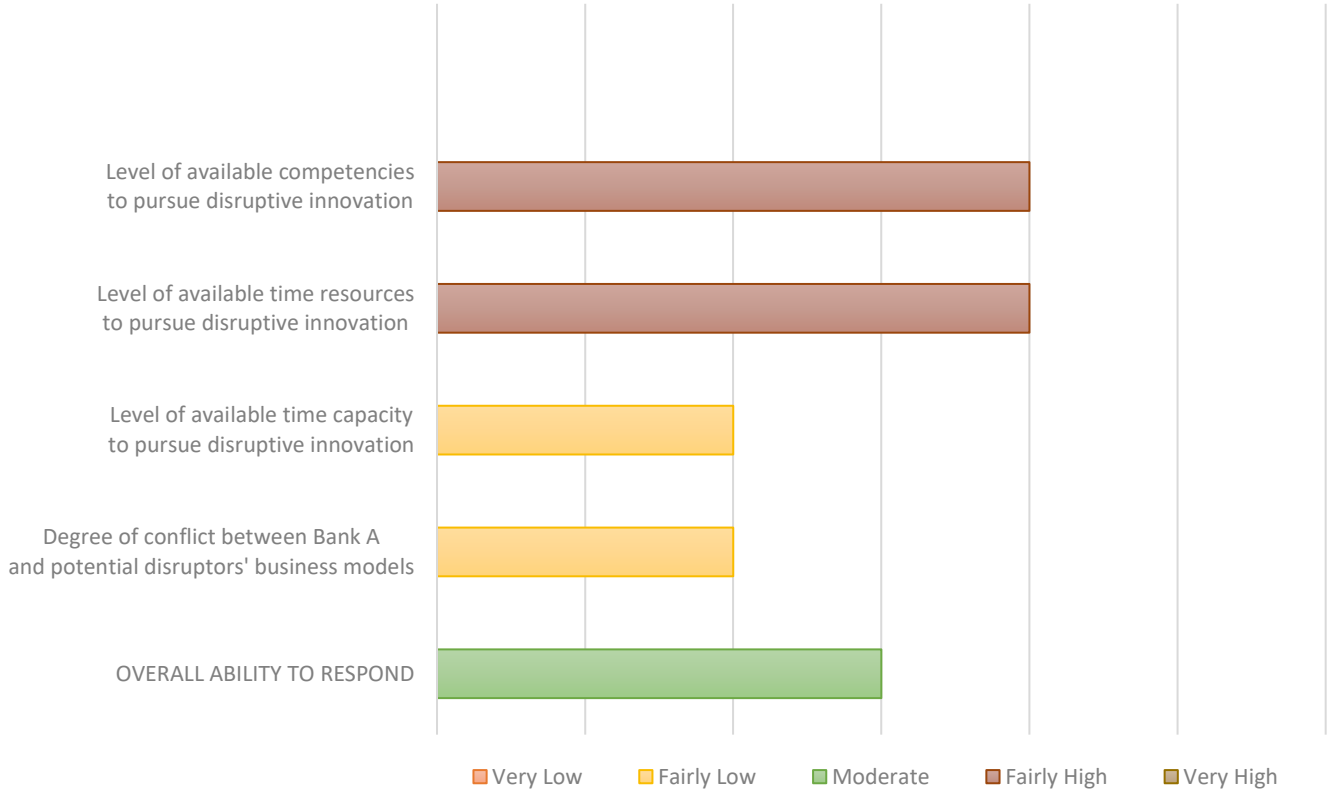

Figure 9: Influencing Factors & Bank A's Ability to Respond

Based on respondent feedback from Bank A, Bank A's overall ability to respond is Moderate. Respondents from Bank A consider their firm to have a 'fairly high' level of competencies in regard to what is needed to pursue disruptive innovation, as well as a 'fairly high' level of available resources for disruptive innovation. Respondents also believe that although Bank A has the necessary skills and financial resources, they do not have the available time to utilise them fully. One respondent in this regard says:

> *"We have really brilliant people working in the bank, with really great ideas in terms of products as well as how to manage disruption, but the BAU [business as usual] work takes priority in terms of time."*

Another respondent explains the clash between existing products and disruptive innovation getting priority and how this affects the firm's ability to respond:

> *"Really disruptive stuff is sometimes done separately in an innovation team because it requires resources and capacity outside of BAU [business as usual], but then it loses the underlying context of the business, like understanding the underlying needs of clients and how will the new product fit with other products. It then also struggles to fit into existing support and sales models and still needs to go through legal, compliance and regulatory requirements, which eventually slows it down. But in BAU it has no time priority, so we need to think of new models in which to work such as creating appetite within the existing business with dedicated capacity and resources and especially time to rapidly experiment. This requires innovation in the operating model."*

Based on respondent feedback, it is acknowledged that Bank A has an embedded innovation operating model where teams are tasked to support both sustaining and disruptive innovation. This is leading the organisation to potentially have a fragmented approach to innovation. Although there are available resources, sustaining innovations are taking priority in terms of time, and therefore, resources may be unexploited.

Respondents also say that Bank A's business model has a 'fairly high' degree of conflict with potential disruptors' business models, especially non-banks who are potential disruptors. This is because disruptors are seen to be generating revenue from controlling more of the value chain of banking and running leaner operations, while Bank A is getting revenue from traditional mechanisms like fees and

interest generated from deposits, which requires significant infrastructure. A respondent comments on this by saying:

> *"They want to bank the whole ecosystem and control the end-to-end process and their business model is set up like that, how they service, and support is set up like that too. By controlling more than one step in the process, they begin to have economies of scale in a different way than us. This allows them to be faster and cheaper."*

Another respondent mentions the following:

> *"They still also need sales, support, and marketing. They also sometimes charge fees, and so we wouldn't need to change absolutely everything to look like them but we're a large organisation and so change takes a long time even though we have the resources to be able to do it well and at scale because we operate at scale it's like turning the Titanic. Our size is an advantage and disadvantage."*

This point was mentioned by multiple respondents that, although Bank A has the competencies and resources, change in the organisation is slow due to its size and the number of internal processes an idea has to go through before it can be tested, developed, or commercialised. This equates to Bank A having a 'moderate' rather than 'high' ability to respond, as although they have the competencies and resources and are dedicating it to disruptive innovation, their lack of time and current business model is slowing down their ability to respond.

4.2.2.1.3 BANK A'S RESPONSE STRATEGIES

According to Bank A's respondents, the firm has responded by using two interlinked strategies: the first strategy being '*disrupting itself and the potential disruptor first,'* and the second being '*adopting the disruptive innovation during the disruption*.' Respondents say that their primary strategy is to be ahead of the disruption and to drive the basis of competition themselves; however, when they have not been able to do this and have acknowledged a potential shift in consumer demands driven by competitors, they have also capacitated themselves through their strategy to be able to replicate the disruptor before significant market share has been lost.

The primary drivers in terms of motivation and ability of why this strategy has been chosen have already been described, but respondents add that another reason they chose these two active strategies is that they are responding to changing customer demands, which needs a response regardless of disruptors; however, disruptors are prompting them to have to respond a lot faster. Bank A respondents mention the importance of staying relevant and finding new ways to generate revenue.

One respondent also mentions that they do not wait to begin disrupting their own business because they fully acknowledge how long change takes internally in terms of budget provisioning, compliance gateways and commercialisation. The earlier they start, the better, in order to overcome these internal delays. The respondent also notes that part of '*disrupting itself and the potential disruptor first'* is promoting a culture of experimentation and testing, allowing them to try ideas without risking impacting their existing business. They say:

> *"For us, we need to start doing the R&D very early on and include it in our strategy so that we can track it as part of a longer-term view. Clients are also sensitive to major changes because it's a sensitive industry. Our reputation, our banking licence, it's all on the line and so how we experiment and test faster without risking the business is an important part of how we work."*

Bank A's motivation to respond is 'fairly high', and their ability to respond is 'moderate'. In terms of disruptive innovation response strategy theory and the plotting of strategies proposed by Charitou & Markides (2003), this places Bank A nearest to the top and bottom right quadrants, which is in alignment with where the two theories of '*disrupting itself and the potential disruptor first*', and '*adopting the disruptive innovation during the disruption*' can be found.

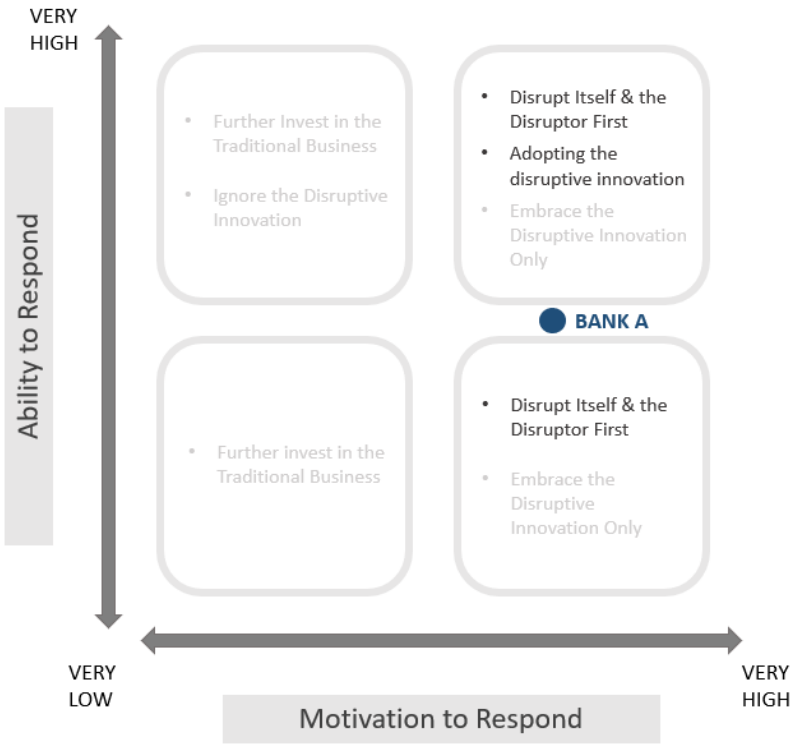

Figure 10: Bank A's Response Strategy plotted on Response Strategies by Charitou & Markides (2003)

4.2.2.2 BANK B

4.2.2.2.1 MOTIVATION TO RESPOND

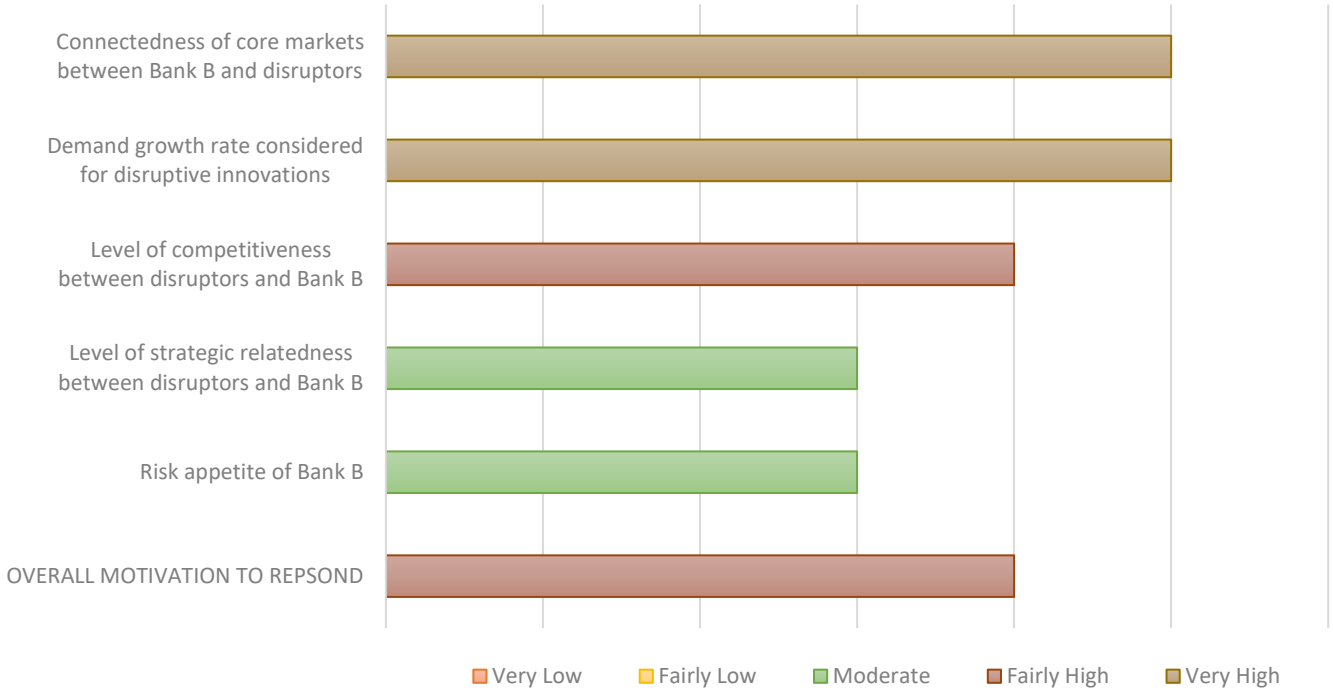

Figure 11: Influencing Factors & Bank B's Motivation to Respond

Based on respondent feedback from Bank B, Bank B's overall motivation to respond is Fairly High. Respondents note that the aforementioned disruptors are very connected to their core market and that the demand for the disruptive innovations are growing rapidly. This increases their motivation to respond as respondents mention the risk of not keeping up with changing demands and potentially being left behind. One interviewee gave examples of banks in the United States and the United Kingdom that were similarly incumbents with traditionally high market share but that have recently closed down due to their lack of response to disruptive innovation and relates this to Bank B as a potential path if it does not respond to disruptive innovation. Respondents also noted that the disruptors are only 'fairly' competitive with Bank B and that their strategic operations are only 'moderately' similar and do have differences. Respondents note that this is somewhat intentional on

Bank B's part as the behaviour of their existing client base differs from what newcomers, and especially digital banks, are targeting. One respondent's comment on this was:

> *"The risk of completely moving to digital is that a lot of our client base is still not digitally savvy and so require brick & mortar and physical human interactions. Not everyone can do online banking or cardless transactions yet."*

Bank B's respondents also note that the bank has a 'moderate' level of risk appetite for disruptive innovation. They note that this is because of banking regulations like Basel III and the risk obligations associated with it, as well as the approvals and monitoring processes imposed by the SARB for new products. However, all respondents note that Bank B's brand is also focused on safety and security, meaning their appetite for allowing risk into their existing business is purposefully low, as safety is a higher priority than innovation. An interviewee comments on this by saying:

> *"[Bank B] will often only take on a new product or service once it has been proven in the market because this means all the bugs and risks have been identified and solutioned for and we don't have to put our clients at the risk of a security breach. Safety is what our clients expect from us."*

A respondent notes that the bank is introducing more risk now than in previous years in order to keep up with customer demands but to a level that still allows it to prioritise safety.

The respondents all view disruptive innovation as an opportunity. They mention that disruptive innovation creates the chance to enter and capture new markets, but most importantly, it allows them not to get displaced in the industry. They believe that by embracing it they are creating longevity for their organisation.

To note, the respondents for Bank B had an average of 15 years of banking experience amongst them. The least years of experience being four years and the most being 22 years.

4.2.2.2.2 ABILITY TO RESPOND

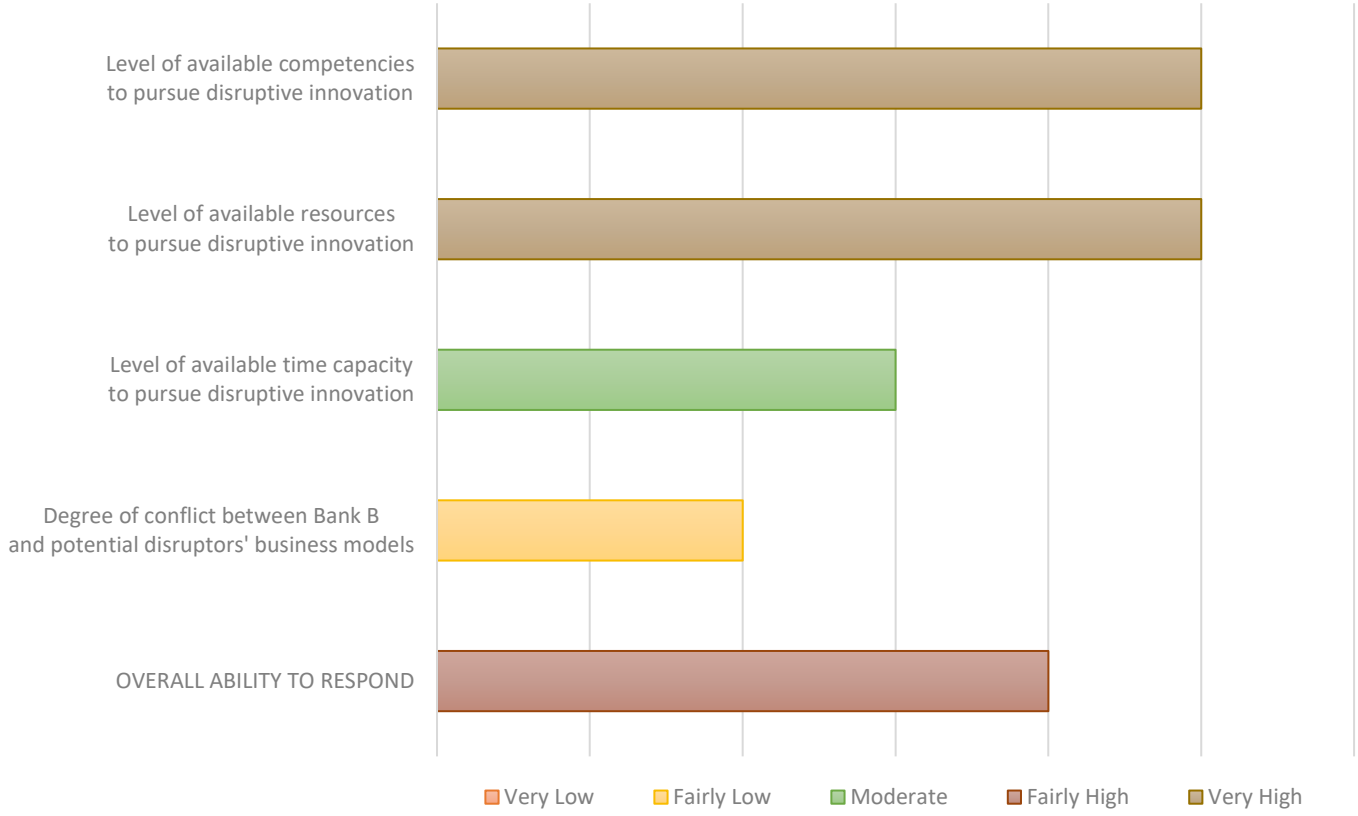

Figure 12: Influencing Factors & Bank B's Ability to Respond

Based on respondent feedback from Bank B, Bank B's overall ability to respond is Fairly High. Respondents from Bank B consider it to have a 'very high' level of competencies and resources to be able to pursue disruptive innovation. However, respondents also believe that the bank has a 'moderate' level of available time to use the competencies and resources to pursue disruption.

Bank B respondents also see their business model as having a 'fairly high' degree of conflict with potential disruptors' business models, which also inhibits their ability to respond. They attribute this conflict to their heavy reliance on physical branches not just to support their operations but as a source of revenue to cover the cost of operating. They compare their business model to digital banks that have more heavily invested in digital mechanisms to support their business model and mention that it would be difficult for bank B to replicate this without significant time and effort.

Bank B respondents also mention the evolution of their ability to respond in terms of their ways of work. One respondent shared this by saying:

> *"We recognised that we were quite slow in responding and this wasn't because we didn't have the resources or the right people, it was more that we didn't have the right project management processes. Disruptors have been using agile for a long time, but we only started quite recently and we're still in the process of making our departments like legal and risk more agile."*

The one inhibitor that all respondents from Bank B mentioned is the support of legacy systems, which form part of their existing products and services, and that still takes up a lot of time and resources. A respondent noted:

> *"Our legacy systems, some of them were built in the 70s and so a lot them can't just be switched off because we wouldn't know what would happen if we just switched them off. What would be the repercussions? There's a lot of risk involved and so we end up supporting the old with the new or having large-scale decommissioning projects that take up a lot of time."*

Bank B considers themselves more able to respond to disruptive innovation now than in the recent past, but believes that there is still room for improvement.

4.2.2.2.3 BANK B'S RESPONSE STRATEGIES

According to Bank B's respondents, the firm has responded by using the strategy of '*adopting the disruptive innovation during the disruption*.' This strategy of replicating the disruptors before the basis of competition has changed is chosen by Bank B for the reasons described under motivations and abilities to respond, but respondents also add that this has been a choice due to some learnings in the past whereby they were slow to respond after customer demands had already changed and it created challenges in terms of retaining and acquiring clients. However, they still choose this approach rather than '*disrupting itself & the disruptor first*', as they are an organisation that values stability and safety and so will quickly adopt proven innovation before the basis of competition has changed but habitually will not try driving disruption themselves due to the potential risk.

Bank B's motivation to respond is 'fairly high', and their ability to respond is 'fairly high'. In terms of disruptive innovation response strategy theory and the plotting of strategies proposed by Charitou & Markides (2003), this places Bank B nearest to the top right quadrant, which is in alignment with where the theory of '*adopting the disruptive innovation during the disruption*' can be found.

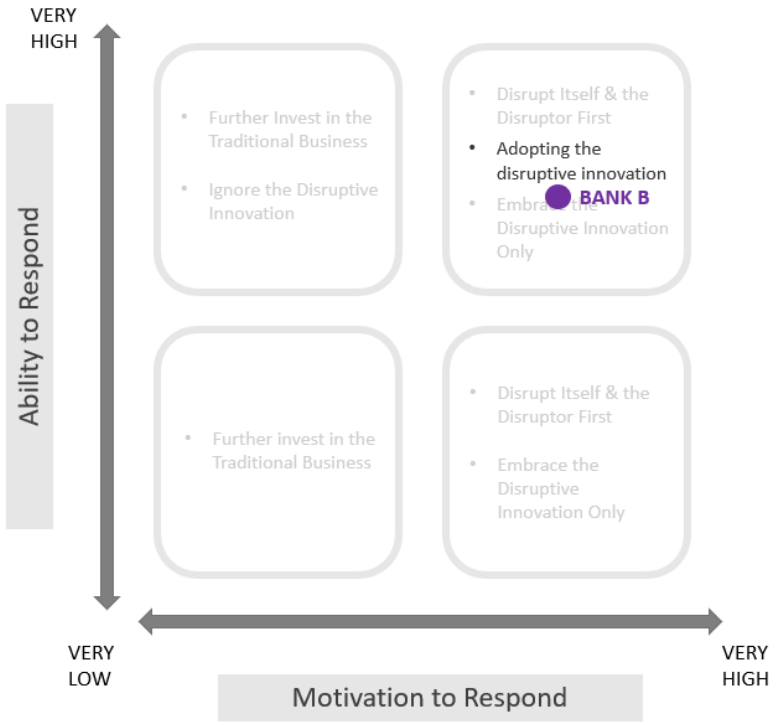

Figure 13: Bank B's Response Strategy plotted on Response Strategies by Charitou & Markides (2003)

4.2.2.3 BANK C

4.2.2.3.1 MOTIVATION TO RESPOND

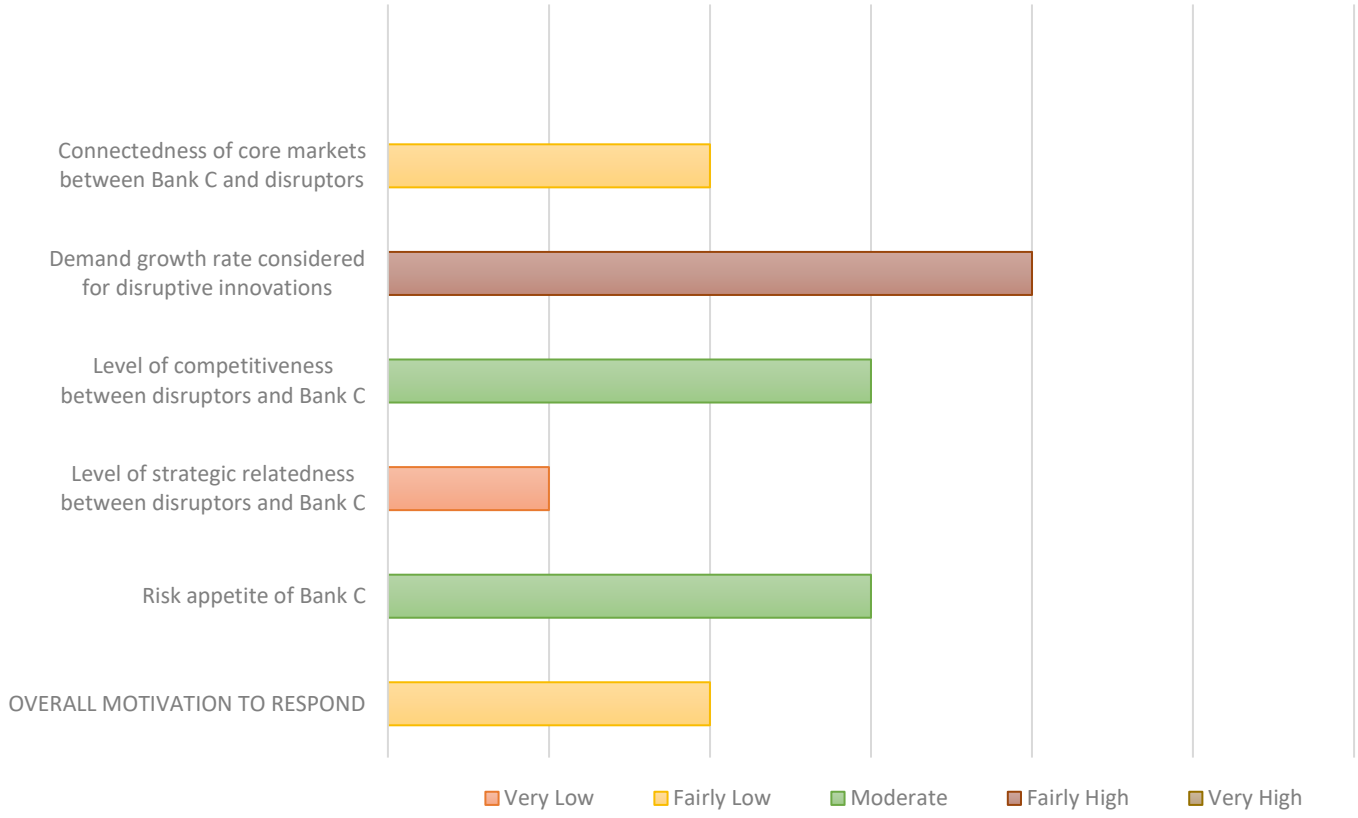

Figure 14: Influencing Factors & Bank C's Motivation to Respond

Based on respondent feedback from Bank C, Bank C's overall motivation to respond is Fairly Low. Bank C's respondents have perceived that the potential disruptors within the banking industry of South Africa are 'fairly' disconnected to their core market although demand is growing for the disruptive innovations. The reason for this from respondents is that Bank C specifically targets a niche group of customers that are considered high and ultra-high net worth individuals, with different consumer needs than the banking consumer base at large. This is also why respondents say that the disruptors are only 'fairly' competitive with Bank C, as although the disruptors are providing a source of ideas to Bank C in terms of product enhancements, they are still not targeting the same market, and Bank C is still retaining much of their market share, even in the retail sector. Respondents also note that the

strategic relatedness to the disruptors is 'very low', which they describe as meaning that it is not a default decision to copy disruptors as the strategic goals of the incumbent in their high-end segment is very different to that of the disruptors that are typically starting in the low end of the market. One respondent noted:

> *"Our operating model and strategy are so different. We emphasise the benefits of a human touchpoint and they emphasise the benefit of going digital. Both have its merits, but if we had to replicate them exactly, it would be going against our value propositions."*

Bank C has a 'moderate' risk appetite, and respondents' partly credit this to banking regulations that limit their risk-taking ability due to prescribed capital and liquidity requirements as well as compliance guidelines; however, they moreover emphasise that Bank C is known to be purposefully conservative. This is because they prioritise preserving their existing niche market. Their offering to clients is stability and reliability rather than being at the forefront of technology. An interviewee even adds:

> *"Our clients value consistency. They don't want too much change or to have to do everything themselves. Our offering involves personalised human interaction to complete their banking needs. Yes, we have online channels, but this is not the crux of our offering."*

Respondents also note that this customer need may also be because they focus on high-net-worth clients who are more sensitive to change and instead value consistency because the amounts they hold with Bank C are much more substantial than a typical retail banking client.

All respondents from Bank C view disruptive innovation as an opportunity. The reason for this is that they see an opportunity to identify and enter new markets as well as to keep up with existing customer demands. Respondents mentioned that they recognise that a new generation of high-net-worth clients is entering the market that has very different needs to their existing client base because they are considered 'digitally native' (a digital native is a person who grew up in the information age with the presence of digital technology), so Bank C is open to innovation in order to retain its numbers and create value for its niche market. They also recognise that if they do not, they could potentially be displaced in the market in the long run, with one respondent saying:

> *"People are not necessarily looking for banks these days; they're looking for banking services, and this may not even be provided by a bank in the future"*

To note, the respondents for Bank C had an average of 8,75 years of banking experience amongst them. The least years of experience being five years, and the most being 12. This bank had the smallest range in terms of years of experience among their respondents.

4.2.2.3.2 ABILITY TO RESPOND

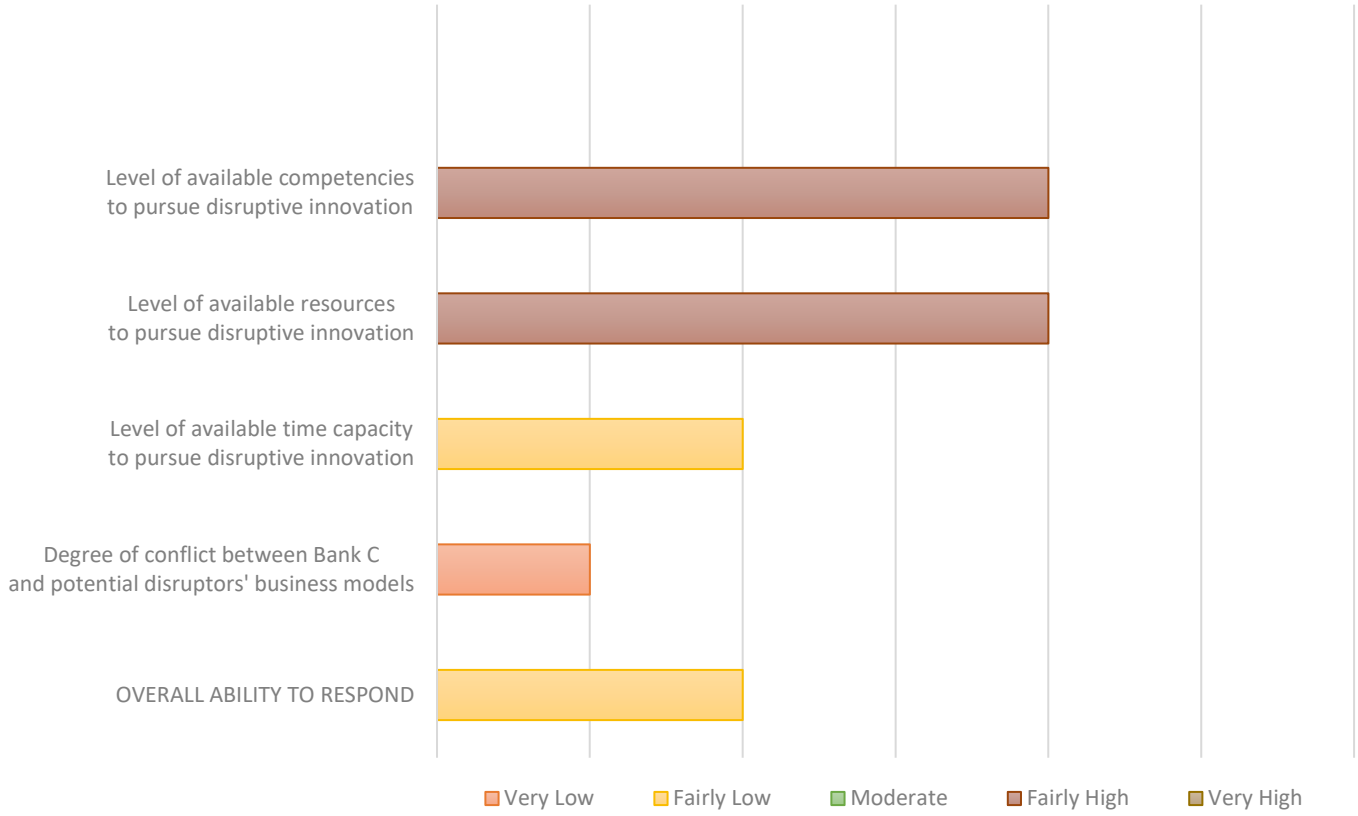

Figure 15: Influencing Factors & Bank C's Ability to Respond

Based on respondent feedback from Bank C, Bank C's overall ability to respond is Fairly Low. Respondents from Bank C note that their firm has a 'fairly high' level of competencies and resources available for disruptive innovation but do not allocate much time to it by choice. They believe they target a very different segment than disruptors, a segment that values stability more than any other mix of potential benefits. They instead focus their time on incremental innovation, with one respondent noting that:

"We have regular reviews on competitor products and try to forecast the impact that it's going to have in the market. We also observe disruption from economic factors like interest rate changes and try to minimise the impact of that. [Bank C's] risk model is conservative, they're not trying to be first movers, they're observing others and learning from them. They want their customers to be confident that changes are intentional and will benefit them."

Bank C respondents openly acknowledge that the bank is not trying to be a disruptor but instead focus is on appeasing their high-end market with tried and tested methods rather than risking a potential failure that would impact their clients.

Respondents believe Bank C's business model has a 'very high' degree of conflict with potential disruptors' business models, again because they are focusing on different segments, with disruptors primarily targeting the lower end of the market that is underserved in banking. Bank C respondents note that in terms of the number of clients, they have significantly fewer, so they focus on high-value transactions, loans, and deposits rather than volumes like many disruptors do, and so require a different business model to be able to support this.

These factors contribute to Bank C having a 'low' ability to respond to disruption, with the lack of development of that ability being largely intentional as their focus is on value-adding sustaining innovations rather than disruption that may introduce risk of retention within their segment.

4.2.2.3.3 BANK C'S RESPONSE STRATEGIES

According to Bank C's respondents, the firm has responded by using two strategies of '*further investing in the traditional business*' and *'catching up to the mainstream market post the disruption.'* Bank C's respondents note that their market is not the mainstream market and so they purposefully do not replicate the disruptor during the disruption. This is supported by their motivations and abilities to respond, described in the two previous sections, but additionally, they add that there is less competition in the market they exist in, and so although banking as a whole may be at a further stage of disruption, within their niche market there is less urgency. This allows them to observe what is occurring in the overall market and pick the attributes that serve their high-end niche market, post the disruption of the mainstream market, in order to stay relevant. Bank C respondents were also asked

why they did not choose '*moving to the higher end of the market*' as a response strategy. They responded by saying that this was not a response strategy, that instead it is their core business strategy, and their bank would be at the high end of the market regardless of disruptors.

Bank C's motivation to respond is 'fairly low', and their ability to respond is 'fairly low'. In terms of disruptive innovation response strategy theory and the plotting of strategies proposed by Charitou & Markides (2003), this places Bank C nearest to the bottom left quadrant, which is in alignment with where the theory of *'further investing in the traditional business*' can be found.

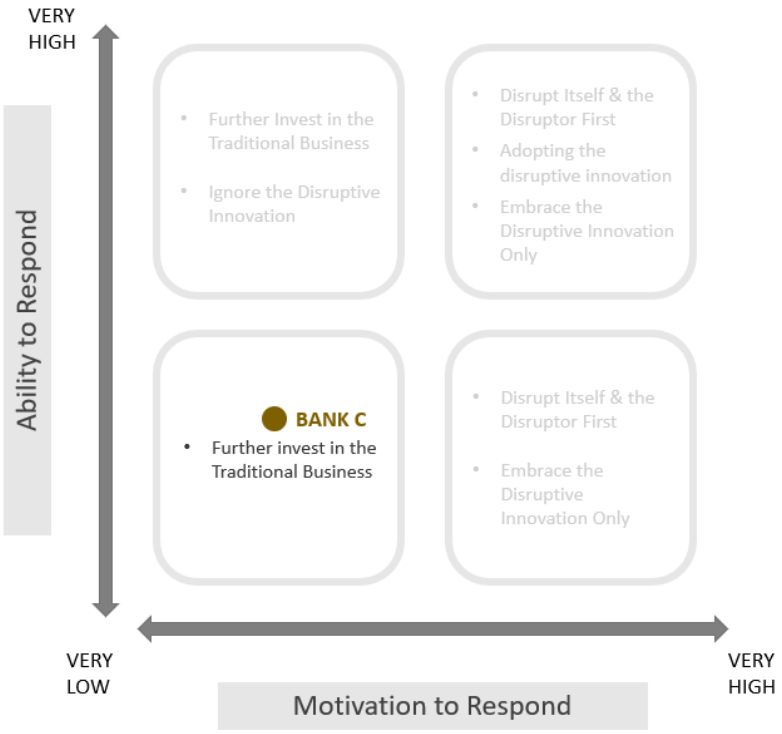

Figure 16: Bank C's Response Strategy plotted on Response Strategies by Charitou & Markides (2003)

4.2.2.4 BANK D

4.2.2.4.1 MOTIVATION TO RESPOND

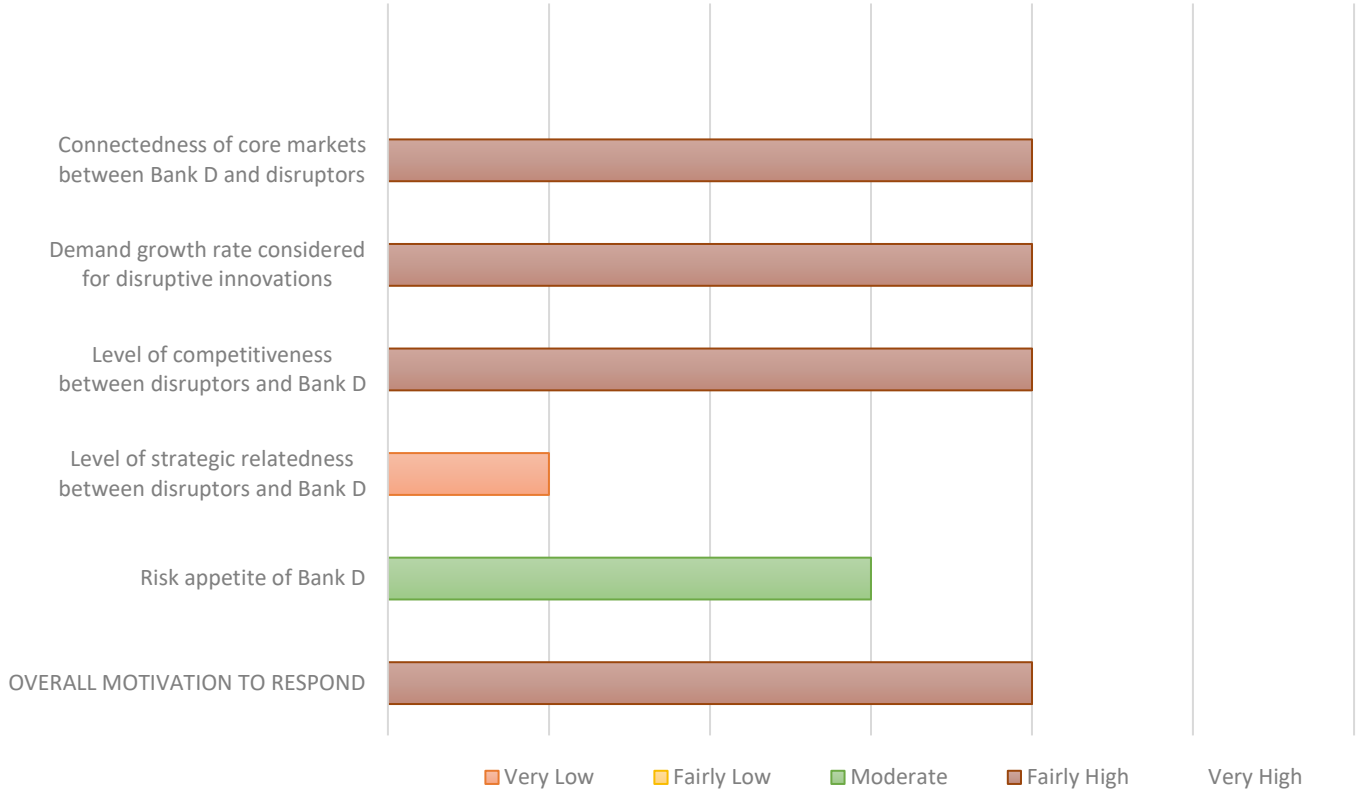

Figure 17: Influencing Factors & Bank D's Motivation to Respond

Based on respondent feedback from Bank D, Bank D's overall motivation to respond is Fairly High. Respondents from Bank D believe that the potential disruptors are 'fairly' connected to their core market and that demand for the disruptive innovations is growing 'fairly' fast. They also believe that the disruptors are 'fairly' competitive with the firm. These are all motivators for Bank D to respond to the disruptive innovation; however, when it comes to the strategic relatedness of disruptors compared to Bank D, respondents believe they are very different, which detracts from their motivation to respond actively. The reasons for these responses are that although respondents recognise the similarities between the disruptors and the bank in terms of market, demand and competition, respondents also note that the operations of running a business based on disruptive innovation are very different from what they currently have at Bank D. Their strategy includes the supporting of their existing offerings and that this is not going to change for a long time. They mention that currently,

innovation is a separate business area and that they also have different roles and titles for those in innovation. However, they believe that to be a disruptor themselves, they would require a cultural change where innovation is embedded into all their operations, including how they reward and recognise colleagues. They note that this is not currently the case, as the innovation business areas do not have the mandate to do anything in the existing business areas, and this impacts their motivation to respond.

Respondents from Bank D also note that they have had recent outages of their core banking systems, which has impacted their motivation to invest in innovation, as maintaining existing systems is taking up their time and capacity. One respondent commented on this by saying:

> *"When basic things are breaking, disruption becomes a secondary concern. When things are going well, then effort can go towards R&D and experimentation."*

This has impacted Bank D's risk appetite, which respondents say is currently 'moderate' as their main priority is stabilising their existing systems. They also attribute a moderate risk appetite to banking regulation, which they mention has inhibited them from moving at the same pace as fintechs, who have much lighter risk and compliance obligations.

Two respondents from Bank D also mention the reality of being disruptive compared to a firm saying they are disruptive and that their bank struggles with this, with Bank D having a 'pseudo personality.' One respondent said the following in this regard:

> *"A lot of it is just perception, for example, a bank thinking their innovative and positioning themselves like that to the public but whether they are in reality is different. Also, with regards to targeting the unbanked with mobile banking, you have to look at the environment, yes people have phones but can they afford airtime? We also need to consider why we still have such long queues at month end. Banks need to look at innovation in terms of adoption and not just pushing out new changes."*

A potential solution that Bank D respondents mention is that they look to incubators as partners, as their ideas are more radical, which overcomes the mindset constraints within the incumbent. They also look towards fintechs with existing proven solutions, and so this strategy makes them more motivated to respond than relying on their own operations only. It also allows them to take advantage of their similarities in terms of core market targeted and competitiveness with disruptors, as this now can be

transformed into reasons to work together. One respondent sums it up by saying, *"All competitors are potential partners."*

Overall, all respondents viewed disruptive innovation as an opportunity. The primary reason for this from respondents is that they believe disruptive innovation is a chance to make a positive impact and grow its brand within the jurisdictions in which Bank D operates. An interviewee in this regard says:

> *"Even when a disruptor is already out there and making significant progress in the market, it's an opportunity for [Bank D] to partner and grow its presence, which is a positive thing"*

To note, the respondents for Bank D had an average of 15 years of banking experience amongst them. With the least years of experience being ten and the most being 19.

4.2.2.4.2 ABILITY TO RESPOND

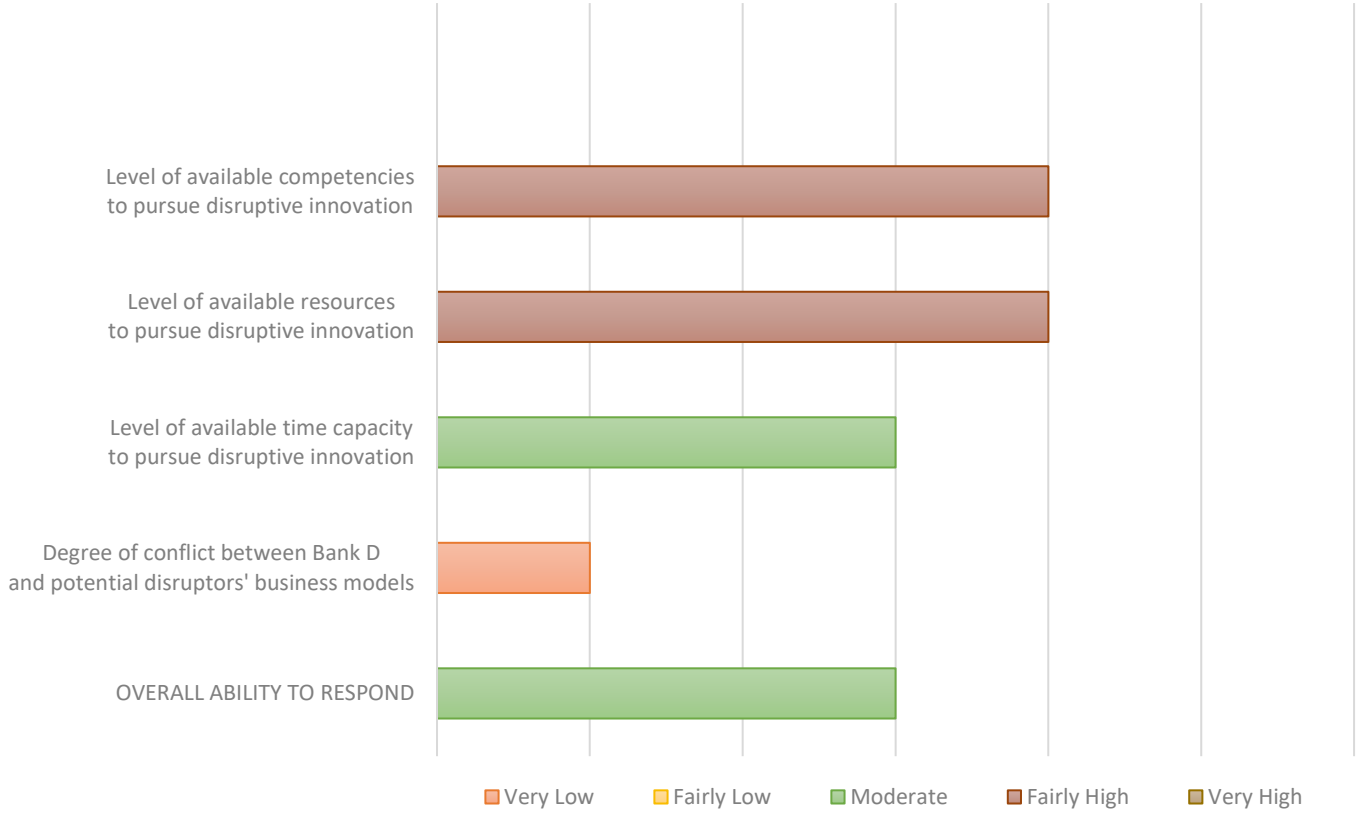

Figure 18: Influencing Factors & Bank D's Ability to Respond

Based on respondent feedback from Bank D, Bank D's overall ability to respond is Moderate. Bank D respondents note that the organisation has a 'fairly high' level of competencies and resources to contribute towards disruptive innovation. Respondents also note that they are actively contributing these skills and financial resources to disruptive innovation; however, internally they do not necessarily have the available time capacity to build the capability to do it themselves, so as a rule, they always look to gain a partner who not only has the available time capacity but also the right competencies to pursue the innovation together with Bank D.

Respondents also note that Bank D's business model has a 'very high' degree of conflict with potential disruptors' business models. They attribute the primary reason for this being that they have legacy systems to support that operationally increase their costs, and so they have to currently rely on mechanisms such as fees to cover these costs. One respondent notes the differences by saying:

> *"Newcomers have it easier because they're not having to move their clients from one system to the other and having to support the cost of that move. They're also not having to dedicate time and resources when old systems reach a threshold of scale and stability. As a long-standing bank this is what we have to deal with, and this is why we look to partners to supplement our innovation needs."*

Bank D respondents note their 'moderate' ability to respond but strongly stress their conscious decision to partner with existing firms who are often already considered potential disruptors in order to assist them in taking an active response to disruptive innovation.

4.2.2.4.3 BANK D'S RESPONSE STRATEGIES

According to Bank D's respondents, the firm has responded by using two strategies: the first strategy being '*disrupting itself and the potential disruptor first*', and the second being '*adopting the disruptive innovation during the disruption*'. Bank D aims to do both of these using its model of partnerships, in which it identifies start-ups and fintechs that have credible ideas or an existing product or service with potential and then supports the smaller firm with its resources, credibility and scale. The reasons for these in terms of motivations and abilities have been outlined previously; however, respondents also add that lessons learnt in terms of failed projects have also guided them towards these strategies, such

as not identifying local customer demands and regulations in new jurisdictions until it was too late and significant investments had already been made, which could have been overcome if local partners were found and leveraged. Respondents from Bank D also note how partners have allowed them to overcome some regulation obligations by operating through the partner, and the model has allowed them to overcome internal bureaucracy that comes with doing it themselves, such that they now move faster in their responses. One respondent describes their strategy by saying:

> *"We are a platform bank because we are allowing the disruptions to come onto our platform and be part of our platform and connect to us in various ways that we think are useful to both them and to us. Both sides get benefits out of being part of that platform, such as it won't take us as many years to develop the platform and when you allow the disciplines to come in and add to the platform, then you're learning at the same time from them on how quickly they can adapt and they also learn from you on some of the things in terms of banking and scaling. Partnerships is how we adapt."*

Respondents from Bank D also note that driving continuous growth for shareholders is a significant driver of them taking an active approach and wanting to respond faster in the market. They note some risks of their partnership model being that they potentially forgo the development of innovation competencies and culture within their business by relying so heavily on partners, as well as the potential risk of partners wanting to continue without Bank D once they have grown to a self-sufficient size; however, Bank D accepts these risks in order to realise a return on investment more quickly.

Bank D's motivation to respond is 'fairly high', and their ability to respond is 'moderate'. In terms of Disruptive Innovation Response Strategy Theory and the plotting of strategies proposed by Charitou & Markides (2003), this places Bank D between the top and bottom right quadrants, which is in alignment with where the strategy of '*disrupting itself and the potential disruptor first'*, and the second strategy of '*adopting the disruptive innovation during the disruption*' can be found according to the theory.

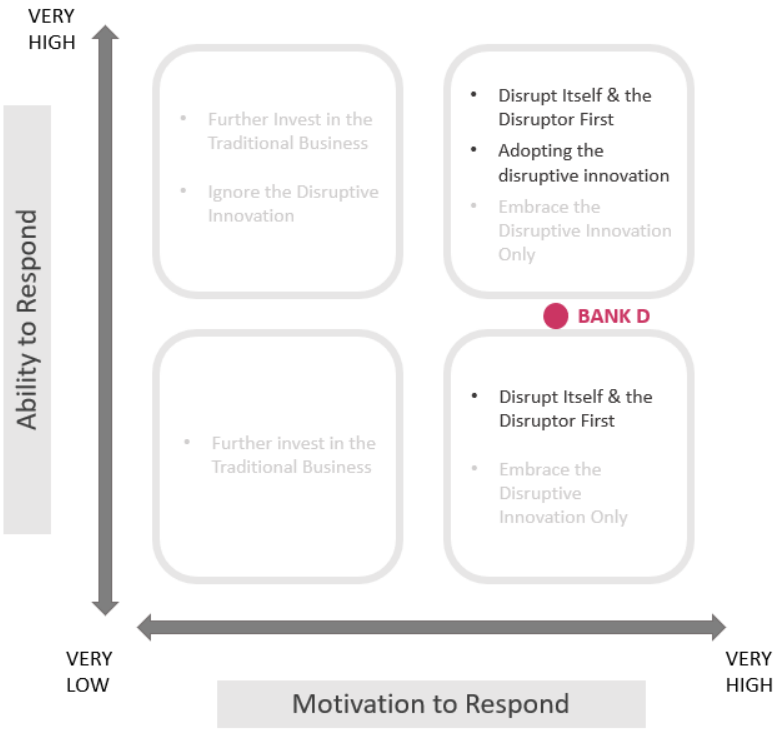

Figure 19: Bank D's Response Strategy plotted on Response Strategies by Charitou & Markides (2003)

4.2.2.5 BANK E

4.2.2.5.1. MOTIVATION TO RESPOND

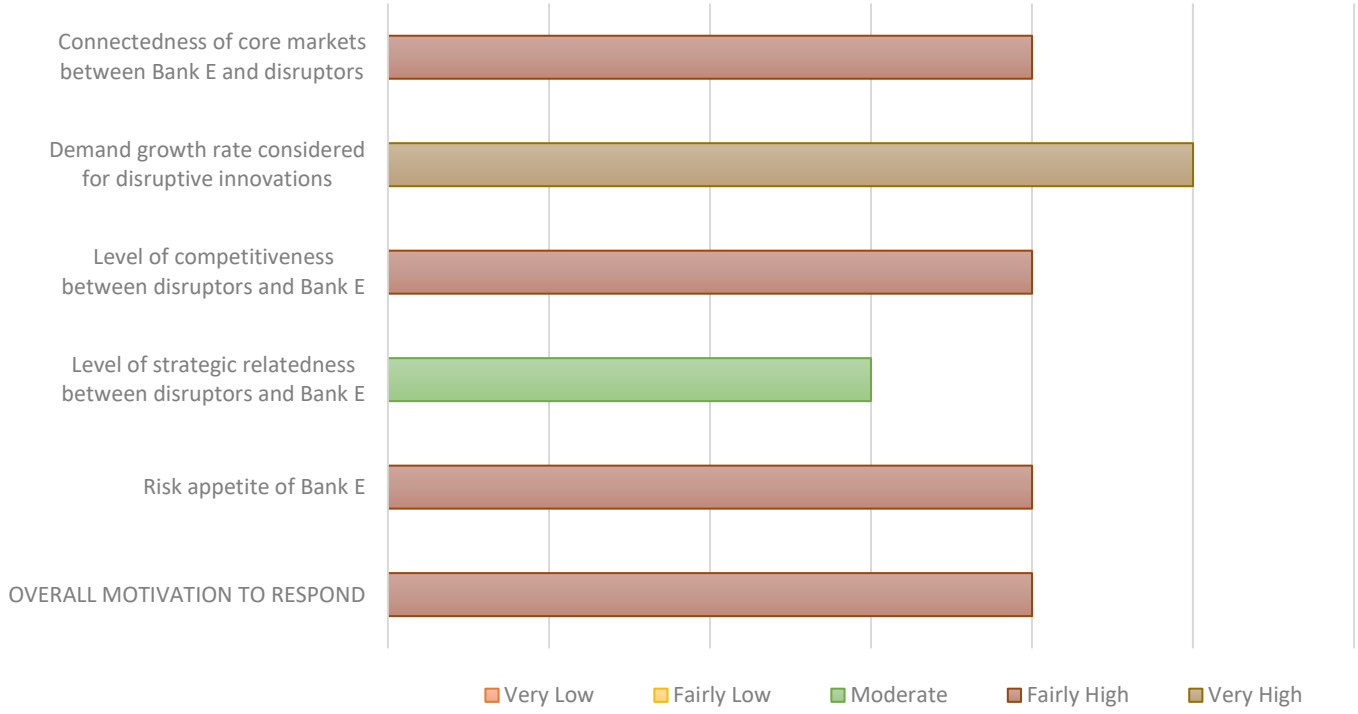

Figure 20: Influencing Factors & Bank E's Motivation to Respond

Based on respondent feedback from Bank E, Bank E's overall motivation to respond is Fairly High. Respondents say that the potential disruptors are 'fairly' connected to their core market, that the disruptor is 'fairly' competitive with them and that the demand for the disruptive innovations is rapidly growing. All these perceptions by Bank E add to the bank taking an active response to the threat of disruption. Some respondents in Bank E note that fintechs and other payment companies still rely on banks for the clearing and settlement of transactions or to hedge their risk. They note that this reliance on incumbents is why some disruptors cannot be considered 'very' connected or competitive just yet and that it has allowed Bank E to take a more measured response to the disruption.

Bank E is the only bank to consider itself having a 'high' risk appetite, compared to the others that consider themselves having a 'moderate' risk appetite. The primary reason for this is because Bank E has a defined strategy of using vendors as their primary source of innovation. This motivates them to take on more risk as the vendor is the one who takes on the majority of the risk in the collaboration,

and Bank E removes some of their risk by choosing vendors with an international record of accomplishment before incorporating them into their South African business.

Bank E respondents diverged in terms of their viewpoint on disruptive innovation being a threat or opportunity. Half of the respondents viewed it as an opportunity, and the other half said 'both'. The reasons provided for it being an opportunity were that it allows for new disciplines and skills to enter the banking industry and for offerings to be enriched in this way. It also allows firms to share clients and not only fight for market share. One respondent describes this point by saying:

> *"This type of innovation allows clients to be multi-banked. They can pick and choose the services they want from each of us and create an offering that works for them. We can now share clients rather than always be fighting for them and for us that means we don't have to be a jack of all trades."*

In terms of why some respondents said 'both' and highlighted that it may also be a threat, is because they believe that some areas of the bank are currently at a greater risk of losing market share and need to start developing more in-house skills to be able to move faster in their response.

To note, the respondents for Bank E had an average of 17.5 years of banking experience among them, with the least years of experience being seven and the most being 25. This bank had the largest range in terms of years of experience among their respondents.

4.2.2.5.2 ABILITY TO RESPOND

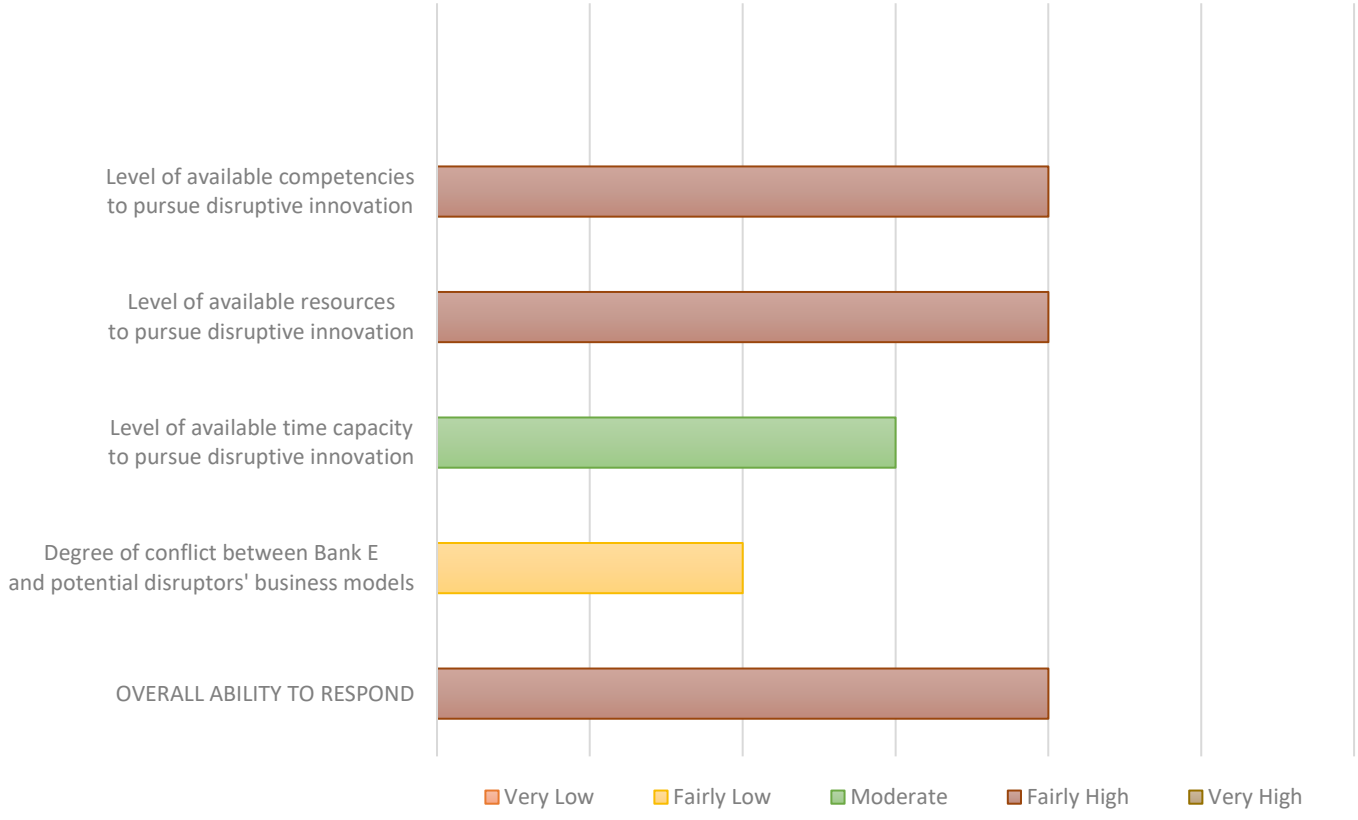

Figure 21: Influencing Factors & Bank E's Ability to Respond

Based on respondent feedback from Bank E, Bank E's overall ability to respond is Fairly High. Bank E respondents say that their firm has a 'fairly high' level of competencies within their staff members to pursue disruptive innovation and a 'fairly high' level of available resources but a 'moderate' level of time capacity, which then depresses their ability to respond actively. Respondents attribute this to internal processes in which ideas and products need to go through before getting into the market. One respondent explains it by saying:

> *"Compliance and risk management are part of everything we do being such a big bank. We have regulations we need to abide by, and so we've created internal processes to make sure we are in line with regulation frameworks, but these processes often stop competencies from being fully used. There's also a lot of layers to go through before decisions can be taken, which slows innovation down."*

The respondents add that the layers of approval also come from the many layers of management within the bank, which delays approvals, and that more accountability needs to be given to individuals to make decisions. Some respondents also refer to the risk-taking ability of colleagues in terms of hindering their ability to respond as they say that this is a mindset change that needs to happen amongst employees and not something that can happen by capacitating teams with more time and resources. A respondent comments on this by saying:

> *"People don't necessarily want to carry projects that are going to take a long time to materialise. The department was created five years ago, but up until now innovation was more theoretical, but the true learning actually came from leading a platform journey. From practice we learnt what it means to be disruptive, and it also took that long to actually have a cultural change."*

Respondents also note that Bank E's business model has a 'very high' degree of conflict with potential disruptors' business models, again limiting their ability to respond due to how they are set up to support their existing business. However, they acknowledge this lack of ability and look towards vendors to assist them in responding, and instead use their competencies and resources internally to integrate the vendor product with their own value propositions.

4.2.2.5.3 BANK E'S RESPONSE STRATEGIES

According to Bank E's respondents, the firm has responded by using two strategies: the first strategy being '*adopting the disruptive innovation during the disruption*' and the second being *'moving to the higher end of the market'*. These two strategies run in parallel to one another, with the incumbent adopting the disruptive innovation as it observes changing customer behaviour, but it also makes sure that its highest value clients are given their sustaining innovation demands in order to retain them and so also purposefully overshoot performance on traditional attributes even when there is the threat of disruption. Two respondents also mentioned '*disrupt itself and the disruptor first*', but this did not reflect as a mode amongst all responses. It being mentioned may indicate it being an upcoming strategy of the bank.

Bank E respondents also note the bank's preference to work with vendors as a way to adopt the disruptive innovation, but that working with vendors still requires integration into the bank, which can cause time delays. They note that vendors also have little flexibility in terms of unique features, and so there is still dependency for Bank E to have skills and technical development capacity to make things fit for purpose.

Bank E's motivation to respond is 'fairly high', and their ability to respond is 'fairly high'. In terms of disruptive innovation response strategy theory and the plotting of strategies proposed by Charitou & Markides (2003), this places Bank E nearest to the top right quadrant, which is where one of their strategies, **'***adopting the disruptive innovation*', can be found according to the theory.

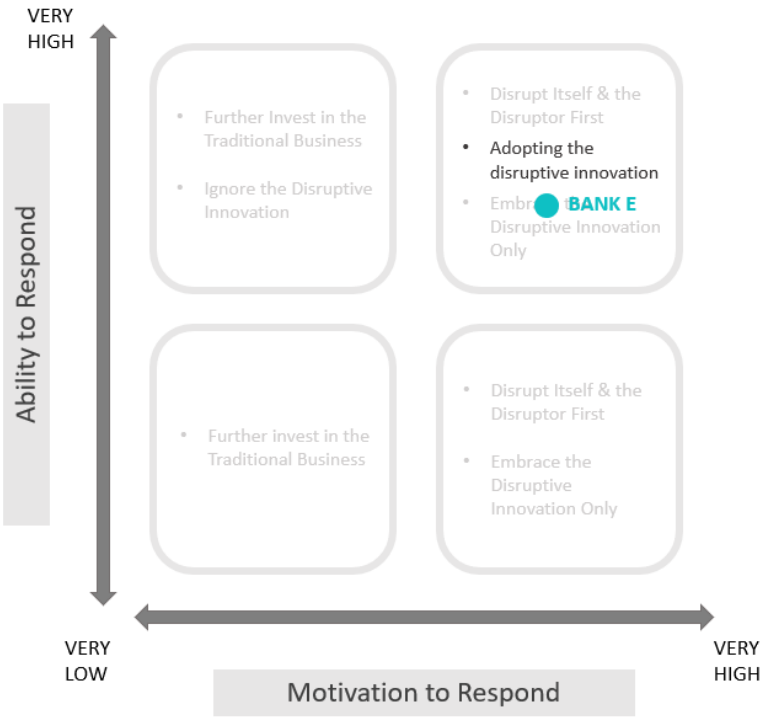

Figure 22: Bank E's Response Strategy plotted on Response Strategies by Charitou & Markides (2003)

4.2.2.6 INCUMBENT INDUSTRY PROFILE

4.2.2.6.1. MOTIVATION TO RESPOND

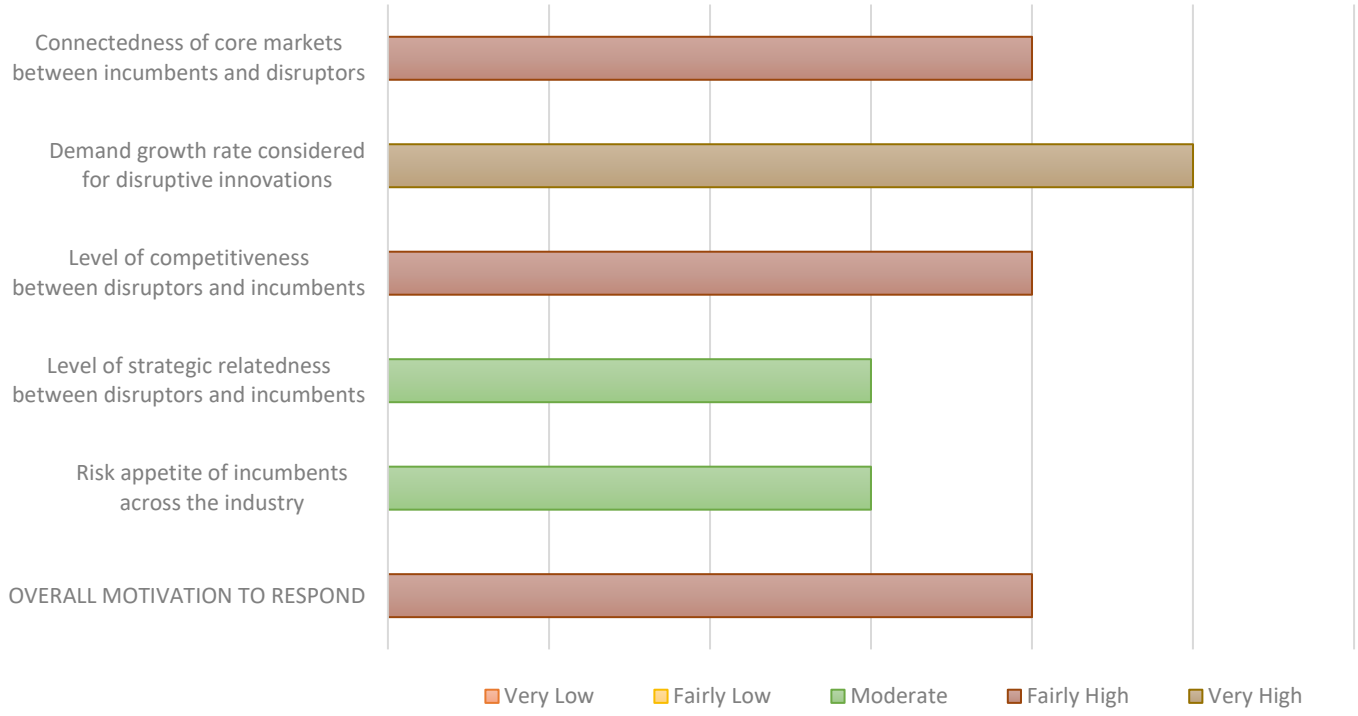

Figure 23: Influencing Factors & the Incumbent Banking Industry's Motivation to Respond

When looking at all five banks in combination and trying to profile the industry as a whole, it is seen that incumbents within the South African banking industry have a Fairly High motivation to respond. This is through looking at all respondent responses together and identifying the mode (the most frequent response) across all respondents rather than having a bank-specific view.

Looking at the interview data there were common themes across the respondents and across the banks in terms of motivators to respond. Below are the themes that were mentioned by at least four respondents across two or more banks:

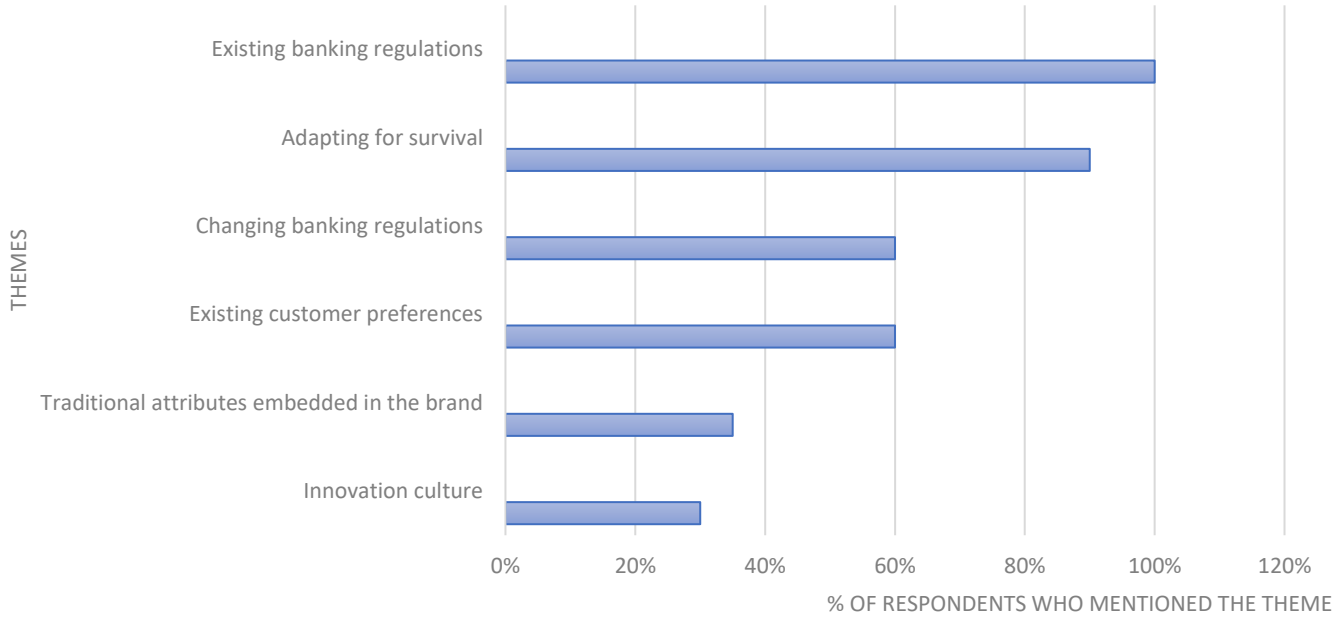

Figure 24: Common Themes Across All Respondents for Motivation to Respond

- **Existing Banking Regulation:** All respondents spoke about existing regulation in terms of Basel III and additional rules and guidelines that come with holding a banking licence, which is upheld by the South African Reserve Bank (SARB) and the Financial Sector Conduct Authority (FSCA). Respondents describe this regulation as necessary within the banking industry but a detractor to incumbents leading disruption due to the various risk and approval guidelines that need to be followed for new products, services, and major changes to operations within banks. This finding corresponds to findings in the secondary data regarding the comprehensiveness of banking regulations, and the primary data indicates that it indeed has an impact on overall incumbent motivation to respond, as when new ideas are produced, they need to pass various approvals to ensure that they fall within the regulatory framework before they can be commercialised. Respondents describe this to be time-consuming and may lead to new ideas being rejected even if they are considered disruptive or have already taken up resources. This detracts from incumbents' motivation to respond.
- **Adapting for Survival:** 18 out of the 20 respondents mentioned that part of the motivation to respond is that they will be displaced in the market if they do not. Respondents mention changes in

customer preferences driven by technology evolutions as well as new preferences introduced through disruptor products and services. The significant changes in the industry in terms of technology and customer preferences are highlighted in the secondary data findings in section 4.1.1. Within the primary data, this finding is supported as incumbents are already seen to be adapting based on the new technology available and changing customer demands. Respondents across the banks also say that to retain and grow their customer base, they need to acknowledge what potential disruptors are doing and adapt; otherwise, risk becoming redundant. This increases incumbent motivation within the industry to respond.

- **Changing Banking Regulations:** 12 respondents mentioned the existing changes in regulation in terms of regulation to digital assets and the licensing of firms who manage digital assets, but more significantly, respondents mentioned the potential changes in regulation in terms of mandates to clear and settle transactions, and that this signifies a change within the industry where the framework starts to look towards activity-based regulation rather than the regulation based on the type of entity. Currently, incumbent banks, together with the SARB, are the primary actors of clearing and settling, which makes other industry participants still reliant on banks. Respondents are aware of potential changes to regulation that may remove the barrier to entry in terms of who is able to clear and settle, and which is expected to reduce incumbents' competitive advantage. This finding is supported by the secondary data, and the changes to regulations are described in detail in section 4.1.1.1. Some respondents mention how this regulation has historically given incumbents more freedom to respond at their own pace, but now there is greater urgency to improve their value propositions. One respondent's comment about responding to the reduction in the barriers to entry was:

  > *"The offering then needs to be more enticing such as instant and cheaper payments, which will require new infrastructure and abandoning of the traditional infrastructure. We will also need to give customers new features and benefits, without them having to register or incur costs, so that the value of remaining with us is high and they don't need to consider alternatives. We will need to have a dominant product set that is reliable. All of this will require fast iterations to keep staying at the forefront of what clients need."*

  Existing and potential changes in banking regulation increase incumbent motivation to respond to disruptive innovation.

- **Existing Customer Preferences:** 12 of the 20 respondents mentioned that a reason their banks often do not respond immediately to the threat of disruption or replicate the disruptor is because of their existing customers and serving their demands and general activity. Respondents mention that existing customer preferences often clash with the mix of attributes that disruptors offer, so replicating them would mean potentially detracting some of their existing clients. This lowers incumbent motivation to actively respond as they would rather wait until the new mix of attributes generates more demand by their mainstream market. This is coupled with some respondents commenting on their banks not having the ability to personalise offerings enough to be able to target both the niche and mainstream markets, and so it reduces their motivation to respond to new preferences too early.
- **Traditional Attributes Embedded in the Brand:** Related to the theme of existing customer preferences, seven respondents also mentioned how their existing customers choose their bank specifically for attributes such as stability and consistency, which often is not associated with disruptive innovation. This means that by actively engaging in disruptive innovation, they are going against their core strategy. Therefore, they are motivated to take a passive approach to disruption in order to drive retention and serve their niche markets.
- **Innovation Culture:** Six respondents touched on culture within their organisation and described the reality of their firm having innovation as part of their core strategy and objectives but it not feeding into the culture in terms of the mindset needed for disruption as well as the reward and recognition mechanisms to motivate employees towards disruptive innovation initiatives. This disconnectedness between culture and innovation objectives has a negative effect towards incumbent motivation to respond to disruptive innovation.

Other industry observations in terms of incumbents are that all incumbents consider that the demand for disruptive innovation is growing ‘fairly’ or ‘very fast’, which increases their motivation as a whole to respond. Additionally, all but one incumbent considers their risk appetite for disruptive innovation to be ‘moderate’. Some of the reasons for this are described in the themes above, and overall, this level of risk appetite dampens incumbent motivation to respond.

4.2.2.6.2 ABILITY TO RESPOND

Figure 25: Influencing Factors & the Incumbent Banking Industry's Ability to Respond

When looking at all five banks in combination and trying to profile the industry as a whole, it is seen that incumbents within the South African banking industry have a Fairly High ability to respond. This is through looking at all respondent responses together and identifying the mode (the most frequent response) amongst all respondents rather than having a bank-specific view.

Looking at the interview data, there were common themes across the respondents and across the banks regarding their abilities to respond. Below are the themes that were mentioned by at least four respondents across two or more banks:

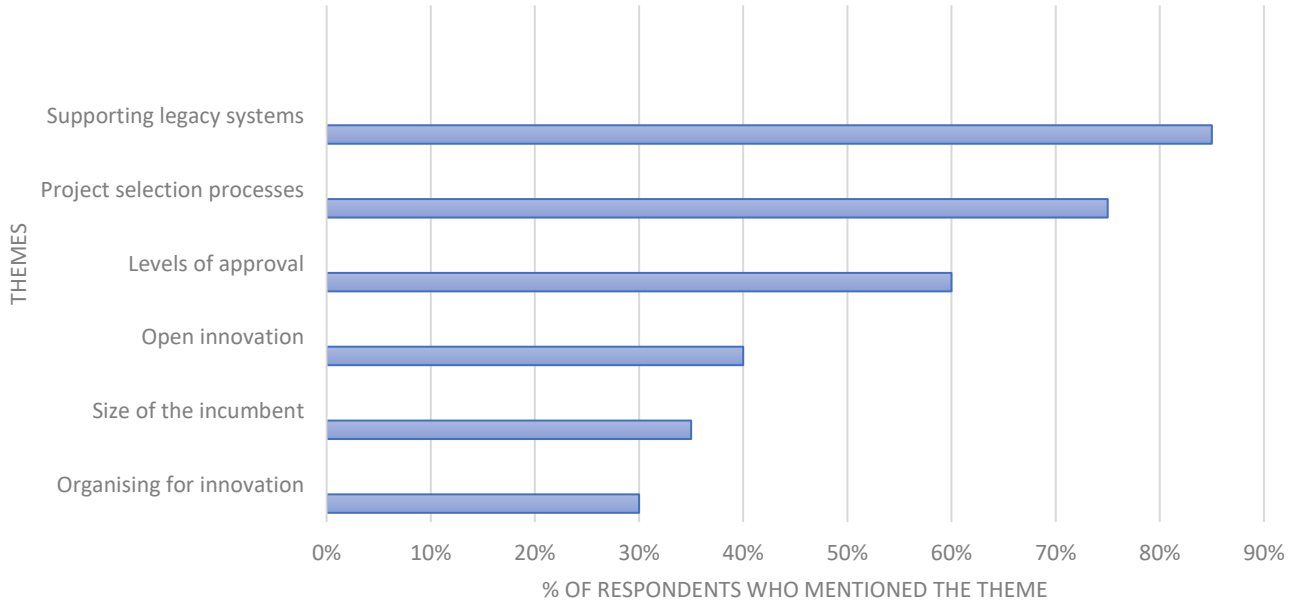

Figure 26: Common Themes Across All Respondents for Ability to Respond

- **Supporting Legacy Systems:** All of the incumbents within the sample have existed for many decades, with the oldest being founded in 1991 and two being formed in the 1800s. This means that all the incumbents have systems that were built long ago with old technology and under different client assumptions; however, many of their products and services still run on these systems today. Seventeen respondents highlighted this as an inhibitor to their ability to respond to disruptive innovation, as these systems require maintenance and support to keep their existing products and services up and running. Respondents did mention that their banks are in the process of building or acquiring new underlying payment rails, but this is still in progress, and all their banks are still supporting both old and new systems until their new systems are fit for purpose to take on the load. One respondent's comment on this was:

  > *"Any company that doesn't have legacy systems is already at an advantage compared to us because we have old systems that frequently break down and that is now struggling to handle any additional scale or complexity, but we still have to dedicate time to it and budget for it because without it we wouldn't be able to survive. Eventually we will be able to move on, but that's not going to happen any time soon."*

The supporting of legacy systems decreases an incumbent's ability to respond within the banking industry of South Africa.

- **Project Selection Processes:** 15 respondents made reference to their project selection processes within their firm as a detractor to their ability to respond to disruptive innovation. Respondents stress that their current selection processes are based on known factors such as expected revenue, costs, and number of new clients; but for disruptive innovation this is often not known. They mention how this leans their firms towards incremental feature improvements that target their existing core market, even while there exist ideas with the potential to be disruptive within the bank. Some respondents mention that this is because short-term value in terms of shareholder dividends is a primary driver towards where investment capital is provisioned, so return on investment within the year takes priority over long-term value creation. This dependence on the project selection processes for budget and resources decreases the ability of incumbents to respond to disruptive innovation with their own disruptive innovation or to continue to fund disruptive innovation initiatives that did not contribute to profitability within the year.
- **Levels of Approval:** 12 respondents mentioned that an inhibitor in their ability to respond and specifically to respond quickly is the levels of approval a new product or service needs to go through before it can be scaled. This includes many levels of manager approval as well as approvals from areas such as risk, compliance, marketing and legal. Respondents highlight that within their firm, there is a lack of autonomous decision-making and accountability for decisions. One respondent commented on this by saying:

  > *"By the time one of our products makes it through the approval of managers, then heads of department and then all our risk and compliance gatekeepers, the competition already has something similar in the market, and any first mover advantage is lost. I genuinely feel like we have the ideas first, but we're not set up to execute on them quickly. I understand why the governance is needed, but we need a better system to allow new projects through to market faster."*

- **Open Innovation:** Eight respondents note using partnerships and/or vendor agreements as a mechanism to support their ability to respond. The respondents mention these engagements in reference to a lack of agility, time and speed in their core organisation, and so use open

innovation as a way to still have an active response to disruptive innovation. Two of the five banks are seen to have this as a core characteristic in terms of their ability to respond.

- **Size of the Incumbent:** Seven respondents mention the size of their firm when discussing the positive aspects of their ability to respond. These seven respondents mention it in terms of having the scale, resources, and brand credibility to take advantage of disruptive innovation in the market, specifically when replicating a small-sized disruptor and overtaking them with their existing size and customer base. Some respondents note this as an attractive feature of incumbents that also attracts smaller firms to want to work with incumbents, such that they are able to share the market rather than compete with them.
- **Organising for Innovation:** Among the respondent feedback, different designs in how the organisation is set up to maximise innovation were identified. Incumbents within the banking industry are seen to have a range of designs, such as ambidextrous business units, autonomous teams and embedded innovation capabilities within the existing business. Respondents comment on this in terms of their ability to respond, with the core theme being that they have improved over time in terms of how they are set up but still experience issues regarding the model. Issues such as "siloed teams," "lack of understanding of customer needs", and "duplication of effort" were mentioned by respondents on their innovation capabilities and organisational design. This can be seen as an area of improvement for incumbents to improve their ability to respond as they mature their innovation approach.

Other industry observations in terms of incumbents are that all incumbents consider that they have a 'fairly' or 'very high' level of competencies and available resources within the organisation to be able to respond to disruptive innovation, which improves their overall ability to respond as they believe they have the right skills and experience within their human resources. Additionally, all incumbents say that they either have a 'moderate' or 'fairly low' level of time capacity to dedicate to disruptive innovation (some of the reasons for this have been described above). Lastly, all incumbents say that they either have a 'fairly' or 'very high' degree of conflict with disruptors' business models, which detracts from their ability to directly and quickly respond to disruptiveness that competitors are creating, as their operations are not set up in the same way.

4.2.2.6.3 RESPONSE STRATEGIES OF INCUMBENTS ACROSS THE BANKING INDUSTRY

According to the feedback from all respondents, the primary strategy used across the incumbent industry if it was considered a single unit of analysis is '*adopting the disruptive innovation during the disruption*'. This was identified through a dominant mode of 14 mentions across the 20 respondents.

The motivation to respond of incumbents combined is 'fairly high', and their ability to respond is 'fairly high'. In terms of disruptive innovation response strategy theory and the plotting of strategies proposed by Charitou & Markides (2003), this places the incumbent banking industry in the top right quadrant. This is additionally where the dominant mode strategy for the incumbent industry, *'adopting the disruptive innovation'*, can also be found, according to theory.

The below graph shows how this plotting compares relative to the individual banks.

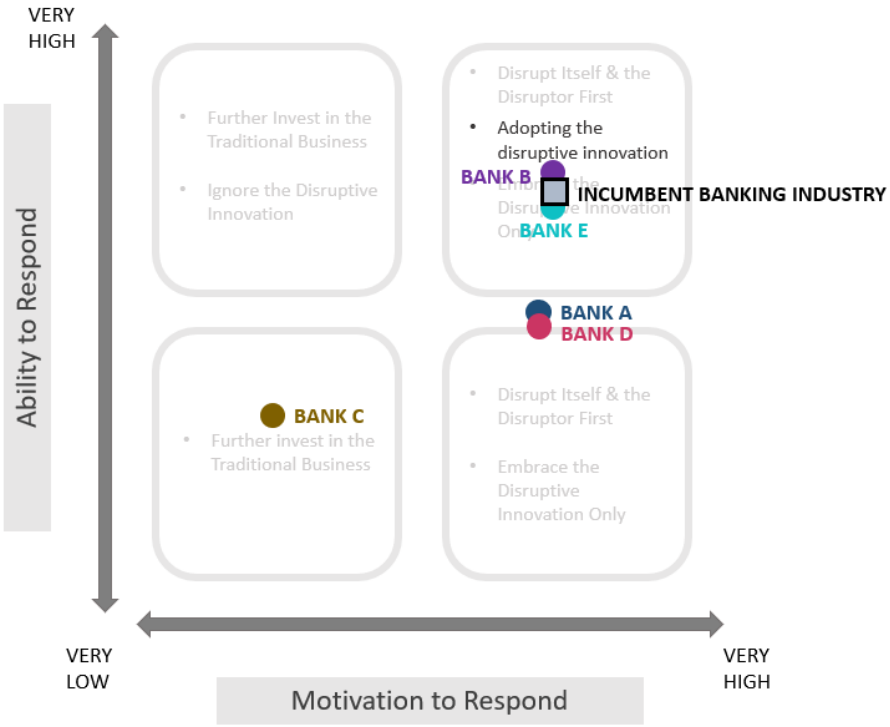

Figure 27: Incumbent Industry Response Strategy Mode and All Individual Banks plotted on Response Strategies by Charitou & Markides (2003)

4.3 SUMMARY OF DATA PRESENTATION

This study aims to answer two research questions. The first question is '*To what degree is the South African banking industry undergoing disruption?'* with the sub-question being *'Why is this considered the case?'.* The second is '*What is the nature of incumbent responses to the threat of disruption*?' with the sub-question being '*What factors are influencing these responses*?'. The findings have been presented in the order of these two questions and are discussed further in chapter five to resolve against the original propositions made.

4.3.1 DISRUPTIVE INNOVATION WITHIN THE BANKING INDUSTRY

The findings show that incumbents perceive that disruption is at least in stage three, whereby disruptive innovations have emerged and are growing in performance. This is supported by secondary data indicating that the size of the market is growing and attracting new entrants, and that customer preferences and the technology to support them are evolving the traditional mix of attributes most valued by customers. The primary data from the semi-structured interviews also highlights observations from employees of incumbents that include that they are vulnerable to disruption and that there is an urgency to respond, as although the disruptive innovations have not yet significantly impacted their mainstream markets, the innovations are starting to attract higher segment customers and are progressively increasing in quality. This is seen through the new attributes that disruptors have introduced, their dominance in low-end and niche segments and the changes in regulation, which are creating more opportunities for growth by new entrants. The potential disruptors acknowledged by incumbents are newcomer banks, payment gateway providers, any product or service provider (that is able to incorporate financial services into their business), digital asset companies and technology companies.

4.3.2 INCUMBENT RESPONSE SUMMARY

	Perception on Stage of Disruption	Motivation to Respond	Ability to Respond	Response Strategies
Bank A	Stage 3	+	O	• Adopt the disruptive innovation during the disruption • Disrupting itself and any potential disruptor first
Bank B	Stage 4	+	+	• Adopt the disruptive innovation during the disruption
Bank C	Stage 3	-	-	• Further investing in the traditional business • Catching up to the mainstream market post the disruption
Bank D	Stage 5	+	O	• Adopt the disruptive innovation during the disruption • Disrupting itself and any potential disruptor first
Bank E	Stage 3	+	+	• Adopt the disruptive innovation during the disruption • Moving to the higher end of the market
INCUMBENT INDUSTRY	**Stage 3**	**+**	**+**	• **Adopt the disruptive innovation during the disruption**

Symbol	Description
++	Very high level
+	Fairly high level
O	Moderate level
-	Fairly low level
- -	Very low level

Table 6: Summary of Incumbent Responses

The findings show that out of the five incumbents, four have a 'fairly high' level of motivation to respond with only Bank C having a 'fairly low' level due to the specific high-end market that they service. In terms of ability this is more distributed with two incumbents having a 'fairly high' level of ability to respond, two having a 'moderate' level, and one (again Bank C) having a 'fairly low' level of ability to respond. Across all five incumbents, this equates to five response strategies being presented and when looking at those that fall within Charitou & Markides (2003) theory on response strategies, three of them are within the theory and all three of them align in terms of the level of motivation and ability to respond required for these strategies to be prioritised by incumbents. When looking at the industry as a whole, incumbents as a single unit of analysis are seen to have a high level of motivation to respond and a high level of ability to respond, with the most frequent response strategy presented across all respondents being 'adopt the disruptive innovation during the disruption'. Again, according to Charitou & Markides (2003), the level of motivation and ability to respond found in the incumbent industry correlates to this response strategy and is therefore aligned with response strategy theory.

Regarding influencing factors across all entities, six central themes were found under motivation, some of which relate to the seven factors presented in the theoretical framework. The themes explicitly mentioned are existing banking regulation, adapting for survival, changing banking regulations, existing customer preferences, traditional attributes embedded in the brand and innovation culture. For ability to respond, six central themes were also found, again some of which correspond to the factors presented in the theoretical framework. The themes explicitly mentioned are supporting legacy systems, project selection processes, levels of approval, open innovation, size of the incumbent and organising for innovation. The nexus of factors presented by the framework and specific themes highlighted by respondents is outlined in chapter five to summarise the influencing factors and their relative weightings on prompting incumbent bank response strategies in South Africa.

CHAPTER 5: ANALYSIS AND DISCUSSION OF THE RESEARCH FINDINGS

5.1 INTRODUCTION

This chapter focuses on the analysis and synthesis of the data presented in chapter four, together with the insights gained from the literature reviewed in chapter two. The analysis focuses on four key areas related to the two research questions posed and their two sub-questions. These four areas are; the degree to which the South African banking industry is undergoing disruption, the characteristics related to why the industry is considered to be undergoing disruption to this degree, the nature of incumbents' responses to disruptive innovation, and finally, the factors which are influencing these responses. The research findings are compared and contrasted with relevant literature and the original propositions made in order to progress the answering of the research questions of this study.

5.2 BACKGROUND

As described in Chapter Three, this study uses primary data solicited through semi-structured interviews with respondents who are employed by the five incumbents being analysed in this study and have roles related to innovation through projects, products, or strategy. Secondary data was also utilised in the form of journals, news publications, online databases, industry reports, government records and company financial reporting. All data was analysed, and relevant documents were reviewed.

5.3 DEGREE OF DISRUPTION WITHIN THE BANKING INDUSTRY

The first research question of the study is '*To what degree is the South African banking industry undergoing disruption?'.* The original proposition made in relation to this question is disruption is occurring within the banking industry of South Africa which is to a high enough degree that incumbents have acknowledged disruptors and the threat of disruption. This section discusses the findings in relation to the original proposition made to determine a conclusive answer to research question one.

When being asked "To what degree do you believe the South African Banking industry is being disrupted", all participants except one believed that at the very least disruptive innovation has emerged with 40% of participants believing that it has emerged and is growing in performance, 30% believing that existing firms are already being disrupted in their mainstream markets and 25% believing that industry disruption has already occurred. This response indicated that across all five of the participating incumbents there is consensus that disruption is occurring within the South African banking industry.

All participants across the five incumbent banks also acknowledged that there are disruptors and potential disruptors in the South African banking industry, and they are significant enough in the market that their innovations have been acknowledged and some of them additionally replicated by incumbents. Five types of disruptors were named, the first being newcomer banks which includes Capitec Bank, Discovery Bank, Tyme Bank and Bank Zero and their innovations include: free no registration rewards programmes (replicated by three incumbents), cheap or free bank accounts (replicated by all incumbents within the study) and a business model based on a digital operating model. This type of disruptor was named by all participants as a disruptor or potential disruptor which signifies that the degree of disruption is high enough that incumbents are acknowledging these types of disruptors and in some cases replicating attributes of their offerings. Other types of disruptors include; payment gateway providers (acknowledged by all participants within the study), any product or service provider who adds financial services onto their existing offerings (acknowledged by 85% of participants), digital asset companies (acknowledged by 45% of participants) and technology companies (acknowledged by 25% of participants). For each of these types of disruptors their disruptive innovations have been acknowledged and assessed, and additionally in some instances

replicated or partnered with by incumbents (such as with scan to pay and embedded banking providers) as a response to the threat of it disrupting the industry.

These findings are aligned to the proposition that disruption is occurring within the banking industry of South Africa which is to a high enough degree that incumbents have acknowledged disruptors and the threat of disruption. All incumbents have acknowledged two or more types of disruptors and the specific disruptors and innovations that fall within these categories. Incumbents have additionally replicated or partnered with the disruptors they deem a significant enough threat to their own business. This is aligned to this industry undergoing a high rather than low degree as, according to the theory of disruptive innovation and the process of disruption, when disruption is considered to be at a low degree, incumbents are still overlooking potential disruptors and the threat of disruption. This is because at this stage the markets these new entrants are targeting are too small to be attractive to incumbents, there is high uncertainty around the innovation and/or there is a lack of synergies between operations and business models required to promote the same mix of attributes (Adner, 2002; Christensen et al., 2015; Markides & Oyon, 2010). Incumbents are nevertheless clearly articulating the potential disruptors and are already adopting the innovations that have synergies with their existing operations and business models, indicating that the degree of disruption is high enough for this to occur. This is further supported by all incumbents having distinct response strategies to the threat of disruption. The specific response strategies will be discussed in section 5.5. The existence of these responses within each incumbent supports that each incumbent has acknowledged that the degree of disruption is high enough that a response is required to combat the threat of disruption.

All incumbents consider that the industry is undergoing disruption to a high enough degree that they have acknowledged disruptors and the threat of disruption. However, two incumbents perceive that the industry is undergoing an even higher degree of disruption, with Bank B perceiving that incumbents are already being disrupted and Bank D perceiving that industry disruption has already occurred and the basis of competition has changed. This finding is significant as it highlights that the perception around the degree of disruption the industry is undergoing is relative, as these two banks' perception is based on comparing their own products, services and business models to the disruptors. For each of these two banks, especially Bank D, disruptors are offering such a vastly different mix of attributes compared to their offering that they perceive disruption to be at a higher degree than the other three incumbents, whose existing offerings are more similar to disruptors. This is aligned with

existing literature, which outlines that the degree of disruption an incumbent goes through is considered relative, as the products, services and business model of a disruptor could be more disruptive to a firm that does not have any comparable attributes within their own products, services, and business model while being sustaining to a firm that does have comparable attributes (Christensen, 2006; Sainio & Puumalainen, 2007; Yu & Hang, 2010).

5.4 CHARACTERISTICS DRIVING THE DEGREE OF DISRUPTION

The sub-question to research question one ('*To what degree is the South African banking industry undergoing disruption?'*) is *'Why is this considered the case?'*. The proposition related to this question is that there are specific market characteristics related to the phases and characteristics from the process of disruption that are driving this perception by incumbents. This section discusses the findings in relation to the original proposition made to determine a conclusive answer to the sub-question to research question one.

One of the developments in the theory of disruptive innovation is that disruption is no longer considered an event and is instead considered a dynamic process that can take years and sometimes decades before the disruptive innovation enters the mainstream market (Adner, 2002; Christensen et al., 2015; Gilbert, 2003; Hüsig et al., 2005). Due to the nature of disruptive innovation not being disruptive in the short run, incumbents may fail to react prior to it encroaching into the mainstream market (Druehl & Schmidt, 2008a). Aligned to the guidelines from literature, the process of disruption within the South African banking industry is found to have five phases: firstly, (1) there exists no disruption in the industry, (2) the disruptive innovation is then emerging but is insignificant, (3) the disruptive innovation has emerged and is growing in performance, (4) the disruptive innovation reaches the mainstream market to disrupt incumbents and finally (5) that disruption has occurred and the basis of competition for the industry has changed (Petzold et al., 2019). As outlined in the theory on the process of disruption, it is also sequential and over time rather than a single event (Adner, 2002; Christensen et al., 2015; Christensen et al., 2016; Markides & Oyon, 2010; Rafii & Kampas, 2002; Sood & Tellis, 2011). This process is shown in Figure 28.

As seen in the research findings, the incumbents within the industry as a whole consider the disruption process to be at the third stage for banking in South Africa. This was found by identifying the mode across all respondent feedback across all incumbents. This stage is considered to be related to a high degree of disruption within the industry, and as described in section 5.3, it is high enough that incumbents have acknowledged disruptors and the threat of disruption. In terms of what is driving this perception, it is proposed that there are specific market characteristics that can be related back to each stage in the process of disruption that is driving why each incumbent perceives that disruption is at this degree. This would make it systematic whereby the degree of disruption within this industry can be identified and tracked at any given time by monitoring these characteristics.

Within the South African industry, it is acknowledged that incumbents have been slow to generate their own disruptive innovation, which has caused them to lean towards sustaining innovation and improving their existing offerings. A reason provided for this is that banking regulations have forced incumbent banks to have more risk, compliance and monitoring obligations than non-banks, which diminishes their ability to generate and commercialise disruptive innovation compared to non-bank competitors. Due to the approval processes that delay the return on investment for disruptive innovations, as well as the potential risk of fines if the disruptive innovation does not strictly abide to the guidelines provided by regulatory authorities', incumbents are motivated towards sustaining innovations which targets improving their existing offerings. Another assumption that underlines the characteristics that allows disruptive innovation to come about is that incumbents focus on their most demanding customers and therefore naturally engage in sustaining innovations to incrementally improve their existing offerings to satisfy these customers, leading to an overshoot on performance on attributes being offered (Christensen et al., 2015; Druehl & Schmidt, 2008a). The primary data shows this characteristic to be true of incumbents within the South African banking market as it is seen by two incumbents that traditional attributes are a core aspect of their brand and so motivation to keep increasing performance on these attributes is high. Serving existing customer preferences is a factor in all of the incumbent's allocation of time and resources. This is seen through incumbents overshooting on compliance and regulatory features, configurability of their existing products as well as banking channel technology features to suit the needs of some of their most demanding clients. However, these attributes are to a level that most, and especially low-end banking customers do not value and to a level that may be detracting on the client experience of low-end customers due to the increased

complexity. This performance overshooting on traditional attributes is a characteristic found in stage one in the literature on the process of disruption whereby incumbents create the opportunity for disruption by overshooting on traditional attributes (Christensen et al., 2015). Theory also proposes that at this stage all segments are still consuming the existing mix of attributes, which is aligned with the findings as this industry is found to be beyond stage one. Participants have observed that all segments are not still consuming the traditional mix of attributes, but instead, many customers are now using incumbents as well as new entrant offerings, which have a new mix of attributes. The characteristics found in the literature for the first stage of the disruption process align with the findings within this study and support why incumbents perceive the industry to have completed and passed stage one and to be at a higher degree of disruption.

A point noted in the findings is that new entrants have earned trust in the lower market segments, as this is where they started. They have designed offerings specifically for this part of the market, so although incumbents have the scale and resources to enter the low end of the market, the disruptor still leads as they better meet the segment's needs. This is aligned with the literature on this second stage of the process of disruption, where a characteristic is that new entrants start in the low end of the existing market or are targeting a new market with a better-suited mix of attributes. In line with Danneels (2004), this process of maturing in a marginal market and gradually improving performance to satisfy the needs of higher-end segments is key to the mechanism of disruption. At introduction, the disruptive innovation is not suitable for the existing market due to its inferior performance on traditional attributes, so its first use may be in new applications and markets where its new attributes are an advantage. This has been seen in the banking industry whereby unbanked individuals and businesses were targeted, and their consumption of services has created a new low-end segment in banking. In this way, disruptors are able to also create markets. As the disruptive innovation improves, it begins to target existing low-end customers and will start to disrupt existing markets. This is because low-end customers will begin to adopt the disruptive innovation in large numbers if it meets their performance requirements as well as provides them with new features. These customers do not need the extended performance that incumbents were offering, and the disruptor is able to provide them with a better combination of attributes that meets their needs (Druehl & Schmidt, 2008a; Petzold et al., 2019). It is also aligned in showing that this industry is beyond stage two and at a higher degree of disruption as the new entrants are not only starting at the low end of the existing market currently,

they have already gained a significant following in the lower end segments of retail banking and small to medium-sized enterprise (SME) business banking.

Christensen et al. (2018) proposes that a disruptive innovation can be smaller, cheaper, more convenient, and more accessible, or a combination of these, which makes them more attractive than incumbent offering to lower-end or niche segments. Within the findings, respondents also note five new attributes introduced by new entrants that align with this definition and impact the basis of competition. These attributes are; digital operations, lower fees, platformisation, free rewards programmes, and banking on a Sunday. These are attributes that have additionally been seen to be openly acknowledged in the public by incumbents, with many already incorporating these into their own strategies and offerings. Within the process of disruption at stage two, it is proposed that incumbents are not acknowledging market developments by newcomers as a threat yet. This acknowledgement of attributes introduced by disruptors and potential disruptors aligns with the literature that this industry is beyond stage two. Although the majority of participants across the incumbents believe that the industry is in stage three, those who believe that the disruption process is further along than stage three have shared that part of their reasoning is the success of these new attributes across the industry that are driven by disruptors.

A finding noted within participant responses is that the underlying banking products and services are the same from incumbents and disruptors. This indicates that the traditional attributes of the potentially disruptive innovations are increasing in quality to a similar standard to incumbent offerings, which is a characteristic in the literature associated with stage three and a high degree of disruption (Adner & Zemsky, 2005; Govindarajan et al., 2011). It also indicates that the disruptive innovations are no longer considered low in performance (a characteristic of stage two), and so have passed this step within the process of disruption. Noted with this finding is that many disruptors are still reliant on incumbents to support the traditional attributes within their offerings, such as the need for a bank account or credit facility. A characteristic of stage four is that the disruptive innovation/s are sufficient on traditional attributes and superior on new attributes, which is then seen as not having been met in this industry yet, as disruptors themselves are not yet sufficient on traditional attributes by themselves. Although this characteristic of stage four has not been met, the finding aligns to the literature that this industry is in stage three, where the degree of disruption is high, but the industry has not been disrupted yet. As already highlighted, new entrants are seen to have earned trust in the

lower market segments, and this has additionally been proven through the secondary data where is it disruptors who are leading in the lower-end segments of retail banking and SME business banking. This is aligned to a characteristic of stage three in the literature which says that disruptive innovations are leading in niche markets at this point in the process, which is the case in this industry. All respondents noted they believe that the demand for the disruptive innovations is growing rapidly, which again meets a characteristic associated with stage three found in the literature. Some respondents also noted that many customers are now using both incumbent and new entrant offerings, not just in the retail lower-end segments but additionally in wholesale banking, which is aligned with the characteristic of this stage, which is that the disruptors' innovations are starting to attract higher segment consumers and their market is no longer small. These market characteristics observed by incumbents confirm that the industry is in stage three and that these characteristics can be monitored to identify if disruption progresses past this stage.

Characteristics found in the literature on stages four and five are that the disruptor/s are starting to acquire mainstream customers from incumbents, the disruptive innovation/s are the standard on mainstream attributes, and finally, firms within the industry who have not adopted the new mix of attributes lose significant market share and may exit the market. All of these are not found within this industry and so are aligned with the finding that this industry is in stage three where disruption is occurring to a high degree but is not disrupted yet. Findings in relation to participant observations on the degree of disruption are that fintechs still have a reliance on banks, so, the industry cannot be considered to be undergoing disruption to a high enough degree that disruptors are reaching mainstream markets. This is because, historically, banking regulations have restricted clearing and settlement activities to those firms with a banking licence, which has protected incumbents' share of this part of the payments market. Consequently, disruptors are unable to significantly acquire mainstream customers from incumbents. Noted by participant responses and secondary market data is also the finding that incumbents have not lost significant market share. This is across all segments, which includes retail and wholesale banking, where incumbents still hold 90% of the market share based on assets held as well as deposits held. An additional finding through participant responses is that trust is seen to remain with incumbents across the mainstream and high-end market of wholesale banking. This is aligned with the theory that in the early stages, there is a high degree of uncertainty around the potentially disruptive innovations (Chesbrough, 2003; Christensen et al., 2015; Henderson, 2006). In this case, the uncertainty is also felt by higher segments of banking customers. This finding

again supports that the process of disruption has not yet evolved to stage four since disruptors still have marginal market share across the industry outside of the low-end segment of retail banking. In theory, stage three, which the industry is currently in, is seen as the point in the process of disruption where incumbents cannot ignore the disruptive innovation anymore as encroachment has begun, and so instead, they begin to consider ways to respond to it, which respondents have acknowledged is occurring within their incumbent banks (Markides, 2006; Myers et al., 2002). The characteristics noted through the literature on stages four and five should be monitored to track when this industry moves to a higher degree of disruption.

Characteristics identified through the findings that are driving incumbent perception of the degree of disruption being high and specifically in the middle of the process of disruption in stage three, but that were not originally found in the literature, is that by this stage, there is a significant increase in the number of new products and services as well as a significant increase in the number of firms offering financial services. This indicates that the supply within the banking industry is growing and that potentially, demand is available that is motivating this. A characteristic additionally found that could be an explanation for this is that there is a notable reduction in the boundaries of the banking industry, in terms of customers and competition. These characteristics are not found in the literature but are indicators of why the industry is considered to be undergoing disruption to a high degree and so should be seen as indicators of disruption for this industry going forward.

Another finding is that the level of urgency to respond increases if the incumbent perceives disruption to be at the latter stages. An observation for Bank D, the only firm to perceive the stage of disruption to be at stage five, is that they supplemented their 'moderate' ability to respond with partnerships through an open innovation model. This perception of stage five in the process of disruption can be seen to contribute to them choosing to partner with potential disruptors, as although the approach comes with risks that they have acknowledged, their urgency to respond and move at a faster pace is greater than other incumbents and has prompted them to still choose it as part of their strategy. This finding indicates that the response strategies found in section 5.5 may change for each incumbent, as their perception changes on which stage of disruption the industry is in. A characteristic of disruption being at a higher degree, and specifically in stage five, therefore, can be when incumbents are seen to be responding with more urgency and are using mechanisms such as partnerships to accelerate their innovation capability at a faster pace than they historically have.

Proposition two, which states that there are specific market characteristics that are driving this perception by incumbents as a whole, that can be linked back to literature on the process of disruption, is ultimately found to be valid. This is because, as described above, each of the characteristics proposed (that represent each of the sequential stages of the process) are referenced in some way when incumbents identify the degree of disruption within the industry. The proposition can also be expanded with four new characteristics found within this industry.

When determining where the banking industry of South Africa is in terms of the process of disruption and the degree of disruption occurring in the industry, the characteristics proposed by the literature can be monitored and tracked, together with the four additional characteristics found. This highlights that literature on the process of disruption is generalisable to this industry, and as the theory suggests, the evolution of the process provides a motive for incumbents to take action and prioritise response strategies.

The research findings are visually presented in Figure 28, which represents the process of disruption within the South African banking industry and the characteristics that are driving the perception and awareness that the industry is being disrupted to a high enough degree that incumbents have acknowledged disruptors and the threat of disruption.

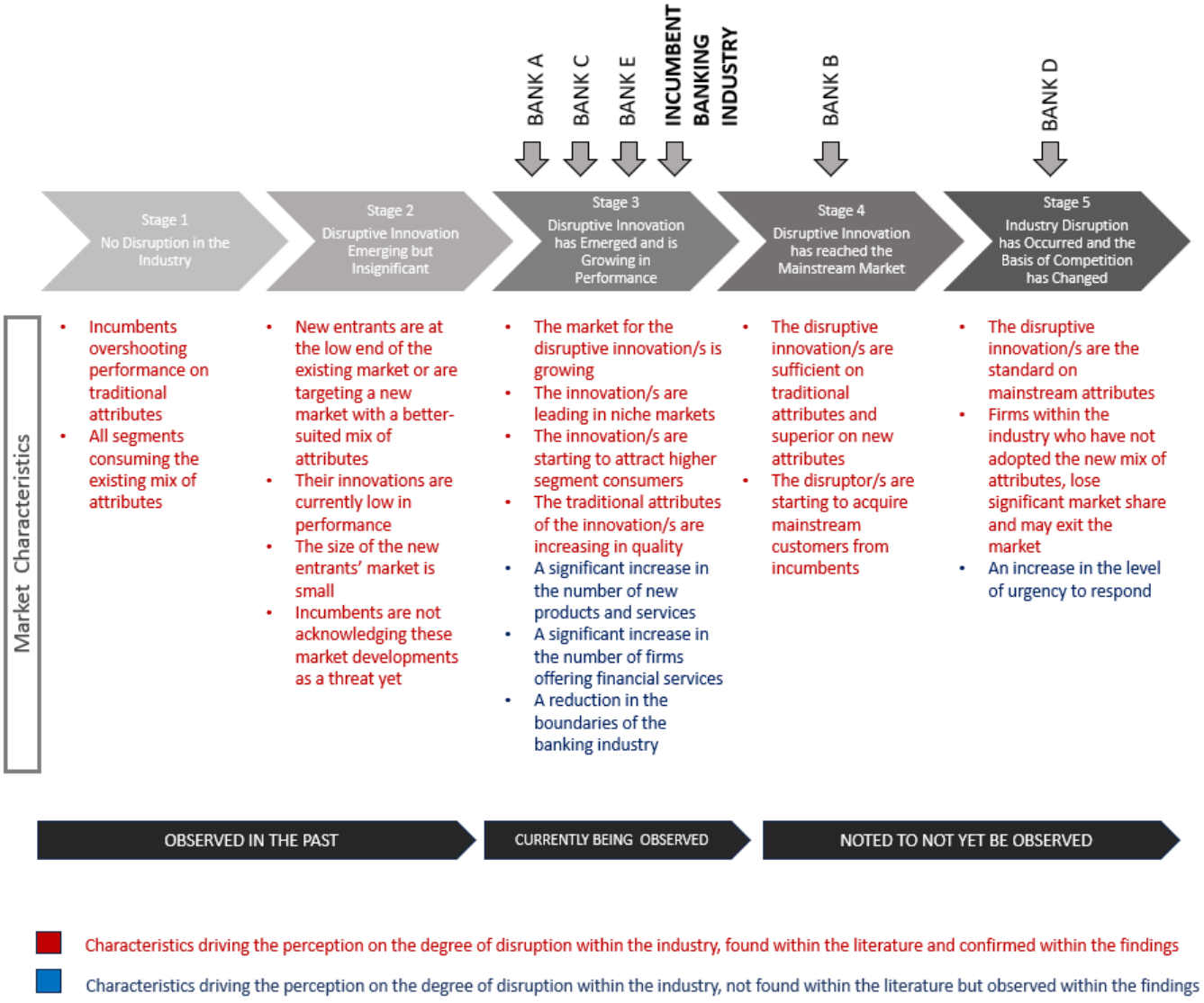

Figure 28: Process of Disruption within the South African Banking Industry

5.5 INCUMBENT RESPONSE STRATEGIES

The literature in core disruptive innovation theory primarily focuses on how incumbents can react to the introduction of a potentially disruptive innovation in their industry, with a focus on the adoption decision; when and how firms adopt the disruptive innovation. However, not all disruptive innovations completely replace the incumbent business which implies that adoption is not the only option for

incumbents to react. The development of response strategy literature highlights that how incumbents react to the entrance of a disruptive innovation in their industry depends on their motivation and ability to respond (Charitou & Markides, 2003; Markides, 2006).

The second research question posed in this study is '*What is the nature of incumbent responses to the threat of disruption?*'. In proposition three, eight response strategies were projected based on the core disruptive innovation theory proposed by Christensen & Raynor (2003) and further built on by supporting studies and disruptive innovation response strategy theory, which lent from the original theory but developed a framework for incumbent responses which was published by Charitou & Markides (2003) and further built on by supporting studies. The complete list of response strategies is: further investing in the traditional business, ignoring the disruptive Innovation, disrupting itself and the disruptor first, adopting the disruptive innovation during the disruption, embracing the disruptive innovation only and scale, moving to the higher end of the market, catching up to the mainstream market post the disruption and exiting the market. Respondents were also given the option to describe any other responses taken, outside of what was outlined by the conceptual framework. However, only one respondent out of 20 took this approach; thus, this was not deemed significant enough to include in the discussion. Out of the eight response strategies proposed by theory, five were selected by respondents and are described below (the other three's descriptions are briefly outlined in section 2.3). Out of the five strategies, one is a passive response, three are reactive responses, and one is a proactive response, showing that all three types of response styles have been observed in the industry. Note that respondents were allowed to select more than one strategy if their firm had more than one dominant response as part of their operations, and four out of five incumbents are seen to have two response strategies as part of their organisational approach rather than one. This is in line with literature that states that under high levels of uncertainty, firms need to remain flexible by using strategies that involve a low level of commitment and a high level of reversibility to cope with unforeseen contingencies (Claude-Gaudillat & Quélin, 2006; Vrande et al., 2006). By using more than one strategy, firms have more flexibility in their responses, which increases their probability of successfully reducing the threat of disruption.

The five strategies are described in detail below. By observing them in this industry where incumbents are choosing any of these strategies rather than choosing to exit the market, there is already acknowledgement that Christensen's original theory, whereby it is described that incumbents will be

replaced if a disruptive innovation enters the market, cannot be proven true for this market. Instead, the banking industry of South Africa is seen to align with Kilkki et al. (2018), whereby it is described that the incumbent is only disrupted if it is required to redesign its strategy in order to survive, and it does not necessarily have to leave the industry. Since each of the incumbents is seen to have at least one response to the threat of disruption incorporated into its business strategy, all incumbents can be seen to be undergoing a level of disruption enough to acknowledge it through a modification of their strategies.

5.5.1 ADOPTING THE DISRUPTIVE INNOVATION DURING THE DISRUPTION (reactive strategy)

This response was raised the most frequently and was mentioned by 70% of respondents. It is seen as the dominant strategy across incumbents within the banking industry. It is also an identified central strategy of four out of the five incumbents. Adopting the disruptive innovation during the disruption is outlined by Charitou & Markides (2003), who explain that disruptive innovation involves idea generation and scaling of the actual innovation into the market and that these two distinct activities do not need to be done by the same firm. This is especially true when an idea has been proven in the market, and incumbents have acknowledged the risk of not pursuing it themselves. This is in line with the innovation pentathlon, which describes ideation, selection and implementation being different disciplines in the innovation funnel, and so if firms are stronger at implementation, they have the option to leave ideation to disruptors and selection to the market (Costello et al., 2013). This can be seen in the results whereby this reactive strategy is paired with a proactive strategy by two of the incumbents as a backup plan if they are not able to proactively disrupt themselves with their own ideas, and so are enhancing their innovation funnel with outside ideas. The theory proposes that incumbents can utilise their competencies, resources, scale, and credibility to take an existing idea being tested by disruptors and commercialise it through to their mainstream markets at a pace and scale that allows them to retain and potentially grow their overall market and avoid being disrupted. Core disruptive innovation theory proposes a way to do this by having separate business units or spin-off companies dedicated to exploring and developing disruptive innovations. These entities can operate with more autonomy and flexibility, allowing them to pursue disruptive opportunities without

being inhibited by the existing organisational structures and culture of the larger incumbent. By doing so, incumbents can effectively manage the tension between sustaining their current business and exploring new disruptive ideas (Christensen et al., 2002; Vrande et al., 2006). This is because the factors that have made them successful, such as a focus on efficiency, established processes, and customer feedback, can hamper their ability to embrace disruptive technologies or business models. The operational structures and decision-making processes of incumbents are often optimised for their existing operations, making it difficult to allocate resources and attention to emerging disruptive opportunities. This is especially seen in the banking industry of South Africa, where project selection processes are geared towards sustaining innovations on existing offerings. Even though there are available competencies and resources for promoting disruptive innovation, allocation of them to disruptive innovation is limited. Charitou & Markides (2003) agreed with this approach in adopting the disruptive innovation through a separate business unit or entity as a way of "playing two different and conflicting games simultaneously" but still acknowledged that playing both games may come with its own risks. This is seen in the results with Bank C (the only incumbent not using this response) acknowledging those risks and deciding to avoid them to circumvent impacting their existing high-end niche market. The other four incumbents that embraced this approach viewed the conflicts as manageable in the face of the bigger risk of potentially losing consumers and being disrupted. Out of the four banks that are using this response strategy, three of them (Bank B, D & E) have created different business units to execute it to avoid conflict with their traditional business. Bank A is the only incumbent to be using an embedded approach as they view the risk of not being able to eventually integrate the new business with the traditional to be too costly. With Bank B, D and E, there is still no total autonomy of the unit, with the innovation divisions still sharing priority and decision-making processes with the traditional business, which could potentially impact the effectiveness of the separate unit. This is also outlined by Charitou & Markides (2003), where 98 companies were surveyed, and results showed that when the degree of decision-making autonomy given to new units is higher, the overall firm is more effective in playing two games concurrently.

Autonomous divisions and entities are not the only way to execute this response strategy. Bank D & E use open innovation as a core characteristic of this response strategy and so have coupled their autonomous divisions with partnership and vendor contracts in order to be able to replicate ideas in the market. They make use of open innovation to supplement their own internal ability to respond, which they believe has now made them be able to respond faster and with less risk than if they did not

utilise open innovation. These benefits are seen to be worth the dependency and potentially higher costs than them managing it themselves. The findings show that the complementarity of the two business models allows 'competitors' to collaborate. This is in line with the statement of Gilbert & Bower (2002), which states that since disruptive innovations start new markets and attract new customers, they are not cannibalistic immediately to incumbents, and partnerships are an easier mechanism for incumbents to tap into this market. Bank D uses coupled open innovation by allowing partners to utilise their existing platforms in a way that is mutually beneficial and assists them in driving disruptive innovation by providing their brand and credibility to partners. Bank E uses outside-in open innovation to enhance their own products, services, processes or business models with intellectual property, technology and/or expertise from other firms. This method of executing this strategy is in line with Raffi & Kampas (2002), who argue that incumbents can make pre-emptive efforts by exploring potential partnerships with emerging players that have value creating market position or technology. Similarly, Chesbrough & Crowther (2006) proposed that open innovation might be a way to monitor potentially 'disruptive technologies' that may threaten existing businesses. Bank E specifically targets large vendors with a proven success rate with other international banks in order to also reduce the risk of failure. These variations on how this strategy is executed is aligned with Osiyevskyy & Dewald (2015), who state that how firms adopt disruptive innovation does not have to be homogenous; firms can adopt with adaptations to complement the company's existing competencies.

Theory proposes that this response strategy is most often seen when both the motivation and ability to respond are high for the incumbent. This is because the incumbent is seen to have a high enough motivation not to want to take a passive response, but additionally, a high enough ability to not need to ideate themselves because their ability to respond is so robust that once a viable idea has presented itself in the market, they can take advantage of their capabilities to quickly commercialise that idea at a pace and scale that overcomes the threat of disruption (Charitou & Markides, 2003). This is seen to be true for two of the incumbents (Bank B & E), who both have high motivation and ability to respond and, therefore, purposefully wait for potentially disruptive innovations to present themselves in the market before using their resources and size to take advantage of it; reducing the need to invest in ideation and R&D capabilities within their business and rather focusing their efforts on execution and commercialisation. Where theory does not completely match the results is within Bank A and D, whereby both incumbents are seen to have 'high' motivation but only 'moderate' abilities to respond.

These two firms have fully acknowledged their lower ability to respond and have supplemented their strategy with a second response, 'disrupting itself and any potential disruptor first'. This response (described fully below) is used to overcome Bank A and D's lower ability to respond quickly and effectively by them investing in ideation development that is needed to be proactive.

This strategy, being seen by four out of the five incumbents, is in line with core theory whereby it is argued that the initial small size of the market in which disruptive innovation is commercialised does not motivate incumbents enough to adopt that same disruptive innovation very early. They instead prefer to wait until it is proven in a later stage of the disruptive process and where the market is large enough to be identified as a growth engine before replicating what is already in the market (Kassicieh et al., 2002). King & Tucci (2002) also show through their research that firms with greater revenues in lower market segments prior to the disruptive innovation are more likely to enter market niches (albeit at a later time) than firms with less prior revenues in lower segments. This is aligned with the findings results whereby Bank A, B, D and E all gained more revenues in lower segments than Bank C, and so are the ones seen to adopt the disruptive innovations in lower niche segments after their value has been proven (King & Tucci, 2002).

5.5.2 DISRUPTING ITSELF AND ANY POTENTIAL DISRUPTOR FIRST (proactive strategy)

This response strategy was the second most frequent response, which was mentioned by 40% of respondents and has been identified as a central strategy for two incumbents (Bank A and Bank D). It involves incumbents getting involved in disruptive innovation, not by replicating other disruptors in the market by investing in the new mix of attributes disruptors are proposing and that is growing in popularity, but instead finding their own novel mix of attributes that is different from what is currently proposed by their business as well as what is proposed by disruptors. This approach, therefore, involves an incumbent not only disrupting themselves by creating creative destruction amongst their own existing customer demand but also disrupting the disruptors, as they are no longer trying to keep up with disruptors; they are trying to displace them with their novel mix of attributes. Charitou & Markides (2003) propose this strategy through the example of timepiece producer Swiss, an incumbent in the 1960s who dominated the market with attributes of craftsmanship and accuracy in their

products. However, in the 1970s disruptors such as Timex and Seiko entered with products that were cheaper, as it used quartz technology and had new features and functionality which were different to the attributes Swiss was providing. Swiss's share of global world production declined from 48% to 15% from 1965 to 1980. Swiss used this response strategy of disrupting itself and the disruptors by introducing a new line of watches called Swatch, which has a very different mix of attributes compared to its existing products as well as what was provided by Timex and Seiko. This mix grew in demand to whereby it is gained the position of the most purchased watch by 1983. Although Swiss used this strategy to respond to disruption after it lost market share, incumbents can use this strategy at any point to overcome the threat of disruption, as is seen by firms such as Apple and Sony, who are displacing their own products with a new mix of attributes before being replaced by a competing firm (Charitou & Markides, 2003).

Core disruptive innovation literature supports this theory by outlining how a firm can overcome its inability to drive creative destruction within its own business by promoting an autonomous business unit or entity to drive the ideation and execution of disruptive innovation. This response is also in line with Paap & Katz (2004), who states that the key to avoiding the negative effects of disruptive technologies is to focus primarily on what is happening with customer and operational needs instead of replicating the technologies. Bank A and D are doing this by understanding the job to be done by the customer and targeting it in an improved way that is aligned with their business strategy and operations rather than just replicating disruptors. Raffi & Kampas (2002) also support this approach and state that when the core business is potentially susceptible, firms have to invest in pre-emptive efforts. Such efforts can involve performing a more thorough analysis of the opportunity or threat, starting an in-house development effort, or exploring potential partnerships with emerging players that have valuable technology or market positions (Rafii & Kampas, 2002). Similarly, Chesbrough & Crowther (2006) proposed that open innovation might be a way to monitor and experiment with potentially 'disruptive technologies' that may threaten the incumbent's traditional businesses and this is the approach being taken by Bank D to execute this strategy.

Charitou & Markides (2003) propose that this strategy is most used by firms who have high motivation to respond, but they can have any level of ability to respond, as although this strategy is advantageous in being proactive when ability is low, it also does not stop firms who have a high ability to respond, to invest in ideation capabilities in an attempt to proactively disrupt themselves and disruptors. Bank A

and D have 'high' motivation and 'moderate' ability to respond. They both use this strategy together with 'adopting the disruptive innovation during the disruption'. Bank A states that they use strategy 5.5.1 to supplement strategy 5.5.2 as they are aiming to be leading in terms of disruptive innovation and use 'adopting the disruptive innovation during the disruption' to be able to catch up when they have not been able to lead the market with their own proactive innovation. Bank D is the inverse, whereby it uses this strategy to overcome its lower ability to respond, as it recognises that it may not be quick enough to catch up if a disruptor is already gaining traction in the mainstream market. This use of a second strategy to supplement another strategy when motivation or ability levels are not ideal, is a finding of this study not found in existing literature.

Since this theory is seen by two out of the five incumbents within this study, it can be said that Christensen's (1997) original proposal that incumbents fail to disrupt themselves is not explicitly true within the banking industry of South Africa. The theory said incumbents will fail to prioritise disruptive innovation due to it not yet having explicit demand. Therefore, the innovations fail to make it through the incumbent's project selection processes, which lean towards known financial assessments and known market parameters. As seen in section 5.6.2.3, the project selection processes of incumbents do indeed lend themselves towards sustaining innovations rather than disruptive innovations, and so the original disruptive innovation theory was correct in this regard. The primary data findings of this study show that incumbents are now aware of this shortcoming but try to overcome this by using alternate paths to prioritising disruptive innovation such as using open innovation or including the potential loss of not disrupting themselves into their strategy, in a way that allows them to disrupt themselves.

5.5.3 FURTHER INVESTING IN THE TRADITIONAL BUSINESS (passive strategy)

Investing in the traditional business has been proposed by core disruptive innovation theory as a core practice of incumbents. It is specifically referred to as investing in sustaining innovations, which involves incumbents incrementally improving the performance of their existing products, services, and business models to meet the demands of their most valuable clients (Christensen, 2006). In theory, this is said to eventually lead to overshooting of the performance of traditional attributes whereby performance is higher than lower segments and the mainstream market needs, which then creates a

gap for disruptors to offer a new mix of benefits that is better valued by lower end segments, niche markets and non-customers, and that eventually reaches a performance level on traditional attributes that the mainstream market values and is overall a better fit for them because of the new attributes introduced. In response strategy theory, this is not only seen as a common practice by incumbents, it is also highlighted as a response strategy to the threat of disruption, whereby incumbents purposefully focus and invest more in their traditional business as a way to defend against disruption. This is because in core disruptive innovation theory, it is assumed that the disruptive innovation will grow to a level where the new mix of attributes will directly compete with the traditional mix and eventually overtake it. The theory then proposes that incumbents must directly face it and potentially embrace it in a new way outside of their traditional business. This assumption was born out of original case studies on disruptive innovation, such as Christensen's study, on the disk drive industry where the new disruptive technology completely replaced existing technologies and incumbents who did not embrace it were forced to leave the industry (Christensen, 1997). Since then, many studies such as Markides (2006), Osiyevskyy & Dewald (2015) and Adner & Snow (2010) have shown that this is not true for all disruptive innovations and especially disruptive business models, and so incumbents may choose to further focus and invest in the traditional business if they believe the disruptive innovation will not overtake their traditional mix of attributes completely.

Bank C is the only incumbent to take this approach, with all of their respondents (20% of total responses in the sample) saying that this is an intentional response strategy of the firm. This is primarily because Bank C operates in the high-end segment of the market, targeting high and ultra-high net worth individuals who value the mix of attributes they offer (such as stability, security, and personal interaction). They acknowledge that they are indeed overshooting the mainstream market of the banking industry in terms of the performance of those attributes but that the mainstream market is not their core market. Their core market does not assign the same value to the new mix of attributes that includes lower prices and easy access. This is a finding of this study whereby if an incumbent is at the high end of the market already, they are unlikely to choose either of the two strategies previously described. Bank C does not believe that the new way of doing banking that disruptors are offering is superior or will conquer their entire high-end market, accordingly this strategy is seen as a better utilisation of their capabilities. Bank C is further promoting its traditional attributes in the market and capitalising on its existing investments. Additionally, their existing mix of attributes is seen as a direct representation of their brand, and so moving away from it will involve potentially losing brand

recognition and credibility. This response is especially viable for Bank C as many of the disruptors are seen to have disruptive business models rather than products or services, and these are typically seen to fail in taking over the entire market, so Bank C focusing on their existing business model may be a valid strategy. The theory behind business model innovation not replacing incumbents is that disruptive business models follow the same characteristics as disruptive innovations. Whereas disruptive technologies are based on new technologies or adaptions of existing technologies, disruptive business models do not discover new products or services. Business models instead redefine what an existing product or service is and how it is provided to the customer; therefore, when looking at research specifically on disruptive business models, there is a common trend that disruptors grow to a significant size but do not replace incumbents (Markides, 2006).

This response strategy is seen to be used by incumbents that have low motivation to respond, as they do not see the link between their markets and the disruptors' markets to be significant enough, and there is lower strategic relatedness between the incumbent and disruptors. The incumbent could also have a lower risk appetite and competition with disruptors. All of these characteristics are seen within Bank C, with additional characteristics such as their brand and organisational culture being geared towards sustaining innovations, and consequently they purposefully also have a low ability to respond with disruptive innovation. This response strategy in this banking industry aligns with what theory proposes regarding when and why this approach is taken.

5.5.4 CATCHING UP TO THE MAINSTREAM MARKET POST THE DISRUPTION (reactive strategy)

This is a strategy proposed by core disruptive innovation theory rather than response strategy theory, that entails an incumbent using its size, credibility, and resources to quickly catch up to the mainstream market post the disruption in order to remain in the industry. Christensen supports that incumbents can catch back up to the mainstream market quickly since the rate of improvement on innovation is faster than changing demands in the market (Christensen et al., 2018). Other researchers say this is risky in terms of potentially losing significant market share during the disruption, which may be harder to gain back post-disruption. In the banking industry of South Africa, 20% of respondents selected this response, all of which represent Bank C. Bank C is seen to use this strategy in combination

with strategy 5.5.3 as a way to learn from disruptors and choose the specific attributes that suit their niche high-end market and that have already been proven to be safe and reliable in the mainstream market. Bank C is less concerned about losing market share because they do not operate in the mainstream market of the entire industry and so uses it primarily to observe and adopt changing trends that may eventually impact its market.

In terms of motivation and ability, there are no guidelines on what levels of these prompt an incumbent to choose this strategy. Bank C had low levels of motivation and ability to respond. If this is used as a reference, this reactive strategy could potentially be found in the bottom left quadrant of the Charitou & Markides (2003) framework on response strategies if it were to be integrated into this literature.

5.5.5 MOVING TO THE HIGHER END OF THE MARKET (reactive strategy)

This response strategy is proposed by core disruption theory whereby rather than accepting being displaced entirely in the market, an incumbent can intentionally move to the higher end of the market where customers value the extreme performance on traditional attributes and profit margins are still significant (Kumaraswamy et al., 2018; Yu & Hang, 2010). This response was chosen by three respondents who all belong to Bank E. This incumbent is seen to execute on the demands of their highest-value corporate and investment banking clients to retain them as customers and motivate them to adopt more of their products and services. This is the second strategy used by Bank E, whereby they look to 'adopt disruptive innovations during the disruption' in order to try to preserve the mainstream market share, but at the same time dedicate additional capacity to their high-end segment in order to preserve and grow the large portion of revenue being generated from that segment. This revenue can then also be utilised in order to support mainstream market demands. This allows Bank E to still capitalise on their overshooting of performance on traditional attributes.

Regarding levels of motivation and ability to respond to disruptive innovation, there is nothing proposed in the theory on what these levels would be ideal for an incumbent to gravitate towards this response. Bank E has high levels of motivation and ability to respond. Using this as a reference, this

reactive strategy could potentially be found in the top right quadrant of Charitou & Markides (2003) framework on response strategies if it were to be further built on with this strategy. This could be because the firm is seen to have enough motivation to not take a more passive response, as is seen in the left quadrants, and has a high enough ability to utilise this towards serving the complexity of demands from their higher-end market.

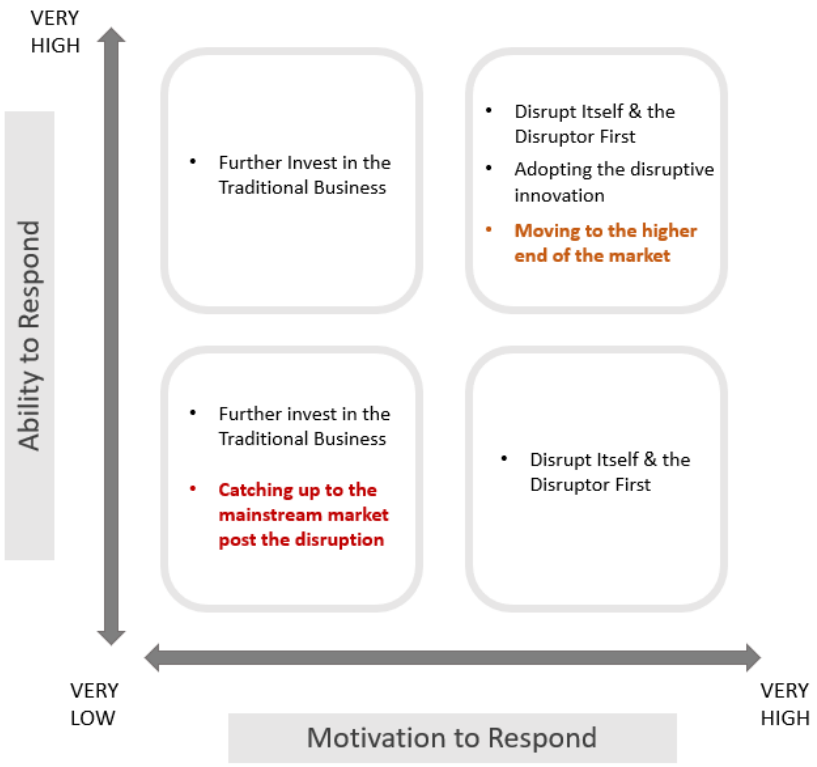

Figure 29: All Observed Strategies overlaid onto the Response Strategy Framework (Charitou & Markides, 2003; Christensen et al., 2018)

When creating a nexus between core disruptive innovation theory and the strategies recommended for incumbents through the literature, as well as the specific response strategy framework proposed by Charitou & Markides (2003), through the results of this study a representation as seen in Figure 29 can be found. The levels of motivation and ability suggested by Charitou & Markides (2003) for an incumbent to prioritise each strategy effectively were found to be aligned with the results. Strategy 5.5.4 and strategy 5.5.5 are not originally found in the response strategy framework, but by observing

the five incumbents' response strategies together with their levels of motivation and ability to respond, based on the findings, it can be recommended that 'catching up to the mainstream market post the disruption' is best pursued when an incumbent's motivation and ability to respond are both low, while 'moving to the higher end of the market' is best pursued when an incumbent's motivation and ability to respond are both high. These have been presented with the other three strategies found in the results to show a representation of the framework as it exists for the incumbent banking industry of South Africa.

In terms of proposition three, which stated that incumbent banks can choose between a range of strategic responses as identified by the literature, to mitigate the threat of disruption, this is found to be valid as five of the eight strategies have been observed within the industry. These five strategies align with what has been found in the literature regarding their classifications and descriptions. No new response strategies were identified outside of those in proposition three. A finding discovered that was not originally proposed within proposition three is that incumbents can have more than one response strategy. This is seen as a key finding as four out of five of the incumbents have two response strategies and use these to supplement each other if they do not have the optimum levels of motivation and ability to support their primary strategy confidently.

5.6 INFLUENCING FACTORS TO INCUMBENT RESPONSE STRATEGIES

The sub-question to research question two (which was '*What is the nature of incumbent responses to the threat of disruption?*') is '*What factors are influencing these responses?*'. The proposition related to this question is that there are factors, identified in the literature, related to either the incumbent's motivation or ability to respond that influence which response strategies an incumbent will prioritise. Motivation is said to be based on the level of connectedness disruptors have with the incumbent's core market, the perceived growth rate of the disruptive innovations, the level of competition between disruptors and the incumbent, the strategic relatedness between them, the risk appetite of the incumbent for disruptive innovation, and the final two factors being their managers' experience in the industry as well as their perception of disruptive innovation being a threat or opportunity. Ability is

said to be based on the level of competencies, resources, and time available within the incumbent to pursue disruptive innovation as well as the level of conflict between the disruptors' and the incumbent's business models. This section discusses the findings in relation to the original proposition made to determine a conclusive answer to the sub-question to research question two.

5.6.1 MOTIVATION TO RESPOND

No incumbents within the sample had a 'very low' motivation to respond, indicating that the degree of disruption occurring is high enough to be acknowledged and to motivate incumbents to do something about it. Additionally, no incumbents had a 'very high' motivation to respond; all were either at a 'fairly low' or 'fairly high' level of motivation, indicating that there is an urgency to respond but not at the highest level yet. At an incumbent industry level as a whole, there is also a 'fairly high' level to respond, and this correlates with disruption being at stage three in the process rather than the latter stages where urgency is higher and motivation would be 'very high' due to disruptors actively competing in and potentially dominating the mainstream market. The factors found that impact incumbent banks' level of motivation are outlined below.

5.6.1.1 CONNECTEDNESS TO CORE MARKET

Markides & Oyon (2010) state that one of the motivators to incumbents responding is when a disruptor has the potential to enter the incumbent's core market and, therefore, is connected to it. This is seen as a motivator for incumbent banks to respond in South Africa, as all except one incumbent identifies it as a contributor to their motivation. The one bank that states that disruptors are not connected to its core market is Bank C, which is a bank that exists in the high-end niche segment of the market. Disruptors are not yet foreseen to be able to serve this segment's needs, and so connectedness to the core market of incumbents may become more of an influencing factor to Bank C as the process of disruption advances. Part of why this still has an impact on incumbent motivation even though disruptors have not encroached on the incumbent mainstream market significantly yet is

because incumbents recognise that if they do not keep up with the core market's demands at a high pace, there is a high chance of them struggling to retain customers and potentially being displaced in the market. These changing demands come from being introduced to new attributes through disruptors within the banking industry, but also changes introduced by disruptors across all industries, as customers are part of many different markets, which influence their customer experience preferences. This increased motivation is aligned with literature where it is described that managers' reactions are particularly driven if a situation is perceived as a danger to their core business that is likely to result in loss (Charitou & Markides, 2003; Dewald & Bowen, 2010; Dewald & Osiyevskyy, 2015; Gilbert & Bower, 2002). As an industry, there is seen to be a 'fairly high' connectedness of core markets between disruptors and incumbents and this factor is seen to increase incumbent motivation to respond.

5.6.1.2 DEMAND GROWTH RATE OF THE DISRUPTIVE INNOVATION

According to Charitou & Markides (2003), another factor influencing an incumbent's motivation is the rate at which the disruptive innovation grows. This statement is supported by literature on innovation and competitive responses (Chesbrough, 2003; Christensen et al., 2016; Debruyne & Reibstein, 2005). The increase in the growth rate of an innovation increases the likelihood that incumbents react and enter the new market as the market becomes more attractive in terms of profitability. All incumbent banks consider the potentially disruptive innovations to be growing either 'fairly' or 'very' rapidly; none of the incumbents consider it to be growing slowly. As an industry, incumbents as a whole consider it to be growing rapidly, increasing their motivation to respond as this reduces their ability to respond at a leisurely pace. The uncertainty of the ultimate size of disruptors' markets also influences this response, and as demand grows, it reduces this uncertainty. This is in line with Christensen (1997) and Chesbrough (2003), who state that forecasting the potential market size during the early stages is difficult due to high levels of uncertainty. Forecasting disruptive innovation differs from forecasting sustaining innovations due to the relative novelty of the new product or service (Linton, 2002). This can be seen as a positively correlated factor in influencing an incumbent's motivation to respond and currently increases motivation to respond by incumbents. For this industry specifically, its impact on motivation is small due to the uncertainty still existing for the future growth rate of these innovations.

5.6.1.3 COMPETITIVENESS BETWEEN DISRUPTORS AND THE INCUMBENT

Three banks consider that disruptors are 'fairly' competitive with their business, and two banks consider that disruptors are only 'moderately' competitive with their business. The incumbent industry as a whole considers disruptors to be 'fairly' competitive with them. A consideration driving this level of competitiveness is that disruptors who are not banks cannot complete settlement and clearing activities, and so still have a high dependency on banks, reducing their competitiveness with incumbents. This was given as a reason for competitiveness not being higher and a historical reason for banks having less motivation to respond. Incumbents also acknowledge that currently, in terms of market share, they are still dominant, only losing significant market share in the lower segments of banking, which include retail banking, SME business banking and the unbanked that incumbents historically overlooked. This is in line with disruptive innovation theory, whereby disruptors start at low-end market segments with inferior performance which is often perceived as less threatening by incumbents (Druehl & Schmidt, 2008a; Sood & Tellis, 2005). If a new entrant introduces a new product that encroaches from the high end, then the incumbent tends to defend its market quickly and resolutely, since the established firm is losing its best customers (those with the highest willingness to pay) (Druehl & Schmidt, 2008a). In contrast, when new entrants attack the less profitable customers in the less attractive tiers of the market, they avoid direct competition with established firms, as is also seen in this industry (Sood & Tellis, 2011). As in the literature, these incumbents are seen to be more motivated by their more profitable customer tiers, which include corporate and institutional banking clients. The level of competition between disruptors and incumbents is a positively correlated factor in motivation to respond.

5.6.1.4 STRATEGIC RELATEDNESS

Strategic relatedness is outlined by Charitou & Markides (2003) as one of the most important factors in motivating incumbents to respond. Strategic relatedness refers to the similarities between disruptors' and incumbents' products, services, customer relationship channels, customer support channels, distribution channels and other strategic factors. When strategic relatedness is high, it motivates incumbents to respond as the new attributes that disruptors are presenting can fit into its own strategic operations, whereby it leverages existing competencies and resources to create synergies and

potential competitive cost advantages for the incumbent. When strategic relatedness is low it demotivates incumbents, as a response will require investment in new channels as well as skills and resources to support the channels, which will detract from its existing business due to a lack of synergies (Palich et al., 2000). None of the incumbent banks said there was a high level of strategic relatedness between them and disruptors. Only two banks said they had a 'moderate' level of strategic relatedness; one had a 'fairly low' level, and the other two had a 'very low' level of strategic relatedness. Overall, the incumbent industry mode across all participants was 'moderate'. The characteristics influencing this level of strategic relatedness is that disruptors are seen to still be at the low end of the market, thus, the various channels used to support their operations are lean and very suited to that segment rather than the entire market. This provides some strategic relatedness to incumbents as some also support a portion of the low-end market, but the majority of their operations do not match those of the disruptors for there to be strong synergies. This aligns with the theory whereby disruptive innovation is perceived as less of a threat while its focus is still on the lower end of the market. The two businesses should be considered related only if the traditional and the new business share enough strategic assets (customers, processes, and channel assets) (Charitou & Markides, 2003). Disruptor markets currently provide little possibility to create synergies and achieve economies of scale when comparing all strategic assets. Incumbents within this study highlight the needs and preferences of their existing customers and the need to continue supporting them until they align with the new mix of attributes. The incumbents are unable to support both markets sustainably and so choose to continue to support their existing customer needs over potentially upcoming new ones. This is in line with resource dependency, described by Christensen as when incumbents find it difficult to react on new-market disruptions because their current clients initially do not want the disruptive innovation. Christensen (1997) supports his statement by explaining how managers may think they control the flow of resources in their firms, but in the end, it is customers and investors who dictate how the money will be spent (Christensen, 1997; Christensen et al., 2018). This is also in line with the famous phrase of Hamel & Prahalad (1994) "the tyranny of the served market", to refer to the destroying effect of solely focusing on serving current customers. Established firms get most of their revenues and profits from the existing products targeting the mainstream segment, so they devote all their efforts to perfecting the current product (Hüsig et al., 2005; Prahalad & Hamel, 1994; Sood & Tellis, 2011). Two incumbents explicitly mention that the old mix of attributes, which includes safety, reliability and a low rate of change, is part of their core brand and, therefore, strategy, further

highlighting how low the strategic relatedness between an incumbent bank and disruptor can be, and how demotivating it is to respond when a response puts the incumbent's brand and credibility into question. This conflict is in line with Porter (1996) and Charitou & Markides (2003), who state that a firm's risk of undermining its image or reputation and the value associated with it is high when adopting a potential innovation and defocusing the organisation from its existing business. Regardless, this is still seen to be a factor that impacts an incumbent's overall motivation to respond. Although positively correlated with overall motivation, it is currently detracting from incumbent motivation to respond at present in the banking industry of South Africa. This factor may be more of a contributor to increasing incumbent motivation to respond once disruption moves to the latter stages in the process.

5.6.1.5 RISK APPETITE

All except one incumbent state that it has a 'moderate' level of risk appetite for disruptive innovation. Across the incumbent industry, the mode for risk appetite is also at a 'moderate'. According to theory, risk appetite has a positive correlation to overall motivation to respond by incumbents, and this also holds for the banking industry of South Africa. A characteristic of the banking industry that has an impact on risk appetite is the stringent level of regulation placed on it by the Twin Peaks regulatory framework described in section 4.1.1.1. Incumbents describe their willingness to take on risk in order to promote disruptive innovation as being high but then ultimately being depressed by the framework they must work within in order to stay compliant. This 'moderate' risk appetite finding aligns with Charitou & Markides (2003), who also state that when adopting a potentially disruptive innovation, firms risk defocusing their organisation by trying to do everything for everybody. Therefore, it is not just the risk of the disruptive innovation failing, but the negative impact on their existing business. This is a characteristic that will hold constant regardless of the stage of disruption that the industry is within, especially because of the complexity of the regulation frameworks. It will always have a negative effect on incumbent motivation to respond as they do not want to risk the potential for fines and a loss of trust in the South African economy. Additionally, theory proposes another reason for this is that because managers are incentivised on short-term goals, they are less likely to have the risk appetite to take on disruptive innovation that may only generate a return on investment in the medium and long run and potentially after their tenure with the firm ends. Govindarajan and Kopalle (2006) propose that long-term goals and incentives would trigger more new opportunities for

disruptive innovation, as managers who are incentivised on short-term goals are more likely to be risk-averse and lean towards sustaining innovations that benefit their careers. Founders of 'disruptive firms' were found to be more confident to make changes and had the freedom to do so as they were incentivised by long-term value created (Govindarajan & Kopalle, 2006).

5.6.1.6 BARRIERS TO ENTRY

Not mentioned as a motivator to respond by theory or within proposition four, the barriers to entry into the banking industry have been seen to impact the motivation to respond by incumbents. This primarily takes form in the regulation of this industry, which has historically been stringent on who can operate as a bank and complete core banking activities as well as on the types of assets that can be formally included in the industry. The regulation comes with capital, liquidity, and monitoring requirements, but recent reviews of the regulations are proposing more non-banks are to be allowed to complete core functions like clearing and settling of transactions as well as for banks and non-banks to now be licenced for the management of digital assets like cryptocurrency and digital identities. With more non-banks being able to clear and settle, this will reduce the barrier to entry into the industry and increase competition, which is seen to increase the motivation to respond by incumbents. In terms of more firms being licenced and having to uphold compliance and monitoring guidelines for digital assets, this increases the barrier to entry, which allows existing banks to better capitalise on digital assets (since it is now legally allowed for them to utilise them within their products and services) and makes it impossible for those who are not licenced to operate. Newly licenced firms also need to account for the cost of compliance within their operating model, which incumbent banks have already done. Barriers to entry are, therefore, a negatively correlated factor that contributes to the motivation to respond by incumbents (when it increases, it decreases the motivation to respond). This is a unique characteristic of this industry and is prevalent enough in the findings to be considered a separate factor from what is proposed by theory.

5.6.1.7 INNOVATION CULTURE

Another factor not mentioned explicitly by disruptive innovation theory or in proposition four is the impact of organisational culture on an incumbent's motivation to respond. Found in the results was that when an incumbent is not set up for disruptive innovation in terms of aspects such as values, communication and recognition mechanisms, then employees of that firm are unmotivated to drive the disruptive innovation objectives of the organisation. This means that an organisational culture set up for disruptive innovation in terms of people plays an important role in actually responding to disruptive innovation and positively correlates to motivation to respond by the overall firm. Innovation culture, therefore, refers to an organisational culture set up for disruptive innovation. One bank also mentions that when an organisation is not set up for disruptive innovation, and when employees do not fully understand it but have to execute it, it leads to failures, which entails wasted resources and wasted time, further demotivating incumbents to respond. The original research proposed by Christensen (1997) shows that incumbents had a strong first-order customer competence but lacked the motivation to build the resources necessary to serve new markets. This was found in later research by Christensen and in the research of Yu & Hang (2010) and Govindarajan et al. (2011). This is also seen to be found by the incumbents within the South African banking industry, whereby mainstream customer orientation in a firm's culture leads to sustaining innovations. Case studies have shown that in times of disruptive change, the organisational culture generates an inertia that is difficult to overcome and is a reason managers struggle with the practical aspects of implementing disruption timely within their own organisation (Henderson, 2006). When looking at incumbent banks, it is also seen that their current business strategy is driven by transaction economics and competitive advantage, whereby they are currently driven by volumes, costs and what the competition is doing, which also drives them towards being product-centric. In order to create a culture that allows for the facilitation of disruptive innovation and entering new markets, theory guides that a firm's strategy should instead be driven by purpose or shared possibility whereby the customer's needs, challenges, and experience is what primarily drives decision-making rather than market position and profitability (Marjanovic & Murthy, 2016). This is supported by the findings whereby when an incumbent's culture is not oriented towards customer needs and serving these through innovation, motivation to respond to disruptive innovation is observed to be depressed.

5.6.1.8 OPPORTUNITY FRAMING

Dewald and Osiyeskyy (2015) conducted research on how whether managers view disruptive innovation as a threat or an opportunity influences their motivation to respond, with managers viewing it as a threat being more reluctant to respond with disruptive innovation and rather devoting their energy into defending their existing market share. This is especially because incumbents may want to avoid the cannibalising of their existing customer demand (Govindarajan & Kopalle, 2006; Kim & Min, 2015; Kostoff et al., 2004). All five incumbents viewed it as an opportunity, with only two banks viewing it as both an opportunity and a threat. Of those two that said 'both', there was no linkage to their response strategy as neither had passive response strategies. All incumbents recognised there would be creative destruction within their organisation and cannibalisation of their own sales eventually but saw this as a necessary step in staying relevant within the market. A characteristic of incumbents across the industry is, therefore, that they all view it as an opportunity, which is aligned to the literature that states that this positively influences their motivation to actively respond to disruptive innovation.

Another idea proposed by Dewald and Osiyeskyy (2015) is that managers with more experience within the industry are less motivated in responding to disruptive innovation because they have historically been successful in using sustaining innovations to assist their firms in retaining their market share, and so are less likely to acknowledge the potential impact of disruptive innovation. The average years of experience across all participants was 14.15 years with a median of 13.5 years, and a range between four and 25 years with a skewness of 0.067, indicating a fairly symmetrical distribution across the years of experience; however, there were no linkages between years of experience of respondents and their responses, with all respondents acknowledging the potential impact of disruptive innovation as well as the opportunity to use it to generate growth for the incumbent.

When describing the reasons behind their firm's response strategies, respondents more frequently gave information relating to risk appetite, barriers to entry, strategic relatedness, and innovation culture as motivators to their responses, and so these are seen to be highly correlated and more weighted in terms of factors influencing response strategies by incumbents in the South Africa banking industry. Other factors, such as connectedness to their core market and competitiveness, were

acknowledged but not to the degree of the aforementioned factors. This is somewhat aligned with response strategy theory, which says that strategic relatedness and risk appetite are the highest in terms of weightings, but then the findings differ from the theory as the theory also says connectedness to the incumbent core market, the growth rate of the disruptive innovation and the competitiveness level are also high in their contribution to overall motivation which is not the case for this industry. Based on respondent sentiment within this industry, it can be gauged that these latter factors have lower weightings and lower overall impact on response strategies in the banking industry of South Africa, and so these factors deviate in terms of weightings to what is proposed by theory.

When looking at the original proposition made, proposition four, which states that there are factors identified in the literature which influence which response strategies an incumbent will prioritise, some of which were related to motivation to respond, is found to be valid. This is because of the seven factors under motivation to respond within proposition four, six were found within this industry that also align to the proposed classification and description of the factor. The factor that did not align with the proposition was 'manager experience in the industry' influencing the response strategy of the incumbent. Looking across all the factors, two new influencing factors to an incumbent's motivation to respond are also seen within this industry: barriers to entry and innovation culture, both of which are strongly correlated to overall motivation and, therefore, have high weightings. These were not originally proposed and so proposition four can be extended regarding these newly identified factors relating to motivation to respond.

5.6.2 ABILITY TO RESPOND

Across all the incumbents, there was one incumbent who had a 'fairly low' ability to respond, two who had a 'moderate' ability to respond and two who had a 'fairly high' ability to respond, indicating that there is variation across incumbents in terms of ability to respond to disruptive innovation. No incumbents said they had a 'very low' or 'very high' ability to respond. Bank C also explicitly says that they intentionally have a 'low' ability to respond as they target the high segments of the market; hence, their abilities are channelled into serving the niche needs of those segments rather than responding and intentionally driving their own disruptive innovations. When looking at all responses together, the incumbent industry had a mode of a 'fairly high' ability to respond. Ability to respond is driven by internal characteristics and so incumbents are at different levels of capabilities in reference to disruptive innovation but overall, the incumbent industry is seen as being able to respond, if required, to disruption. Ability to respond can consciously be improved or left alone, and this can be seen through some of the factors observed, which impact an incumbent bank's level of ability. These are outlined below.

5.6.2.1 LEVEL OF COMPETENCIES

Competencies include knowledge, skills, abilities, experience, and behaviours, and in this case, it is competencies related to pursuing disruptive innovation. Tushman & Anderson (1986) originally distinguish competence-enhancing and competence-destroying discontinuities. Competence-enhancing discontinuities are seen to build on existing experience while competence-destroying discontinuities prompt the need for new skills and technological competence (Tushman & Anderson, 1986). Leonard-Barton (1992) showed that the competencies that give incumbents their competitive advantage in their current business may become blockers in future business. Disruptive innovation theory proposes that disruption forces competence destroying discontinuities since a disruptive innovation initially targets different customers and offers different value propositions in comparison with the traditional business, and so incumbents require new competencies very focused on the ability to cultivate and pursue new attributes that drive disruption (Charitou & Markides, 2003; Henderson, 2006; Sood & Tellis, 2011). All incumbents believe that they have a high level of competencies to pursue disruptive innovation, with four incumbents saying that they have a 'fairly high' level of

competencies and one saying that they have a 'very high' level. The incumbent industry as a whole, shown through the mode across all participants, is seen to have a 'fairly high' level of competencies. This indicates that incumbents within this industry have acknowledged disruptive innovation enough to invest in the development of competencies required to pursue it within their employee base. This includes investments into training programmes focused on competencies in agile and kanban delivery, which are aimed to improve how banking products are developed and delivered in line with the pace required from the market. This is especially needed since what customers value changes over time, and so firms need to be flexible enough to adapt their capabilities accordingly. There is a risk of a potential competency trap existing in this industry as responses on the level of competencies are high across all incumbents. This behaviour is described in disruptive innovations literature as a strong belief in current capabilities by incumbents and subsequent failure to respond appropriately to the disruptive innovation due to this misalignment between impression and reality (Lucas Jr & Goh, 2009). This factor is seen to be positively correlated to an incumbent's ability to respond, which is aligned with what is proposed in existing literature (Charitou & Markides, 2003).

5.6.2.2 LEVEL OF AVAILABLE RESOURCES

Resources can include physical, financial, and human resources and amongst incumbents, all but one (who said they had a 'moderate' level) said that they have a 'fairly high' or 'very high' level of available resources for disruptive innovation. Across the incumbent industry as a whole, there is seen to be a 'fairly high' level of available resources for disruptive innovation, reiterating that incumbents have acknowledged disruptive innovation and its potential to a level where they are allocating a fair amount of the resources to increase their ability to respond to it. Some respondents mentioned that this is a positive side effect of being in a large organisation whereby the availability of resources is high, and so even if the percentage of the total resources to disruptive innovation is low, the value of it is still high relative to most disruptors in the market. The administration of resources is seen to be limited, a symptom of existing project selection processes within banks, which many respondents highlight as a reason for available resources not being fully utilised within the bank. These processes are seen to be geared towards short-term returns, with known financial metrics being deciding factors on which initiatives are resourced, and so naturally they do not lend themselves well to disruptive innovation.

This equates to a high level of available resources for disruptive innovation but a low allocation of resources. The level of available resources is still seen to have a positive correlation to an incumbent's ability to respond, as is found in Charitou & Markides (2003), and in this industry, it does have a positive impact on an incumbent's ability to respond, but allocation needs to be accounted for in the model.

5.6.2.3 ALLOCATION OF AVAILABLE RESOURCES

As described in 5.6.2.2, all incumbents have internal project selection processes that lean towards sustaining innovations. This is in terms of getting initial physical, financial, and human resources for the innovation as well as continuous funding in subsequent years. Due to these processes using known metrics in terms of profitability, growth rate, market share and usability to select the projects, disruptive innovation does not show itself well, as many of these metrics are unknown or uncertain in the short term. Additionally, disruptive innovation does not often contribute significantly to an incumbent's overall growth in the short term, and so it does not lend itself well to refinancing assessments, which are focused on financial metrics within these incumbents. This is in line with the original theory proposed by Christensen, whereby it is described that a characteristic of incumbent firms is that they experience little difficulty in adopting sustaining innovations that target their current customers but fail in the face of disruptive innovations that he described as targeting new or low-end markets, having initially lower performance, and promising lower margins. The failure is not only in prioritising such innovations internally, but also in recognising them as a threat externally (Christensen et al., 2018). Respondents urge the need to move away from this dominant logic and for improved selection processes and organisation around disruptive innovation in order to allow these incumbents to be 'future fit' and have an innovation portfolio that caters to both short-term and long-term value creation. In theory, this is referred to as dynamic capabilities and is defined as "processes, procedures, organisational structures, decision rules and disciplines that enable the senior leaders of a firm to identify threats and opportunities and to reconfigure assets to meet these" (Teece, 2007). This allows incumbents to explore disruptive innovations and exploit their traditional business; however, these dynamic capabilities are seen to be lacking within this industry (O'Reilly & Tushman, 2008). This is also in part to resource dependency, which influences how managers may develop and apply resource

allocation routines (Thomond & Lettice, 2008). It is seen to limit their freedom to satisfy new demand when funding is being sourced from existing demand, which then gets priority through the processes (Yu & Hang, 2010). The theory also proposes that a reason for this is path dependency, whereby firms replicate the routines that have historically been successful and discard those that have led to failures. This generates an efficient allocation of resources towards sustaining innovations where failure rates are lower (Christensen et al., 2018; Thomond & Lettice, 2008). Respondents from Bank E support this theory by openly mentioning that a driving factor of their allocation of resources is the turnaround time of creating value for shareholders. They recognise that reacting involves complex coordination among many departments as well as external bodies, disruption of their existing systems, reallocation of personnel, and a high chance of costly error, which all extend the time in which they will see a return on investment, which is one of their primary measures of success. This diminishes the incentive to allocate physical and human resources towards disruptive innovation. Overall allocation of resources is seen to have a positive correlation to the ability to respond by incumbents, but because it is low in this industry, it is seen to diminish the incumbent's ability to respond.

5.6.2.4 LEVEL OF AVAILABLE TIME CAPACITY

Another factor proposed by theory that contributes to an incumbent's ability to respond is the available time capacity to pursue disruptive innovation. This is connected to the level of competencies, level of available resources and allocation of resources, as even if those contributors are high if firms do not have the available time to utilise them, it diminishes their effect on the overall ability to respond. Two incumbents within the study say that they have a 'fairly low' level of available time capacity to pursue disruptive innovation, and the other three have a 'moderate' level, with no incumbents having a high level. Similarly, to the allocation of resources, this is seen to be related to resource dependency and path dependency, whereby established companies find it very difficult to invest adequate time in disruptive innovation until their customers want them or until their risk of failure is significantly reduced (Yu & Hang, 2010). Across the industry, incumbents as a whole have a 'moderate' level of available time capacity. These lower levels of available time capacity impact the incumbent's ability to utilise all other factors and, in this industry, have been seen to diminish the overall ability of incumbents to respond.

5.6.2.5 CONFLICT BETWEEN INCUMBENT & DISRUPTOR BUSINESS MODELS

All incumbents said they had a 'very high' or 'fairly high' degree of conflict with disruptor business models. In theory, this degree of conflict is seen to be negatively correlated to an incumbent's ability to respond, and so is the case within the banking industry of South Africa. The high degree of conflict equates to firms not being able to replicate disruptors quickly or easily, especially because their cost structure and existing revenue streams differ from disruptors (Markides, 2006). This aligns with the literature, which states that the markets around disruptive innovations tend to require a different mixture of tailored activities that influence the disruptor's business model. In many cases, these activities are not only new but also conflict with the current way of doing business (Christensen, 2006; Henderson, 2006). This is especially seen in the banking industry where disruptors are targeting non-consumption through the unbanked market, and so have a disruptive business model that includes a cost structure, operating processes and a distribution system in which profit margins are thinner, but net asset turnovers are higher, differentiating themselves from incumbents. Since disruptive innovations also require different and conflicting value chains from the ones established companies currently have, incumbents initially have little incentive to adopt them or to respond to them, and this is seen by incumbents within the banking industry for this same reason, which correspondingly gives new entrants the opportunity to address the needs of current low-end non-customers and the chance to build a competitive advantage in manufacturing cost and design experience. The conflicting business models create risks for the incumbent, such as the risk of destroying or undermining the value of the existing distribution network, the risk of compromising the quality of service offered to customers and the risk of defocusing the organisation by trying to do everything for everybody (Markides & Oyon, 2010). Some disruptors are also seen to be gaining an advantage through controlling more of the value chain, which provides a different type of economies of scale than incumbent banks currently have and a further reduction in their ability to respond. One incumbent, Bank C, also intentionally has a very differentiated business model as they focus on the high-end segments of the market. These business model conflicts diminish the incumbent's ability to respond, and this is significantly seen in the banking industry of South Africa.

5.6.2.6 SUPPORTING OF OLD SYSTEMS

This factor is not currently in disruptive innovation response strategy theory but was significantly mentioned by all respondents as a diminisher of their firm's ability to respond. Incumbents in the South African banking industry are some of the oldest companies in the country. Their age is seen as an advantage in terms of experience and growth over the years, which has equated them to having scale and credibility; however, this age is also seen as a disadvantage in terms of disruptive innovation due to the heavy reliance on systems that were built prior to digital banking becoming mainstream. The old systems are seen to be unreliable and unscalable for disruptive use cases but are still required to uphold many of the core banking products and services offered by incumbents. Although all of the incumbents are in the process of building or migrating onto more future-fit systems, all of them still additionally have a reliance on what they call 'legacy systems' in the short and medium term, which consumes resources and time away from new and potentially disruptive initiatives. The support of old systems is seen to be negatively correlated with the ability to respond. In this industry, because legacy systems are so prevalent, it has a highly diminishing influence on the incumbent's ability to respond to disruptive innovation.

5.6.2.7 MANAGEMENT SPAN

Related to innovation culture in section 5.6.1, management span is seen to influence the type of strategy taken by incumbents and its effectiveness, as it is the practical aspect of administrating and executing those strategic plans. A weakness incumbents see in this study is that they have a low management span, which is that managers have few direct reports, and there is a greater hierarchy in the organisation. This creates more levels of approval for decisions and less accountability for the results (Bahcall, 2019). Respondents mention that they observe many levels of approval within their firm, within their own teams and other teams that fall within the lifecycle of an innovation, equating to a high management span and that this has a negative effect on their ability to respond as it takes too much time to make a decision, accountability is lost along the way, and the opportunity to get early mover advantages is lost.

5.6.2.8 OPENNESS TO OPEN INNOVATION

Two incumbents explicitly mention their utilisation of partnerships and vendors as a way to supplement their ability to respond. Bank D & E say that this openness to open innovation has improved their innovation performance by providing a source of competencies and time that improves their ability to respond quickly and effectively using disruptive innovation. These partners and vendors are seen to be more specialised in ideating and executing disruptive innovation and so supplement the organisational design of the incumbent. These firms, therefore, take advantage of internal and external paths to market, which also improves their turnaround time on getting a positive return on investment from resources. This outcome of this strategy for these two banks is in line with the intent of open innovation whereby it works to use this circumstance as a way to bring knowledge and ideas together from across individuals and firms in a way that creates innovation that would not come about otherwise (Chesbrough, 2011). It also provides no limit to the number of parties that can be engaged, allowing firms to gain more insights into consumers (Chesbrough et al., 2008). Openness to open innovation is seen as a positively correlated factor in terms of overall ability to respond, based on the two incumbent cases.

The size of the incumbent is also seen as a positive attribute towards the ability to respond by respondents, especially in reference to the scale and credibility of the brand when introducing potentially disruptive innovations; however, this is strongly linked to available competencies and resources as outlined in 5.6.2.1 and 5.6.2.2 and so it not outlined as a stand-alone factor. Organisational design is also seen as an influencing factor in terms of the innovation capability evolving from the various options available, such as having a dedicated team for innovation, innovation being an embedded function in each team, being an ambidextrous organisation (where exploration and execution are separated but both receive priority) or ultimately having a permissionless capability (involving cross-functional teams and resources being allocated on opportunity & strategic alignment). The literature points to a permissionless structure being best suited for innovation as units and teams can be given the ownership and resources they need, and there exists a mix of capabilities centred around a value proposition rather than when innovation is treated as a separate activity (Sikorsky,

2021). This is supported in the responses by interviewees from two incumbents. Bank A particularly acknowledges their embedded design is creating greater fragmentation in resource allocation between old and new initiatives and that there is a need to evolve to better enable their ability to respond to disruption. In terms of the overall study not enough data was collected on this topic to explicitly mark this as an influencing factor across the industry.

When describing the reasons behind their firm's response strategies, respondents more frequently gave information relating to supporting old systems, available time capacity, allocation of available resources, and conflict with disruptor business models as contributors to their ability to respond, and so these are seen to be weighted more in terms of factors influencing the ability of incumbents to respond and influencing their ultimate response strategies in the South Africa banking industry. All other factors were acknowledged but not to the degree of the aforementioned factors. This is different to the existing response strategy theory, which does mention the significance of available time capacity and comparison of business models but also mentions the level of competencies and resources to be 'very high' in terms of significance towards overall ability; however, based on respondent sentiment it can be gauged that these latter factors have lower significance and overall impact to response strategies in the banking industry of South Africa than what is proposed by theory.

In terms of proposition four and the original proposition that there are factors, identified in the literature, which influence the response strategies an incumbent will prioritise, some of which are related to ability to respond, is found to be valid. Of the four factors proposed to be related to ability, all four were found in this industry and align to the classification and description of the factor. However, four new factors not originally stated were also found in terms of contributors to an incumbent's ability to respond: allocation of available resources, supporting of old systems, management span and openness to open innovation. There are, therefore, eight influencing factors related to the ability to respond.

An additional theme found is that compared to theory, which had one negatively correlated influencing factor, this industry is seen to have three negatively correlated factors. This is significant since incumbents must also manage the negatively correlated factors to a level that does not detract from the impact of other factors. Rather than simply being able to ignore factors and focus on others that the incumbent is more specialised in, it will need to distribute effort across these negatively correlated factors as well, especially if they are actively attempting to increase their overall ability to respond.

5.7 SUMMARY OF THE DISCUSSION

This study has two research questions with one sub-question each. For each research question and sub-question, a proposition was originally formed regarding the expected results. In this section, the analysis and discussion of the findings are summarised as they relate to each proposition to highlight the validity of each proposition as well as new findings.

Research Question One and Proposition One:

The first proposition to the first research question, '*To what degree is the South African banking industry undergoing disruption?'* was that disruption is occurring within the banking industry of South Africa which is to a high enough degree that incumbents have acknowledged disruptors and the threat of disruption.

All participants across all five incumbent banks have a consensus that there is a degree of disruption occurring within the industry, and it is not in a state that it can be considered that no disruption is occurring. The entire sample also acknowledged two or more disruptors or potential disruptors together with the innovations they considered disruptive. The two types of disruptors acknowledged by all incumbents are newcomer banks and payment gateway providers. This is followed by any product or service provider who adds financial services onto their existing offerings (acknowledged by 85% of participants), digital asset companies (acknowledged by 45% of participants) and technology companies (acknowledged by 25% of participants). All incumbents within the sample have assessed the disruptors and their offerings enough that they have prioritised response strategies and so are also seen to have acknowledged the threat of disruption. Therefore, there is strong evidence for proposition one, that disruption is occurring within the banking industry of South Africa which is to a high enough degree that incumbents have acknowledged disruptors and the threat of disruption, and hence, it is proven to be valid and conclusive at the time this study was conducted. The existence of disruption within the industry is a precondition for response strategies to exist, as it motivates actions to be taken by the incumbents that would not have otherwise occurred.

Research Question One's Sub Question and Proposition Two:

The second proposition to research question one's sub-question, *'Why is this considered the case?'* was that there are specific market characteristics related to the phases and characteristics from the process of disruption that are driving this perception by incumbents. With proposition one being proved valid, this sub-question looks to discover why the banking industry of South Africa is considered to be undergoing disruption to a high enough degree that incumbents have acknowledged disruptors and the threat of disruption. The findings are summarised against the proposition below in Table 7.

Stage within the Process of Disruption	Market Characteristics Proposed to be Driving the Perception of Disruption	Summary of the Research Findings
One: No Disruption in the Industry Yet	1. Incumbents create the opportunity for disruption by overshooting performance on traditional attributes. 2. All segments are still consuming the existing traditional mix of attributes.	It has been found that incumbents are being seen to create the opportunity for disruption by overshooting on traditional attributes, and all segments were consuming the traditional mix of attributes. However, all segments are no longer consuming the traditional mix of attributes at present. These characteristics being previously observed but not the current state of reality confirms that the process of disruption is beyond this stage, so disruption is considered to be at a higher degree because these two characteristics have been observed in the past. These two characteristics are aligned with the literature on what the start of the process of disruption entails.
Two: Disruptive Innovation/s Emerging but Insignificant	1. New entrants are at the low end of the existing market or are targeting a new market with a better-suited mix of attributes 2. Their innovations are currently low in performance 3. The size of the new entrants' market is still small	These characteristics were previously observed but are no longer the current state of reality as the new entrants are beyond only starting at the low end of the market. Their innovations are no longer considered low in performance across the industry; their market has grown, and incumbents, although previously not acknowledging them, are now acknowledging disruptors and the threat of disruption. These characteristics being previously observed but not the current state of reality confirms that the process of disruption is beyond this stage, so disruption is

	4. Incumbents are not acknowledging these market developments as a threat yet	considered to be at a higher degree because these four characteristics have been observed in the past. These four characteristics are aligned with the literature on what the second stage of the process of disruption entails.
Three: Disruptive Innovation/s have Emerged and is Growing in Performance	1. The new entrants' markets are growing 2. Their innovations are starting to attract higher segment consumers 3. The traditional attributes of their potentially disruptive innovations are increasing in quality 4. The innovation is leading in niche markets	These characteristics are what is currently being observed at the time this study was conducted by participants across the five incumbents within the sample. This confirms that these characteristics being observed at present are part of why the industry is considered to be undergoing disruption to a high enough degree that incumbents have acknowledged disruptors and the threat of disruption. These characteristics, being the current state of reality for this industry, confirm that the process of disruption is at stage three. These four characteristics are aligned to literature on what the third stage of the process of disruption entails.
Four: Disruptive Innovation/s have reached the Mainstream Market	1. The disruptive innovation/s are sufficient on traditional attributes and superior on new attributes 2. The disruptor/s are starting to acquire mainstream customers from incumbents	Participants within the sample share that fintechs still have a reliance on banks, and significant market share has not been lost by incumbents. Trust remains with incumbents across mainstream and high-end markets, which highlights that the four characteristics mentioned within the proposition have notably not been observed yet. If they were observed currently, the industry would be considered to be undergoing an even higher degree of disruption. The four originally proposed characteristics not being seen yet for this industry confirm that the process of disruption is not beyond stage three. The characteristics are aligned with the literature on what the fourth and final stage of the process of disruption entails, as they are not being observed within the industry, which is why incumbents are confident the industry is not at the latter stages of disruption or has already been disrupted.
Five: Industry Disruption has Occurred, and the Basis of Competition has Changed	1. The disruptive innovation/s are the standard on mainstream attributes 2. Firms within the industry who have not adopted the new mix of attributes, lose significant market share and may exit the market	

Table 7: Summary of Proposition Two in Comparison to the Research Findings

Overall, proposition two is found to be valid as there is strong evidence to why the industry is considered to be undergoing this degree of disruption, which is centred around the proposed sequential market characteristics either being observed in the past (stage one and two), currently being observed (stage three), or notably absent at present (stage four and five) and these characteristics that incumbents monitor is related to the phases and characteristics from the process of disruption found in literature. It can additionally be extended with four new characteristics for this industry specifically: a significant increase in the number of new products and services in the industry, a significant increase in the number of firms offering financial services and a reduction in the boundaries of the banking industry (found in stage three) as well as a notable increase in the urgency for incumbents to respond (found in stage five). These characteristics do not invalidate proposition two but provide a more conclusive answer to why the banking industry of South Africa is considered to be undergoing disruption to a high enough degree that incumbents have acknowledged disruptors and the threat of disruption.

These findings highlight that the process of disruption can be tracked by incumbents using the characteristics observed, and it can be detected if and when the degree of disruption increases further to where the industry begins to move into the final stages. This way, incumbents may adjust their response strategies to the current reality. It additionally highlights that the disruptive innovation theory is applicable to this industry, as a significant critique of the theory is that its creator, Clayton Christensen, may have chosen cases that match the theory rather than it being generalisable to all industries. The validity of proposition two supports that the process of disruption is generalisable to the South African banking industry, as what is found within the industry aligns with the characteristics within the theory.

Research Question Two and Proposition Three:

The third proposition to the second research question, '*What is the nature of incumbent responses to the threat of disruption?*' was that the incumbent banks can choose between a range of strategic responses as identified by the literature, to mitigate the threat of disruption. The validity of this proposition would indicate that there are strategies to choose from by incumbents that best lend themselves to responding to disruptive innovation.

Out of the eight proposed response strategies, five were identified to be used by incumbents within the South African banking industry. In order of most to least frequently utilised, these are: adopting the disruptive innovation during the disruption, disrupting itself and the disruptor first, further investing in the traditional business, catching up to the mainstream market post the disruption and moving to the higher end of the market. The three response strategies originally proposed but not observed within this industry are: ignoring the disruptive Innovation, embracing the disruptive innovation only and scale, and exiting the market.

Proposition three is therefore found to be valid and the findings are able to answer research question two as there is strong evidence that the nature of incumbent responses to the threat of disruption includes a list of five response strategies that are well defined by literature and that have been utilised within the industry. A finding that can be used to extend proposition three is that the nature of incumbent responses includes more than one strategy, as four out of the five incumbents are seen to be utilising two strategies in parallel. This is seen to allow an incumbent to be diversified and flexible in their approach in order to adjust to changing market conditions as well as reduce the risk of failure.

In terms of additional broad themes found through the discussion when reviewing propositions two and three, aligned to the literature is that the process of disruption is indeed relative as not all incumbents perceived that the industry was in the same stage in the process, with some perceiving that it was in later stages based on how different their own mix of attributes within their value propositions was compared to the disruptors. One bank, Bank D, specifically perceived that the base of competition had already changed, so their urgency to respond was higher than other banks, which led them towards using open innovation as a mechanism to respond at a faster pace. This finding indicates that the perception by an incumbent of where an industry is in the process of disruption does have an impact on the response strategy chosen, so accordingly, the strategies within the findings must specifically be related to the process of disruption where disruptors have already been seen to dominate niche and lower-end markets and are now increasing in performance and growing in demand. This study cannot justify that these same strategies were prevalent in earlier stages of the process of disruption and will be dominant in the latter stages. This theme does not invalidate the original propositions but does provide greater context in terms of answering the second research question of '*What is the nature of incumbent responses to the threat of disruption?'.*

Research Question Two's Sub Question and Proposition Four:

The fourth proposition to research question two's sub-question, *'What factors are driving these responses?'* was that there are factors identified in the literature which are related to either the incumbent's motivation or ability to respond that influence which response strategies an incumbent will prioritise. The validity of this proposition would indicate that their decision on which strategies to opt into is limited and can be calculated rather than unrestricted.

Proposition four is found to be valid but inconclusive and so can also be further extended with new findings in order to answer the sub-question to research question two. The original proposition included seven factors related to an incumbent's motivation to respond that would influence which response strategy they would prioritise. Of the seven, six were found within the industry that match the classifications and definitions originally proposed; these are connectedness between core markets between the incumbent and disruptors, demand growth rate of the disruptive innovations, level of competition between disruptors and the incumbent, strategic relatedness between disruptors and the incumbent, risk appetite of the incumbent and the incumbent's managers' perception of disruptive innovation being a threat or opportunity (referred to as opportunity framing). The one factor proposed but not found to influence incumbents' response strategies is their managers' experience in the industry. The original proposition also included four factors related to an incumbent's ability to respond that would influence which response strategy they would prioritise. Of the four, all four were found within the industry that match the classifications and definitions originally proposed; these are an incumbent's competencies in relation to requirements of a disruptive innovation, their available resources for disruptive innovation, their available time capacity for disruptive innovation and the conflict between the business models of disruptors and the incumbent. This equates to 10 out of the 11 projected factors being found to influence an incumbent's priority on which response strategy it utilises, so the proposition is found to be valid. It can additionally be extended as six new factors were found within this industry: two in motivation to respond and four in ability to respond. For motivation, the additional factors are barriers to entry (found to be negatively correlated to motivation to respond) and innovation culture (found to be positively correlated to motivation to respond). For ability, the additional factors are the allocation of available resources to disruptive innovation and openness to open innovation (found to be positively correlated to the ability to respond), as well as the supporting of old systems and management span (found to be negatively correlated to the ability to respond). This

equates to this industry having 16 factors related to either the incumbent's motivation or ability to respond that influence which response strategies an incumbent will prioritise. These findings provide a conclusive answer to research question two on what factors are driving incumbent responses.

In terms of additional findings, out of the eight factors relating to motivation to respond, seven are positively correlated to overall motivation, and one is negatively correlated. Of the eight factors relating to the ability to respond, five are positively correlated to overall ability, and three are negatively correlated. This highlights that incumbents need to manage these factors closely, as the impact on positively correlated factors will be detracted by negatively correlated factors if they worsen over time and are not managed.

CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS

6.1 INTRODUCTION

This chapter summarises the findings of the study and the conclusions that can be drawn from the primary and secondary data as well as the literature reviewed based on two focus areas: the degree in which the banking industry of South Africa is undergoing disruption and the nature of incumbent responses. The problem statement that this study tackles is the incumbent's potential failure to appropriately respond in the face of disruptive innovation, and this study aims to contribute to resolving this problem by answering the research questions proposed: '*To what degree is the South African banking industry undergoing disruption?'* and *'Why is this considered the case?'* as well as *'What is the nature of incumbent responses to the threat of disruption?* and *'What factors are driving these responses?'*. To answer these questions, five incumbents across the banking industry of South Africa, who collectively hold 90% of the market share, were included in the sample. Four employees from each incumbent who are closely involved in their firm's innovation portfolio management and/or business model strategy were probed using a qualitative approach of semi-structured interviews. Their responses were gathered and analysed to identify dominant themes that contributed towards answering both research questions and their sub-questions in this exploratory study. Through the answering of these questions, it is intended that incumbents, as well as other relevant stakeholders, will be able to use the findings to identify the degree of disruption and monitor its progression proactively, as well as be able to identify a suitable response strategy to preserve and promote its own growth and ultimately overcome failures in the face of disruptive innovation. This chapter provides these conclusions together with recommendations to the beneficiaries of this research and those looking to build on it in future studies.

6.2 MAJOR FINDINGS

6.2.1 DEGREE OF DISRUPTION WITHIN THE BANKING INDUSTRY

It is proposed in the literature that disruption is not a single event but instead a process that may take years and sometimes decades before the disruptive innovation enters the mainstream markets or before the basis of competition has shifted. This is aligned with the findings of disruption within the banking industry of South Africa, whereby disruption is seen to have begun, but the disruptive innovations, although growing, are yet to be seen dominating the mainstream market, and the basis of competition is yet to change, and therefore disruption is still progressing.

Disruption for this industry is specifically found to be at a stage where the disruptive innovations are no longer insignificant and are growing in performance and presence across the industry. This is referenced as stage three within the process of disruption in the banking industry of South Africa. It has passed the characteristics of stage one, whereby the environment for disruptive innovation to emerge does exist. Characteristics such as incumbents overshooting the performance on traditional attributes while serving the demands of their major clients and an overall lack of creative destruction driven by incumbents themselves. It has also passed the characteristics of stage two, which is seen through the disruptive innovations starting at the low end of the market where non-consumption and underserved customers exist. The disruptors have primarily focused on the retail and SME business banking segments, which are at the low end of the industry compared to higher segments of business banking as well as the corporate and institutional banking. Disruptors and potential disruptors are acknowledged and found to be well understood by incumbents to a level where incumbents acknowledge the threat of disruption to their own businesses. The types of disruptors found are newcomer banks, payment gateway providers, existing product and service providers (now offering financial services), digital asset companies and finally, technology companies. The two most prominent types of disruptors are newcomer banks and payment gateway providers which were mentioned by all participants within the study. The innovations that the various entities are offering have also been acknowledged by incumbents and are noted to provide a new mix of attributes by introducing aspects of the banking offering that are cheaper, more convenient and/or more accessible than existing offerings, and which are also better suited to the niche and low-end markets in which they are serving and now dominating. These attributes include digital operations, less complex products, and lower

fees. The process is seen to be in stage three as the characteristics noted are that disruptors are now dominating the low end of the market, demand is growing to a point where attributes that disruptors have introduced are being replicated in the mainstream market, and disruptors are seen as potential competition by incumbents. The process is not seen to be past stage four, which is characterised by disruptors sufficiently serving the mainstream market, as incumbents currently are found to still be dominant in the mainstream market, holding 90% of all assets within the industry. Disruptors are also still reliant on incumbent banks for core banking functions, with regulation prohibiting them from controlling more of the value chain. However, demand for disruptive innovations is growing, and disruptors are beginning to encroach on higher segments. Regulation on core banking functions such as clearing and settling are also being revised, increasing the threat of disruption and lowering the barriers to entry. This is supported by the industry having a 'fairly high' rather than 'very high' motivation to respond, as urgency to respond does exist but is not at the highest level yet. This reinforces that disruption is not in its concluding stages but has passed its initiating stages.

A criticism of disruptive innovation theory is that there is a lack of consensus around the definition of disruption as well as it not being generalisable to all industries since the original theory was primarily based on the disk drive industry, and other cases and industries used to support the ontology are purposefully selected to match the theory. The process of disruption in the banking industry of South Africa, which includes the market characteristics that allow disruption to thrive, the characteristics of the actual disruptive innovations, and where and how they evolve in the market, are found to be aligned with the theory proposed by Christensen, and so this study assists in refuting some of the claims that there is a lack of clarity around the definitions. It also assists in showing that the theory of disruptive innovation is generalisable to the banking industry in the emerging market of South Africa in terms of core concepts. Christensen himself said that the disruption process might be very different depending on the specific industry and market. Subsequently, this study aims to aid in there being greater confidence in decision-making based on the core theory by banks within South Africa (Christensen et al., 2004).

The stage within the process of disruption, although acknowledged to be in stage three by the industry and three out of five incumbents, is also found to be relative, as two of the incumbents believe that the process is at a higher stage based on comparing their own products, services & business model relative to the disruptors. This is seen by Bank D, whereby respondents from this incumbent all perceive that

disruption is in stage five. This perception has created greater urgency to respond, which has driven the incumbent to open innovation as part of their response strategy, which they believe will allow them to move at the faster pace required to defend against the disruption. This is significant because they believe open innovation also presents new risks than managing the response themselves, but they have accepted the risk compared to the risk of being disrupted. Their considerations are found to be different than if they perceived disruption to be earlier in the process.

This stage of the process, where disruptive innovation has emerged and is growing in performance, is seen to be significant enough for incumbents to acknowledge the threat of disruption and the disruptors, and to choose a response strategy. The findings show consensus around the market characteristics driving this perception, and that these are aligned to characteristics of disruption found in the literature. Four new characteristics have additionally been found within this industry that may assist in the tracking of the process of disruption. These characteristics are: there is a significant increase in the number of new products and services, a significant increase in the number of firms offering financial services and a reduction in the boundaries of the industry (found to be associated with at least stage three) as well as a notable increase in the urgency to respond by incumbents (associated with stage five).

The response strategies chosen at the current stage of disruption by incumbents include one passive strategy, three reactive strategies and one proactive strategy. The high number of reactive and proactive strategies relative to passive reinforces that the threat of disruption exists and is high enough to warrant an active approach by most incumbents in defending against it.

6.2.2 NATURE OF INCUMBENT RESPONSE STRATEGIES

The literature in core disruptive innovation theory primarily focuses on how incumbents can react on the introduction of a potentially disruptive innovation in their industry, with a focus on the adoption decision; when and how firms adopt the disruptive innovation. However, not all disruptive innovations do completely replace the incumbent business, which implies that adoption is not the only option for incumbents to react to a disruptive innovation. This study's findings validate this theory, as a range of

response strategies were found across incumbents, including but not limited to adopting the disruptive innovation.

Influencing factors, in terms of which strategies got prioritised, were found to fall into two categories: motivation to respond to disruption and ability to respond to disruption. When looking at motivation, incumbents within the banking industry of South Africa overall are seen to have a 'fairly high' motivation to respond. This indicates that there is indeed urgency to respond, but not at the highest level yet, as incumbents are still found to dominate the mainstream market. Within this industry, eight factors were found to influence incumbent motivation. Six of these influencing factors are mentioned by and aligned with what is proposed in theory in terms of it being an influencing factor and the factor being positively correlated to overall motivation. These influencing factors are: the disruptors' connectedness to the incumbent's core market, the demand growth rate of the disruptive innovations, competitiveness between disruptors and the incumbent, strategic relatedness between disruptors and the incumbent, and finally, opportunity framing. Two factors are newly found through this study to be influencing factors on incumbent motivation to respond within the banking industry of South Africa. These are: barriers to entry (negatively correlated to overall motivation to respond) and innovation culture (positively correlated to overall motivation to respond). These two factors are found to be unique to this industry and can potentially be added to theory as influencers not only to an incumbent bank's overall motivation but, ultimately, their preferred response strategy to the threat of disruption. One influencing factor also found in the literature was years of experience of managers, and it being negatively correlated to overall motivation to respond; however, no evidence of this was found through the data. When comparing theory and the reality of the banking industry of South Africa, Charitou & Markides (2003) propose that strategic relatedness and risk appetite have the strongest correlation to overall motivation to respond. The study finds that strategic relatedness and risk appetite do indeed have strong correlations and, thus, are relatively more significant to overall motivation to respond, but so are barriers to entry and innovation culture, and so when looking at the factors that most impact overall motivation to respond in this industry, these four factors are noted.

When looking at ability, incumbents within the banking industry as a whole are seen to have a 'fairly high' ability to respond as a whole, but when looking at individual incumbents, the range is from 'fairly low' to 'fairly high', and so there does exist some variability across the industry. The ability to respond is found to be driven by internal characteristics, and incumbents are at different levels of capabilities in

reference to disruptive innovation, but overall, the industry is seen as being able to respond to disruptive innovation if need be. Within this industry, eight factors were found to influence an incumbent's overall ability to respond to disruptive innovation. Four of these are mentioned by and aligned to what is proposed in theory; these factors are: level of competencies, level of available resources, level of available time capacity towards disruptive innovation, and conflict between incumbent and disruptor business models. All of these are said to be positively correlated to the ability to respond according to the theory, and this is the case found within the banking industry of South Africa. Four factors were not originally proposed by core disruptive innovation theory or response strategy theory but were found to be influencers on an incumbent bank's ability to respond. These four factors are: the allocation of available resources to disruptive innovation (positively correlated to the overall ability to respond), supporting of old systems (negatively correlated to the overall ability to respond), management span (negatively correlated to the overall ability to respond) and openness to open innovation (positively correlated to the overall ability to respond). In terms of weighting on the overall ability to respond, the four factors originally proposed by the theory are also proposed to all be strongly correlated to the overall ability of an incumbent to respond. However, found through this study is that incumbents within the banking industry of South Africa instead weigh the four influencing factors of available time capacity and conflict between incumbent and disruptor business models (aligned to theory) as well as allocation of available resources to disruptive innovation and supporting of old systems (differs from theory) higher than other factors in terms of significantly contributing to their overall ability to respond. This finding highlights a deviation from the theory found in the study. Additionally, it is found that there are in total now three negatively correlated influencing factors to ability to respond, identified for incumbents in this industry, meaning that although incumbents within this industry may have high levels of competencies, time and other factors, they also need to manage the negatively correlated factors enough not to depress their overall ability to respond, which is a new insight in the context of this industry.

The nexus between core disruptive innovation theory and response strategy theory produced eight possible response strategies for incumbents within the banking industry of South Africa to potentially be used, with the possibility that other industry response strategies existed that were not found in theory. Through primary data collection via semi-structured interviews, it was found that five response strategy types existed within this industry by incumbents. The five strategies, in order of most frequently utilised to least frequently utilised by incumbents, are: adopting the disruptive innovation

during the disruption, disrupting itself and any potential disruptor first, further investing in the traditional business, catching up to the mainstream market post the disruption and moving to the higher end of the market. Out of the five strategies, one is seen to be a passive response, three are reactive responses, and one is a proactive response, showing that all three types of response styles have been observed in the industry. However, the frequency of observations is higher on active rather than passive strategies. The most observed response strategy found for incumbents as a whole across the industry by a margin of 30% from the second most frequent is 'adopting the disruptive Innovation during the disruption'.

Out of the five strategies, three of them (adopting the disruptive Innovation during the disruption, disrupting itself and any potential disruptor first and further investing in the traditional business) all form part of response strategy theory whereby an incumbent's level of motivation and ability to respond is predicted to determine the type of strategy the incumbent chooses to respond with. These three strategies all were found to align with the theory in terms of the level of motivation and ability that would lead to the strategy being chosen, and so there is a high level of accuracy found in terms of using Charitou & Markides (2003) theory within the banking industry of South Africa. The two strategies that presented themselves but did not form part of response strategy theory and were instead part of core disruptive innovation theory are: catching up to the mainstream market post the disruption and moving to the higher end of the market. If an overlay occurs between response strategy theory and these two strategies, 'catching up to the mainstream market post the disruption' would be found when an incumbent has both low motivation and low ability to respond to the threat of disruption. 'Moving to the higher end of the market' would potentially be found as a strategy by an incumbent that has both high motivation and high ability to respond to disruptive innovation. An additional theme identified through the findings is that, on average, an incumbent bank typically has two response strategies. This is seen to allow an incumbent to be diversified and flexible in their approach in order to adjust to changing market conditions as well as reduce the risk of failure. No findings on the relative success of each response strategy were found; however, this was not an objective of this study.

The observations within this industry of incumbents holding their dominance within the market, as well as acknowledging and using disruptive innovation as part of their own responses and growth, highlights that the original theory of disruptive innovation was incorrect in stating that managers do

not have the ability to identify and face disruption successfully, that all potentially disruptive innovations succeed and that the only path for incumbents once disruption has occurred is to exit the market (Christensen, 1997). Christensen did acknowledge that this was not always the case in later iterations of the theory and made extensions to include incumbents enabling disruptive innovation through autonomous business units and so the findings of this study acknowledge that these extensions were correctly made and that managers are very aware of the process of disruption within this industry, as was similarly found by several other authors in other industries (Adner & Zemsky, 2005; Christensen, 2006; Druehl & Schmidt, 2008b; Markides & Oyon, 2010; Yu & Hang, 2010).

6.3 KEY CONCLUSIONS OF THE STUDY

This research report aimed to answer two questions with the intent that the findings will be used to enhance the understanding and practice of innovation management in the South African banking industry, and specifically in how incumbents respond to the threat of disruption in order to sustain and grow their business.

Research question one is '*To what degree is the industry undergoing disruption?*' with the sub-question being *'Why is this considered the case?'.* The propositions were that disruption is occurring within the banking industry of South Africa, which is to a high enough degree that incumbents have acknowledged disruptors and the threat of disruption (proposition one) and that there are specific market characteristics related to the phases and characteristics from the process of disruption, that are driving this perception by incumbents (proposition two).

The banking industry of South Africa has been found to be undergoing disruption to a high enough degree that incumbents have acknowledged disruptors and the threat of disruption. This is confirmed through the incumbents having acknowledged and assessed existing and potential disruptors, which they now consider competition. These disruptors can be grouped into five types: newcomer banks, payment gateway providers, existing product and service providers (who are now

offering financial services), digital asset companies and technology companies. Newcomer banks and payment gateway providers are the most prominent type across all disruptors. Incumbents have also acknowledged disruptors to the extent that they have begun replicating some of their propositions in terms of the attributes they have introduced, such as lower fees, platformisation and digital operations. The incumbents have also acknowledged the threat of disruption by deeming that the industry is in the middle stage of the process of disruption, which is characterised by the market for disruptive innovations growing, the innovations starting to attract higher segments of the market and therefore encroaching on the mainstream market, as well as the traditional attributes of the innovations growing in quality. Incumbents have additionally deemed it enough of a threat to prioritise and invest in response strategies, with all five incumbents within the sample responding to disruptive innovation using at least one, but on average, two, response strategies. Five strategies were found in total, with four being either reactive or proactive response strategies compared to passive strategies. The occurrence of active strategies compared to passive also supports that the degree of disruption is high in this industry enough to warrant an active response by most incumbents. The acknowledgement of disruptors and the threat of disruption by incumbents validates this study's first proposition.

To answer the sub-question, *'Why is this considered the case?',* the market characteristics observed by all incumbents were consolidated and compared to the literature. Within proposition two, 14 market characteristics, each falling within a specific stage within the disruption process, were proposed to drive the perception of disruption by incumbents. These characteristics belong to five sequential stages. Identifying if a stage's characteristics are the current reality, together with the previous stages' characteristics being already observed and the following stages' characteristics being notably absent, would confirm the specific stage within the process of disruption the industry is in, and therefore the degree of disruption occurring. **Within the banking industry of South Africa, it was found that there are specific market characteristics related to the phases and characteristics from the process of disruption that are driving the perception by incumbents that the industry is undergoing disruption to a high degree.** All 14 characteristics were noted in the responses by participants, with them highlighting that the four characteristics relating to stage three of: the new entrants' markets are growing, their innovations are starting to attract higher segment consumers (such as higher segments of business banking and private banking), the traditional attributes of their potentially disruptive innovations are increasing in quality (such that some mainstream customers are now using both incumbents and disruptors, and incumbents are replicating their successful attributes) and their

innovations are leading in niche markets (dominating in retail banking and SME business banking), are the current reality. Additionally, characteristics associated with stage one and two have been observed in the past and the characteristics associated with stage four and five are notably absent at the time this study was conducted. These characteristics and their current state of observation across the five incumbents are why the banking industry is considered to be undergoing disruption to a high enough degree that incumbents have acknowledged disruptors and the threat of disruption. This is aligned with disruptive innovation literature which says that at earlier stages within the process of disruption (stages one and two), disruptors and their markets are still insignificant, so much so that incumbents overlook them and the threat of disruption, and at the latter stages (stage four and five) incumbents would be losing significant market share to disruptors, all of which is not currently the case within this industry and is noted as such within participant responses. In addition to the 14 characteristics, four new characteristics were found within this industry specifically: a significant increase in the number of new products and services in the industry, a significant increase in the number of firms offering financial services and a reduction in the boundaries of the banking industry (currently being observed and therefore can be associated with stage three) as well as a notable increase in the urgency for incumbents to respond (only seen by Bank D who considers the industry to be in stage five and therefore this characteristic can be associated with stage five). This proposition being valid and further extended shows that the core concepts as well as the theory on disruptive innovation being a process rather than a single event hold true for this industry but can be enhanced with some industry-specific findings as well. The answer to question two provides insight to where the banking industry of South Africa is in terms of disruption at the time this study was conducted, as well as the characteristics to monitor to identify if the degree of disruption is increasing.

Research question two is '*What is the nature of incumbent responses to the threat of disruption?'* with the sub-question being *'What factors are influencing these responses?'.* The purpose of these questions was to identify what actions are taken after an incumbent identifies a potential disruption threat in order to remain within the industry as well as experience its own growth. This information aims to derive a common understanding of what disruption response strategies look like for incumbents in this industry and identify whether they are fundamentally different from what existing theories assume. It was originally proposed that the incumbent banks can choose between a range of

strategic responses as identified by the literature, to mitigate the threat of disruption. Eight explicit response strategies were suggested to be prevalent in this industry. This would indicate that there are strategies to choose from by incumbents that best lend themselves to responding to disruptive innovation and, therefore, contribute to response strategy literature for this industry. The sub-question also aims to identify the influencing factors that drive why incumbent banks choose certain strategies over others and factors that influence the implementation of response strategies. It was proposed that there are factors identified in the literature which are related to either the incumbent's motivation or ability to respond that influence which response strategies an incumbent will prioritise.

The nature of incumbent responses to the threat of disruption is that it includes five explicit types of strategies that are dominant in this industry. These strategies, in order of frequency observed, are: the incumbent adopts the disruptive innovation during the disruption (reactive strategy), the incumbent disrupts itself and the potential disruptor first (proactive strategy), the incumbent further invests in the traditional business (passive strategy), the incumbent catches up to the mainstream market post the disruption (reactive strategy), and the incumbent moves to the higher end of the market (reactive strategy). These strategies are aligned with what has been found in previous studies, with the first three being derived from response strategies proposed by Charitou & Markides (2003) as well as its variations being seen in core disruptive innovation theory and the latter two being developed over time from the core theory of disruptive innovation and being accepted by Christensen as part of the literature (Christensen et al., 2018). The nature of incumbent responses includes that it is primarily active rather than passive, as well as more reactive than proactive across the industry. When looking at incumbents as a whole, the nature of their response leans towards the reactive strategy of *adopting the disruptive innovation during the disruption*, which involves an incumbent replicating the successful products, services and/or business models of disruptors along with supporting their traditional business. The execution of this can involve an incumbent investing in the capabilities to drive the innovation within their existing structure, creating an autonomous subsidiary or business unit to drive the innovation, and/or making use of open innovation for this purpose. The nature of this strategy involves a high level of motivation from an incumbent and a high level of ability to respond to disruptive innovation. The existence of five response strategies that can be uniquely characterised and defined validates the original proposition that the incumbent banks can choose between a range of strategic responses as identified by the literature, to mitigate the threat of disruption, as five of the eight proposed strategies were found. The nature of incumbent responses also includes that each

incumbent utilises at least one but, on average, two of the explicit response strategies at a given time, as four out of the five incumbents used two strategies in parallel at the time this study was conducted.

When looking at influencing factors driving an incumbent's choice of response strategy, 16 factors were found that are seen to fall into two categories: motivation to respond and ability to respond. This is in line with Charitou & Markides (2003) theory of incumbent response strategies in terms of the levels of motivation and ability to respond corresponding to certain strategies. Additionally, some factors were not found in the existing literature and instead were found to be unique to this industry, these unique factors are marked with an asterisk (*). There are eight influencing factors on an incumbent's overall motivation to respond within the banking industry of South Africa, four of which are more heavily weighted than the others and so have a stronger relationship with overall motivation. The four higher weighted factors are: strategic relatedness between the incumbent and disruptors, risk appetite of the incumbent, barriers to entry in the industry* and innovation culture*. The four lower weighted factors are: disruptor connectedness to the incumbent's core market, demand growth rate of the disruptive innovations, competitiveness between disruptors and the incumbent and finally, opportunity framing. There are additionally eight factors that contribute to an incumbent's overall ability to respond, four of which have a higher weighting in terms of their contribution. The four higher weighted factors are: supporting of old systems by the incumbent*, available time capacity for disruptive innovation by the incumbent, allocation of available resources to disruptive innovation* and conflict between disruptors' and the incumbent's business models. The four lower weighted factors are: level of competencies for disruptive innovation, level of available resources for disruptive innovation, management span*, and finally, openness to open innovation* by the incumbent. All 16 of these factors are seen to contribute to the nature of the response taken by incumbents as well as contribute to its implementation. When looking at these factors, as well as their impact on the overall motivation and ability of an incumbent to respond, one is able to determine why an incumbent has chosen one or two response strategies over others. These conclusions indicate that proposition four, that there are factors which are related to either the incumbent's motivation or ability to respond, that influence which response strategies an incumbent will prioritise, is found to be valid as 10 of the original factors found within the literature were identified through the findings, and the result shows that it can now be extended with the six additional factors found uniquely to the South Africa banking industry, such that there is a complete list of factors that are deemed to influence an incumbent's response within the South African banking industry.

6.4 RECOMMENDATIONS FOR BUSINESS/STAKEHOLDERS

The primary business beneficiaries of this study are managers involved in innovation and strategy management within incumbent banks, as well as the incumbent banks overall. The study's findings can help an incumbent determine to what degree the banking industry is undergoing disruption by determining the stage within the process of disruption the industry is in. They are then also able to determine which strategies are best suited to their business based on their current realities, or they may choose a strategy and identify which influencing factors need attention in order for them to effectively execute that strategy. The process of disruption and the five strategies found in this industry (relative to the levels of motivation and ability to respond that they correspond to) have been presented below in Figure 30 and 31.

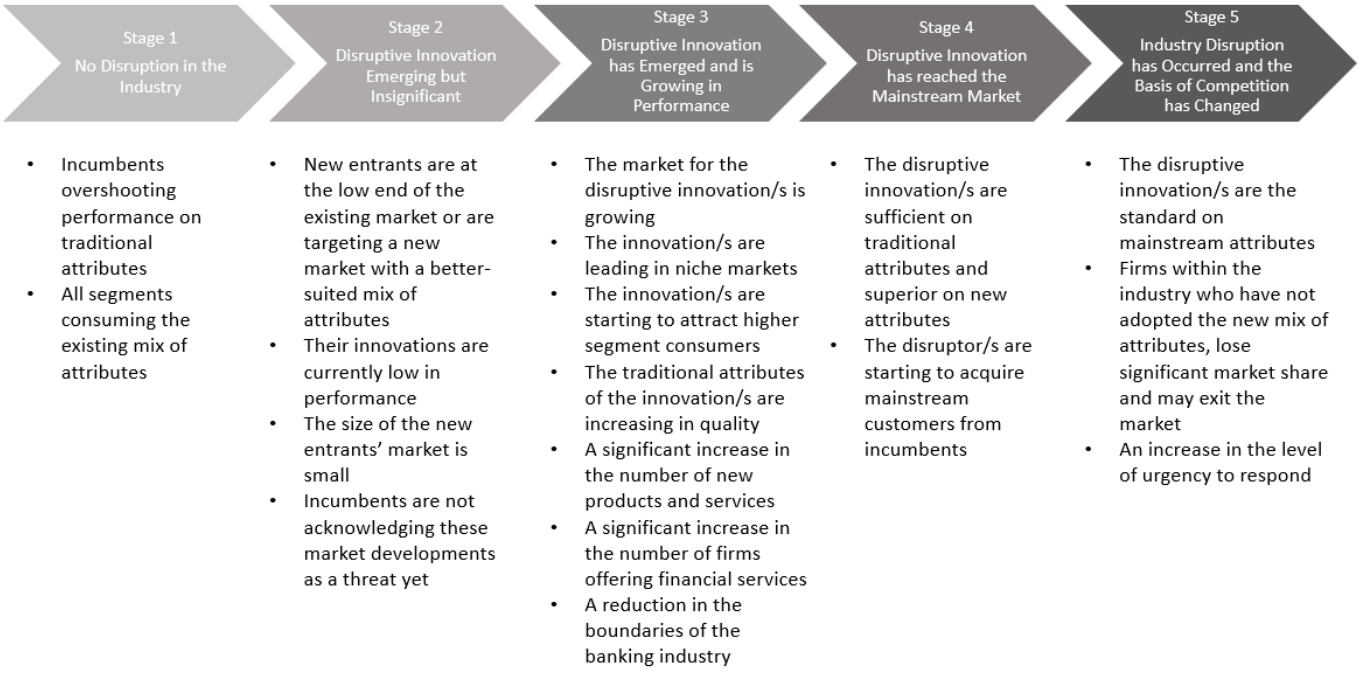

Figure 30: Process of Disruption within the South African Banking Industry

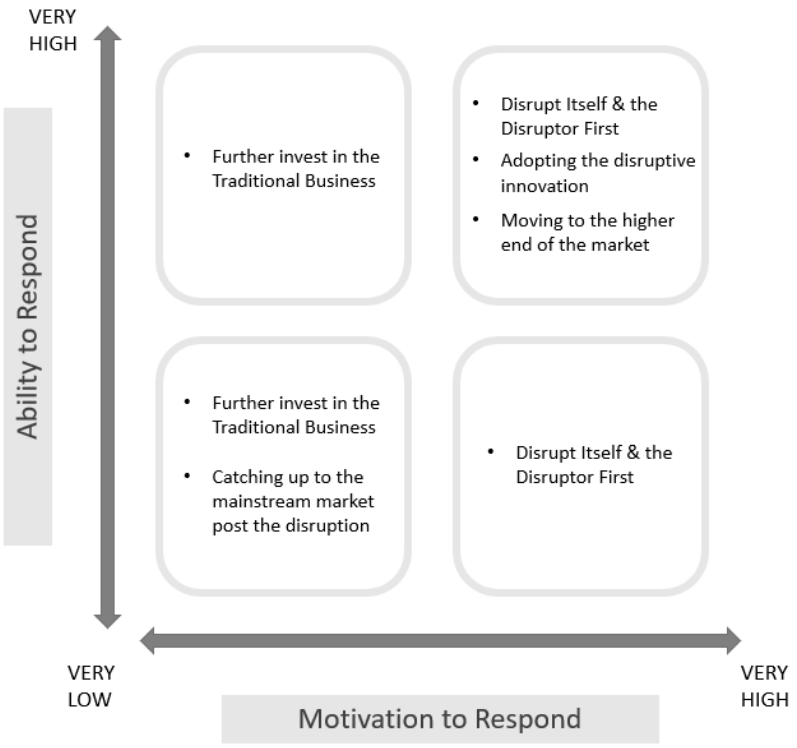

Figure 31: Incumbent Response Strategies within the Banking Industry of SA

Based on the above figures, the recommendations for innovation managers within incumbent banks are:

- At any given time, managers may refer to Figure 30 and the characteristics associated with it to determine in which stage of the process of disruption is the industry in, in order to determine the degree of disruption occurring and assess if and how they should respond. This can be done by identifying which stage's characteristics resonate with their current reality and confirming this by assessing whether the previous stages' characteristics have been observed in the past and whether the later stages' characteristics have yet to be observed. Once the current stage is recognised, the process can be further tracked over time by observing if the latter stages' characteristics are being realised. The current stage of the process of disruption within the banking industry is in stage three, whereby disruptive innovation has emerged and is growing in performance; however, this may change over time to whereby the degree of disruption is increasing further and potentially reaching industry disruption and this can be determined by observing if the characteristics of stage

four and ultimately stage five are being met. This will assist incumbents, as well as other industry participants, in acknowledging the threat of disruption at a given time so that they may appropriately respond to what that threat entails at that point.

- When responding to the threat of disruption, managers are recommended to assess all influencing factors to response strategies proposed within this study and determine their firm's overall level of motivation to respond and ability to respond. They will then plot it in the graph depicted in Figure 31 and find themselves in one of the four quadrants. If the incumbent's existing strategy is not found in that quadrant, it indicates that their overall motivation and ability to respond is not aligned with maximising the delivery of their prioritised strategy. They are recommended to either change their strategy, choose a second strategy that aligns with their quadrant to use in parallel or amend their overall motivation and ability levels by targeting the influencing factors found within the research, especially those with higher weightings.
- Firms who do not have a response strategy are recommended to use the graph to first view the list of reaction strategies that exist amongst incumbents that may be practical options for their own business and to see where they plot currently, in order to find a recommended strategy based on their present motivation and ability to respond levels.
- The incumbent may use the model to adjust their levels of motivation and ability to respond in order to best implement their targeted strategy. Managers that want to increase their firm's overall motivation to respond and therefore target response strategies on the right side of the graph, which are all active strategies that involve including the management of disruptive innovation within their organisation, should look to:
    - **Increase their Strategic Relatedness to Disruptors:** When an incumbent's products, services, customer relationship channels, customer support channels, distribution channels and other strategic factors are very different from disruptors, they have less motivation to respond to the threat of disruption as there is a low chance of them being able to create synergies within their existing business. Instead, an incumbent will detract from the existing business that still provides the bulk of the profitability instead of being able to run both the new and old business concurrently. Incumbents who wish to increase their motivation to respond will need to begin breaking the resource dependency between the existing business and decision-making, and incrementally increase their strategic relatedness to disruptors by investing in new value networks that promote disruptive innovation. In this industry, this is particularly the strategic

operations required to service the lower-end and niche segments of the market. This investment, over time, will allow the incumbent to actively respond and potentially replicate aspects of the disruptor's offering due to the synergies and corresponding motivation created.

- **Increase their Risk Appetite:** A high risk appetite is uncharacteristic of incumbents in this industry due to the stringent regulations in place to protect banks, consumers, and the industry as a whole. Incumbents looking to increase their motivation to respond may want to increase their level of risk accepted as an organisation to higher than what it currently is, but that still is in line to comply with regulation. This can be done by investing in experimentation to give the incumbent and regulatory bodies more confidence in the bank taking on new initiatives, as well as incentivising managers to take on more risk by measuring them on long-term objectives rather than short-term objectives in order to lean managers away from only prioritising safer sustaining innovations.
- **Adjust Organisational Culture towards Innovation:** Found in the results were that when an incumbent is not set up for disruptive innovation in terms of cultural aspects such as values, communication and recognition mechanisms, then employees of that firm are unmotivated to drive the disruptive innovation objectives of the organisation. Incumbents aiming to improve their overall motivation to respond are recommended to ensure that colleagues have both first-order and second-order customer competencies in order to serve mainstream and new markets. This may be supported by the firm facilitating a strategy that is centred around purpose rather than transaction economics to motivate colleagues and equip them with the client-centricity required to promote disruptive innovation.

Barriers to entry into the industry is also a factor that has a strong relationship with overall motivation to respond. However, an incumbent has little control over this, so focusing their energy on the above factors is recommended. The other four factors related to motivation are lower weighted. Some are also dependent on disruptors' position in the market, so the incumbent cannot directly manage it themselves. An incumbent should always be aware of these factors and understand how it is contributing to their overall motivation to respond, and when applicable, devote investment into managing the factors within their control in order to promote the level of motivation that is going to assist them in implementing their strategy effectively. For incumbent banks looking to implement a less active strategy, which can be found on the left side of Figure 31,

they will do the opposite of the three recommendations above regarding managing influencing factors related to motivation.

- Managers that want to increase their firm's overall ability to respond and therefore target response strategies in the top quadrants of the graph, especially the top right quadrant (since 'further invest in the traditional business' can still be done with low ability) should look to:
    - **Reduce the Support of Old Systems:** This is a unique influencing factor within this industry, and the supporting of old systems is a common characteristic of incumbent banks due to their age and scale; however, incumbents who are aiming to increase their overall ability to respond should be dedicating more effort towards reducing the need to support old systems. The continued support of old systems diminishes a firm's ability to respond and is unsustainable for firms with prioritised strategies that require a high ability to respond.
    - **Improve Allocation of Available Resources:** Even when an incumbent potentially has available resources for disruptive innovation, their potential impact is eliminated if these resources do not have the mechanisms to be provisioned to disruptive innovation initiatives. A common characteristic of incumbents in literature, and that has also been found within incumbent banks within this study, is that they have project selection processes that lean towards sustaining innovations as allocation of resources is dependent on known, often financial metrics such as the number of customers targeted, expected revenue, and expected profitability. These types of metrics are largely unknown for potentially disruptive value propositions, or the values are so low at the start that the initiative seems unattractive, and so although an incumbent might prioritise disruptiveness within its strategy, it fails to be allocated adequate resources during execution. Managers within incumbent banks involved in budget allocation and/or project selection processes who are looking to improve their firm's overall ability to respond to disruptive innovation are recommended to review these processes to account for allocation towards disruptive innovation. This can include adding long-term metrics, such as the impact of not investing and being disrupted, into the process, as well as using innovation management tools such as scenario planning. Related to risk appetite, the process can also be reviewed to accept a higher failure rate, as disruptive innovation is associated with many failures and few successes. This type of improved allocation can be verified by reviewing the entire innovation

portfolio and ensuring a mix of sustaining innovation projects targeting short-term growth and disruptive innovation projects targeting long-term growth.

- **Improve Available Time Capacity towards Disruptive Innovation:** Related to the above, is that even if an incumbent has the necessary competencies and resources for disruptive innovation if colleague time is insufficient to utilise it, no progress will be made towards purposefully pursuing disruptive innovation. Incumbent banks looking to increase their ability to respond are recommended to ensure they have resourced not just the skills and infrastructure for disruptive innovation but also colleague capacity towards pursuing it. If there is limited time available from colleagues, incumbents will gravitate towards their existing business and reduce their ability to respond to disruptive innovation.

The incumbent bank is also recommended to improve its competencies required to drive disruptive innovation, reduce its management span and increase its openness to open innovations if it aims to execute a strategy in the top quadrants of Figure 31, as all of these factors will increase its overall ability to respond, but not to the same degree that the three aforementioned factors will. Reducing the conflict between disruptors' and the incumbent's business model will also improve the incumbent's ability to respond. Where it is logical to do so, incumbents should align to disruptor business models to take advantage of the newly introduced attributes, but this is more difficult to adjust than the aforementioned factors, as disruptor business models are often based on the lower or niche market segments in which they began in, and these have vastly different characteristics than the entire market that South African banking incumbents serve.

Overarchingly, incumbents are recommended to be aware of the process of disruption and respond accordingly, as the urgency increases in the latter stages of the process. Incumbents can be aware early on and respond to not only reduce the threat of disruption but also to use disruption as part of their own growth. Firms who are uncertain of the degree of disruption within this industry can use the findings of this study to validate that there is a strong perception that the process of disruption has already begun. They are recommended to specifically assess whether they are able to identify the market characteristics driving this perception to see if they, too, are in the process of being disrupted. They are recommended to use the findings of this study to broaden their view on what options are possible in terms of responses and to assess what other incumbents, who still fall a part of the competition, are doing. The findings of this study also include that incumbents within this industry are

indeed serving the needs of their most demanding and profitable customers, leading to an overshoot on performance on traditional attributes within banking. Incumbents are recommended to acknowledge the impact of this in terms of them having created the gap for disruptive innovations to emerge and potentially for them to be proactive in the future in preventing this. This would involve incumbents expanding to lower-end, non-consumption, and niche segments of the market first, with an appropriate offering for those segments that allows them to generate their own creative destruction and to lessen the opportunity for disruption from new entrants.

This research proposes a model for possible incumbent reactions to the threat of disruption within the banking industry, providing potential explanations on how they relate to each other and why a company may follow a particular strategy instead of an alternative one. This type of information can be useful to many other beneficiaries as well. Initiators of disruption are also recommended to use it to identify which ways incumbents are countering their competition in order to counter back. Disruptors are also recommended to use the model when looking for opportunities to collaborate with incumbents, as incumbents who use active rather than passive response strategies may be more open to this, and it may be more beneficial for disruptors to collaborate rather than compete against incumbents. Consultants, governments, and trade associations are also recommended to acknowledge these findings in how they advise their beneficiaries and when setting up their policies.

6.5 LIMITATIONS & SUGGESTIONS FOR FUTURE RESEARCH

This study was conducted with an effort to uphold high reliability and validity; however, there were limitations within the methodology that allow for future research to be conducted that extend the utility of this topic beyond the conclusions within this research. These limitations and subsequent suggestions for future research are:

- **Conclusions Limited to Banking in South Africa:** This study was conducted with a focus on the mature industry of banking within the third-world country of South Africa. The study does have some generalisability to banking industries within countries of similar economic, political and demographic characteristics, as well as similar mature industries within South Africa undergoing

the process of disruption. However, it would have no generalisability outside of this. Therefore, a suggestion for future research is to pose similar research questions in other industries or countries and compare the results to this study to identify similarities and deltas that may contribute to the understanding of response strategies to disruptive innovation and improve generalisability.

- **Limited Sample Size:** The methodology of this study included 20 interview participants across five incumbent banks. This was deemed sufficient to draw conclusions and make recommendations, but given more time and resources, future studies can improve the generalisability of results by replicating the study in the South African banking industry. Future research may also use quantitative research to test the findings of this exploratory study.
- **Conclusions Limited to When Disruption is At Least in Stage Three:** Answering the first research questions highlighted that in the banking industry of South Africa, the process of disruption is found to be at a stage where disruptive innovations are no longer insignificant and are growing in performance and demand beyond the lower segments of the market, to a point where they are encroaching on the mainstream market. This was deemed stage three within the process of disruption within the banking industry of South Africa. The identified response strategies are related to the characteristics found in this stage. It cannot be assumed that these response strategies would be prevalent in earlier stages of disruption. Consequently, suggestions for future research include research on response strategies within this banking industry as it progresses to the latter stages of disruption, as well as on other industries that are in earlier stages of disruption, to compare against the results of this study. This could be in the form of a longitudinal study that allows for the impact of these strategies to be analysed.
- **Conclusions Limited to Incumbents:** This study focused on incumbent responses and did not include responses from smaller banks or disruptors themselves. The conclusions allow for these other firms to utilise some of the findings in their own strategies; and there is an opportunity to research the response strategies within these younger and/or smaller firms, which currently have less presence in the market but have an impact on the value creation to banking consumers and an impact on the industry as a whole. Additionally, the findings can be used by policymakers in terms of interventions to facilitate disruptive innovation by both new entrants and incumbents for the benefit of national economic development, but a more focused study for this type of audience will allow for a broader discussion in academia and greater application

of the findings going forward. Further findings will contribute to improving the validity of this study.

This research helps validate five of the response strategies proposed by core disruptive innovation theory and the branch of theory that focuses on responding to disruption. Moreover, it validates Charitou & Markides (2003) theory that response strategies are influenced by factors related to motivation and ability to respond. New influencing factors were found that contributed to this framework, and so future research has an opportunity to further extend this framework by identifying more response strategies that abide by the same logic, as well as new and unique influencing factors found in new contexts. This will aid in extending this academic framework, which may then be used by businesses.

REFERENCES

Absa. (2020). *Absa Bank annual consolidated and separate financial statements*. https://www.absa.africa/content/dam/africa/absaafrica/pdf/2021/absa-bank-annual-consolidated-and-separate-financial-statements.pdf

Absa. (2021). *Absa Group Limited Integrated Report 2021*. https://www.absa.africa/content/dam/africa/absaafrica/pdf/sens/2021/Absa-Group-Integrated-Report.pdf

Adner, R. (2002). When are Technologies Disruptive? A demand-based view of the emergence of competition. *Strategic Management Journal*, *23*(8), 667-688.

Adner, R., & Snow, D. (2010). Old Technology Responses to New Technology Threats: Demand heterogeneity and technology retreats. *Industrial and Corporate Change*, *19*(5), 1655-1675.

Adner, R., & Zemsky, P. (2005). Disruptive technologies and the emergence of competition. *RAND Journal of Economics*, 229-254.

Bahcall, S. (2019). The Innovation Equation. *Harvard Business Review*, *96*(2), 74-81.

Baxter, P., & Jack, S. (2015). Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers. *The Qualitative Report*. https://doi.org/10.46743/2160-3715/2008.1573

Bell, E., Bryman, A., & Harley, B. (2018). *Business research methods*. Oxford University Press.

Burger, S. (2022). Blockchain can provide infrastructure for financial inclusion in Africa – Standard Bank. Retrieved 30 April 2023, from https://www.engineeringnews.co.za/article/blockchain-can-provide-infrastructure-for-financial-inclusion-in-africa-standard-bank-2022-07-07#:~:text=%22Standard%20Bank%20remains%20at%20the,enable%20African%20commerce%20to%20flourish.

Burt, R. S., & Ronchi, D. (2007). Teaching executives to see social capital: Results from a field experiment. *Social Science Research*, *36*(3), 1156-1183. https://doi.org/10.1016/j.ssresearch.2006.09.005

BusinessTech. (2021). How South Africa's 5 biggest banks continue to dominate. Retrieved 02 April 2023, from https://businesstech.co.za/news/banking/506740/how-south-africas-5-biggest-banks-continue-to-dominate/

BusinessTech. (2022). Battle of the Banks 2022: Capitec vs Standard Bank vs FNB vs Absa vs Nedbank. Retrieved 30 June 2023, from https://businesstech.co.za/news/banking/620791/battle-of-the-banks-2022-capitec-vs-standard-bank-vs-fnb-vs-absa-vs-nedbank/

Buthelezi, L. (2022). Banks, lenders aren't feeding consumers' increasing appetite for credit. Retrieved 25 April 2023, from https://www.news24.com/fin24/companies/banks-lenders-arent-feeding-consumers-increasing-appetite-for-credit-20221213

Carrim, Y., Fubbs, J., & Wicomb, A. (2017). *The Banking Association South Africa Submission on Transformation in the Financial Sector*. BASA. https://www.banking.org.za/news/2019-transformation-in-banking/

Charitou, C. D., & Markides, C. C. (2003). Responses to Disruptive Strategic Innovation. *MIT Sloan Management Review*, *44*(2), 55-63,63A. https://www.proquest.com/scholarly-journals/responses-disruptive-strategic-innovation/docview/2069496475/se-2?accountid=15083

Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. sage.

Chesbrough, H. (2003). The Logic of Open Innovation: Managing intellectual property. *California Management Review*, *45*(3), 33-58.

Chesbrough, H. (2011). Everything You Need to Know About Open Innovation. Retrieved 03 August 2021, from https://www.forbes.com/sites/henrychesbrough/2011/03/21/everything-you-need-to-know-about-open-innovation/?sh=78fb33a075f4

Chesbrough, H., & Crowther, A. K. (2006). Beyond High Tech: Early adopters of open innovation in other industries. *R&D Management*, *36*(3), 229-236.

Chesbrough, H., Van De Vrande, V., & Vanhaverbeke, W. (2008). Understanding the Advantages of Open Innovation Practices in Corporate Venturing in Terms of Real Options. *Creativity and Innovation Management*, *17*(4), 251-258. https://doi.org/10.1111/j.1467-8691.2008.00499.x

Christensen, C., Raynor, M. E., & McDonald, R. (2015). What Is Disruptive Innovation? Retrieved 29 May 2023, from https://hbr.org/2015/12/what-is-disruptive-innovation

Christensen, C. M. (1997). *The Innovator's Dilemma: when new technologies cause great firms to fail*. Harvard Business Review Press.

Christensen, C. M. (2006). The Ongoing Process of Building a Theory of Disruption. *Journal of Product Innovation Management*, *23*(1), 39-55.

Christensen, C. M., Anthony, S. D., & Roth, E. A. (2004). *Seeing What's Next: Using the theories of innovation to predict industry change*. Harvard Business School Press.

Christensen, C. M., & Bower, J. L. (1995). Disruptive Technologies: Catching the Wave. *Harvard Business Review*, *73*(1), 43–53.

Christensen, C. M., & Bower, J. L. (1996). Customer power, strategic investment, and the failure of leading firms. *Strategic Management Journal 17*(3), 197-218.

Christensen, C. M., Johnson, M. W., & Rigby, D. K. (2002). Foundations for Growth: How to identify and build disruptive new businesses. *MIT Sloan Management Review*.

Christensen, C. M., McDonald, R., Altman, E. J., & Palmer, J. (2016). *Disruptive Innovation: Intellectual history and future paths*. Harvard Business School Cambridge, MA.

Christensen, C. M., McDonald, R., Palmer, J. E., & Altman, E. J. (2018). Disruptive Innovation: An Intellectual History and Directions for Future Research. *Journal of Management Studies (John Wiley & Sons, Inc.)*, *55*(7), 1043-1078. https://doi.org/10.1111/joms.12349

Christensen, C. M., Ojomo, E., & Dillon, K. (2019). *The Prosperity Paradox: How Innovation Can Lift Nations Out of Poverty*. HarperCollins. https://books.google.co.za/books?id=1dhWDwAAQBAJ

Christensen, C. M., & Raynor, M. E. (2003). *The Innovator's Solution: Creating and Sustaining Successful Growth*. Harvard Business School Press.

Claude-Gaudillat, V., & Quélin, B. V. (2006). Innovation, New Market and Governance Choices of Entry: The internet brokerage market case. *Industry and Innovation*, *13*(2), 173-187.

Coetzee, J. (2018). Strategic implications of Fintech on South African retail banks. *South African Journal of Economic and Management Sciences*, *21*(1), 1-11.

Cooper, R., & Edgett, S. (2003). Overcoming the Crunch in Resources for New Product Development. *Research-Technology Management*, *46*, 48-58. https://doi.org/10.1080/08956308.2003.11671566

Corbin, J., & Strauss, A. (2014). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Sage

Costello, G. J., Donnellan, B., & Curley, M. (2013). A Theoretical Framework to Develop a Research Agenda for Information Systems Innovation. *Communications of the Association for Information Systems*, *33*(26), 433-462.

Cranston, S. (2021). Just What is SA's Bank of the Future? Retrieved 26 April 2023, from https://news.sap.com/africa/2021/12/just-what-is-sas-bank-of-the-future/

Dan, Y., & Chieh, H. C. (2010). A reflective review of disruptive innovation theory. *International Journal of Management Reviews*, *12*(4), 435-452.

Danneels, E. (2004). Disruptive Technology Reconsidered: A Critique and Research Agenda. *Journal of Product Innovation Management*, *21*, 246-258. https://doi.org/10.1111/j.0737-6782.2004.00076.x

Darangwa, V. P. (2021). *Exploring artificial intelligence in the South African banking industry* North-West University (South Africa)].

Debruyne, M., & Reibstein, D. J. (2005). Competitor see, competitor do: Incumbent entry in new market niches. *Marketing Science*, *24*(1), 55-66.

Deloitte. (2022). *The Expanding Role of Non-banks in South Africa*. Deloitte. chrome-extension://oemmndcbldboiebfnladdacbdfmadadm/https://www2.deloitte.com/content/dam/Deloitte/za/Documents/financial-services/za-Non-bank-expansion-in-South-Africa.pdf

Dewald, J., & Bowen, F. (2010). Storm clouds and silver linings: Responding to disruptive innovations through cognitive resilience. *Entrepreneurship Theory and Practice*, *34*(1), 197-218.
Dewald, J., & Osiyevskyy, O. (2015). Explorative Versus Exploitative Business Model Change: The Cognitive Antecedents of Firm-Level Responses to Disruptive Innovation. *Strategic Entrepreneurship Journal*, *9*. https://doi.org/10.1002/sej.1192
Druehl, C., & Schmidt, G. (2008a). A Strategy for Opening a New Market and Encroaching on the Lower End of the Existing Market. *Production & Operations Management*, *17*(1), 44-60. https://doi.org/10.3401/poms.1070.0002
Druehl, C., & Schmidt, G. (2008b). When Is Disruptive Innovation Disruptive? *Journal of Product Innovation Management*, *25*, 347-369. https://doi.org/10.1111/j.1540-5885.2008.00306.x
Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American journal of theoretical and applied statistics*, *5*(1), 1-4.
Falkena, H., Abedian, I., Blottnitz, M. v., Coovadia, C., Davel, G., Madungandaba, J., Masilela, E., & Rees, S. (2022). *SMEs' Access to Finance in South Africa*. National Treasury Retrieved from https://www.treasury.gov.za/publications/other/access%20to%20finance%20in%20south%20africa%20-%20a%20supply-side%20regulatory%20review.pdf
FirstRand. (2020). *2020: Results Presentation*. https://www.firstrand.co.za/media/investors/financial-results/fsr-results-presentation-june-2020.pdf
Fourie, J. (2019a). Bank failures and the lessons they offer-economy. *finweek*, *2019*(4), 4-4. https://hdl.handle.net/10520/EJC-14440fbdd8
Fourie, J. (2019b). The second renaissance of finance. *finweek*, *2019*(19), 6-6. https://hdl.handle.net/10520/EJC-18d4d53f58
Gemici, E., & Alpkan, L. (2015). An Application of Disruptive Innovation Theory to Create a Competitive Strategy in Turkish Air Transportation Industry. *Procedia - Social and Behavioral Sciences*, *207*, 797-806. https://doi.org/https://doi.org/10.1016/j.sbspro.2015.10.169
Geurts, A. (2018). Firm responses to disruptive innovations. In *New Waves in Innovation Management Research (ISPIM Insights)* (pp. 165 - 170).
Gilbert, C. (2003). The Disruption Opportunity. *MIT Sloan Management Review*. https://sloanreview.mit.edu/article/the-disruption-opportunity/
Gilbert, C., & Bower, J. L. (2002). Disruptive Change: When trying harder is part of the problem. *Harvard Business Review*, *80*(5), 94-101, 134.
Gobble, M. M. (2016). Defining disruptive innovation. *Research-Technology Management*, *59*(4), 66-71.
Govindarajan, V., Kopalle, P., & Danneels, E. (2011). The Effects of Mainstream and Emerging Customer Orientations on Radical and Disruptive Innovations. *Journal of Product Innovation Management*, *28*, 121-132. https://doi.org/10.1111/j.1540-5885.2011.00865.x
Govindarajan, V., & Kopalle, P. K. (2006). The Usefulness of Measuring Disruptiveness of Innovations Ex Post in Making Ex Ante Predictions. *Journal of Product Innovation Management*, *23*(1), 12-18. https://doi.org/10.1111/j.1540-5885.2005.00176.x
Habtay, S. R., & Holmén, M. (2014). Incumbents' responses to disruptive business model innovation: the moderating role of technology vs. market-driven innovation. *International Journal of Entrepreneurship and Innovation Management 11*, *18*(4), 289-309.
Heising, W. (2012). The integration of ideation and project portfolio management — A key factor for sustainable success. *International Journal of Project Management*, *30*(5), 582-595. https://doi.org/https://doi.org/10.1016/j.ijproman.2012.01.014
Henderson, R. (2006). The Innovator's Dilemma as a Problem of Organizational Competence. *Journal of Product Innovation Management*, *23*(1), 5-11.
Hill, C. W., & Rothaermel, F. T. (2003). The performance of incumbent firms in the face of radical technological innovation. *Academy of management review*, *28*(2), 257-274.

Hüsig, S., Hipp, C., & Dowling, M. (2005). Analysing disruptive potential: the case of wireless local area network and mobile communications network companies. *R&D Management*, *35*(1), 17-35. https://doi.org/10.1111/j.1467-9310.2005.00369.x

Illidge, M. (2023). Cheapest bank accounts in South Africa. Retrieved 29 July 2023, from https://mybroadband.co.za/news/banking/483261-cheapest-bank-accounts-in-south-africa-3.html

Investec. (2020). *Investec Integrated Annual Report*. https://www.investec.com/content/dam/investor-relations/financial-information/group-financial-results/2021/DLC-Volume-1-Annual-Report-2021-Online.pdf

Investec. (2021). *Group Strategy*. Investec Bank. Retrieved 10 September from https://www.investec.com/en_za/welcome-to-investec/about-us/group-strategy.html

Johnston, K. A., & Gill, G. (2017). Standard Bank: the agile transformation. *Journal of Information Technology Education: Discussion Cases*, *6*(1).

Kalan, A. (2016). *Understanding merchant adoption of m-payments in South Africa* University of Cape Town]. OpenUCT. http://hdl.handle.net/11427/22834

Kassicieh, S. K., Walsh, S. T., Cummings, J. C., McWhorter, P. J., Romig, A. D., & Williams, W. D. (2002). Factors Differentiating the Commercialization of Disruptive and Sustaining Technologies. *IEEE Transactions on Engineering Management*, *49*(4).

Kemp, S. (2023). Digital 2023: South Africa. Retrieved 29 April 2023, from https://datareportal.com/reports/digital-2023-south-africa#:~:text=South%20Africa%20was%20home%20to,percent%20of%20the%20total%20population.

Kerr, W. R., & Nanda, R. (2009). Democratizing entry: Banking deregulations, financing constraints, and entrepreneurship. *Journal of Financial Economics*, *94*(1), 124-149. https://doi.org/10.1016/j.jfineco.2008.12.003

Kilkki, K., Mäntylä, M., Karhu, K., Hämmäinen, H., & Ailisto, H. (2018). A disruption framework. *Technological Forecasting and Social Change*, *129*, 275-284. https://doi.org/https://doi.org/10.1016/j.techfore.2017.09.034

Kim, S., & Min, S. (2015). Business Model Innovation Performance: When Does Adding a New Business Model Benefit an Incumbent? *Strategic Entrepreneurship Journal*. https://doi.org/10.1002/sej.1193

King, A., & Baatartogtokh, B. (2015). How Useful Is the Theory of Disruptive Innovation? *MIT Sloan Management Review*, *57*, 77-90.

King, A., & Tucci, C. (2002). Incumbent Entry Into New Market Niches: The Role of Experience and Managerial Choice in the Creation of Dynamic Capabilities. *Management Science*, *48*, 171-186. https://doi.org/10.1287/mnsc.48.2.171.253

Kostoff, R. N., Boylan, R., & Simons, G. R. (2004). Disruptive technology roadmaps. *Technological Forecasting and Social Change*, *71*(1-2), 141-159.

Kovacs, A., Marullo, C., Verhoeven, D., & Van Looy, B. (2019). Radical, Disruptive, Discontinuous and Breakthrough Innovation: more of the same? *Academy of Management Proceedings*, *2019*(1), 14866. https://doi.org/10.5465/ambpp.2019.272

Kudratova, S., Huang, X., Kudratov, K., & Qudratov, S. (2020). Corporate sustainability and stakeholder value trade-offs in project selection through optimization modeling: Application of investment banking [Article]. *Corporate Social Responsibility & Environmental Management*, *27*(2), 815-824. https://doi.org/10.1002/csr.1846

Kumaraswamy, A., Garud, R., & Ansari, S. (2018). Perspectives on Disruptive Innovations. *Journal of Management Studies*, *55*(7), 1025-1042.

Labuschagne, H. (2021). South African banking shootout – Branches and ATMs. Retrieved 30 April 2023, from https://mybroadband.co.za/news/banking/397049-south-african-banking-shootout-branches-and-atms.html

Labuschagne, H. (2022). Smartphone tap payments in South Africa — these are the banks with the most options. Retrieved 30 April 2023, from https://mybroadband.co.za/news/banking/458017-smartphone-tap-payments-in-south-africa-these-are-the-banks-with-the-most-options.html

Leonard-Barton, D. (1992). Core capabilities and core rigidities: A paradox in managing new product development. *Strategic Management Journal*, *13*, 363-380.
Linton, J. D. (2002). Forecasting the market diffusion of disruptive and discontinuous innovation. *IEEE Transactions on Engineering Management*, *49*(4), 365-374.
Lucas Jr, H. C., & Goh, J. M. (2009). Disruptive technology: How Kodak missed the digital photography revolution. *The Journal of Strategic Information Systems*, *18*(1), 46-55.
Makhaya, T., & Nhundu, N. (2016). Competition, barriers to entry and inclusive growth in retail banking: Capitec case study. *The African Journal of Information and Communication*, 111-137. https://doi.org/10.23962/10539/21626
Mao, J.-Y., Su, F., Wang, B., & Jarvenpaa, S. L. (2020). Responding in kind: How do incumbent firms swiftly deal with disruptive business model innovation? *Journal of Engineering and Technology Management*, *57*, 101591. https://doi.org/https://doi.org/10.1016/j.jengtecman.2020.101591
Maree, L., & McKenzie, K. (2015). Exploring the elements of strategic innovation drivers in South African banks. *Journal of Economic and Financial Sciences*, *8*(2), 604-620.
Marjanovic, O., & Murthy, V. (2016). From product-centric to customer-centric services in a financial institution – exploring the organizational challenges of the transition process. *Information Systems Frontiers*, *18*(3). https://doi.org/10.1007/s10796-015-9606-x
Markides, C. (2006). Disruptive Innovation: In Need of Better Theory. *Journal of Product Innovation Management*, *23*, 19-25. https://doi.org/10.1111/j.1540-5885.2005.00177.x
Markides, C., & Charitou, C. (2004). Competing with Dual Business Models – A Contingency Approach. *Academy of Management Executive*, *18*. https://doi.org/10.5465/AME.2004.14776164
Markides, C., & Oyon, D. (2010). What to Do Against Disruptive Business Models (When and how to play two games at once). *MIT Sloan Management Review*, *51*(4), 25. https://www.researchgate.net/publication/281196833_What_to_Do_Against_Disruptive_Business_Models_When_and_How_to_Play_Two_Games_at_Once
McIntyre, A. (2022). The 10 Trends That Will Shape Banking In 2022 - Beyond The Watershed. Retrieved 29 April 2023, from https://www.forbes.com/sites/alanmcintyre/2022/01/20/the-10-trends-that-will-shape-banking-in-2022beyond-the-watershed/?sh=13cc624f73d6
Mishi, S., & Khumalo, S. A. (2019). Bank stability in South Africa: what matters? *Banks and Bank Systems*, *14*(1), 122-136. https://doi.org/10.21511/bbs.14(1).2019.11
Moneyweb. (2023). Cheapest, most expensive basic business bank accounts. Retrieved 15 July 2023, from https://www.moneyweb.co.za/news/companies-and-deals/cheapest-most-expensive-basic-business-bank-accounts/
Morgan, D. L. (2007). Paradigms lost and pragmatism regained: Methodological implications of combining qualitative and quantitative methods. *Journal of mixed methods research*, *1*(1), 48-76.
Morgan, D. L. (2014). Pragmatism as a paradigm for social research. *Qualitative inquiry*, *20*(8), 1045-1053.
Moshoeshoe, G., Singh, L., Streicher, H., & Maree, N. (2021). *South African Peer Bank Analysis - FY20*. https://assets.ey.com/content/dam/ey-sites/ey-com/en_za/topics/financial-services/ey-sa-banks-peer-benchmarking-report.pdf
Moyo, A. (2022). South African banks expect breakthrough blockchain year. Retrieved 30 April 2023, from https://www.itweb.co.za/content/mQwkoq6P5dj73r9A
Mueni, P. (2022). Top 10 fastest growing industries in South Africa in 2022 Retrieved 23 April 2023, from https://briefly.co.za/27937-fastest-growing-industries-south-africa.html
Mujinga, M., Eloff, M. M., & Kroeze, J. H. (2018). System usability scale evaluation of online banking services: A South African study. *South African Journal of Science*, *114*(3/4), 8. https://doi.org/10.17159/sajs.2018/20170065
Myers, D. R., Sumpter, C. W., Walsh, S. T., & Kirchhoff, B. A. (2002). Guest editorial a practitioner's view: evolutionary stages of disruptive technologies. *IEEE Transactions on Engineering Management*, *49*(4), 322-329.

Nagy, D., Schuessler, J., & Dubinsky, A. (2016). Defining and identifying disruptive innovations. *Industrial Marketing Management*, *57*, 119-126. https://doi.org/https://doi.org/10.1016/j.indmarman.2015.11.017

Natanson, E. (2021). Fintech And The Super-App, Inside South Africa's Mobile-First Future. Retrieved 26 April 2023, from https://www.forbes.com/sites/eladnatanson/2021/10/21/fintech-and-the-super-app-inside-south-africas-mobile-first-future/?sh=16d235287611

Natsas, C., Prinsloo, F., Murray, Z., & Roopnarain, R. (2023). *South Africa – Major Banks Analysis*. https://www.pwc.co.za/en/assets/pdf/major-banks-analysis-march-2023.pdf

Natsas, C., Prinsloo, F., & Roopnarain, R. (2022). *South Africa – Major Banks Analysis*. PwC. https://www.pwc.co.za/en/publications/major-banks-analysis.html

Nedbank. (2020). *Provisional Audited Results: 2020*. https://www.nedbank.co.za/content/dam/nedbank/site-assets/AboutUs/Information%20Hub/Financial%20Results/Annual%20Results/2020/2020%20Nedbank%20Group%20Limited%20Annual%20Results%20SENS.pdf

Norrestad, F. (2020). *Number of registered banks in South Africa 2006-2017*. Statista. Retrieved 02 September from https://www.statista.com/statistics/915598/number-registered-banks-south-africa/

Nowak, M. (2013). Project Portfolio Selection Using Interactive Approach. *Procedia Engineering*, *57*, 814-822. https://doi.org/https://doi.org/10.1016/j.proeng.2013.04.103

O'Neill, A. (2023). *South Africa: Real gross domestic product (GDP) growth rate from 2018 to 2028*. https://www.statista.com/statistics/370514/gross-domestic-product-gdp-growth-rate-in-south-africa/

O'Reilly, C., & Tushman, M. (2008). Ambidexterity as a dynamic capability: Resolving the innovator's dilemma. *Research in organizational behavior*, *28*, 185-206. https://doi.org/10.1016/j.riob.2008.06.002

OECD. (2010). *The OECD Innovation Strategy*. https://doi.org/https://doi.org/10.1787/9789264083479-en

Oosthuizen, M., & Scheepers, C. (2018). Strategic foresight for organizational agility at Nedbank Area Collaboration. *Emerald Emerging Markets Case Studies*.

Ormerod, R. (2006). The history and ideas of pragmatism. *Journal of the Operational Research Society*, *57*(8), 892-909.

Osiyevskyy, O., Radnejad, A. B., & Sinha, K. (2020). Dynamic responses to disruptive business model innovations: rational, behavioral, and normative perspectives. *Entrepreneurship and Behavioral Strategy. Charlotte, NC: Information Age Publishing*.

Paap, J., & Katz, R. (2004). Anticipating Disruptive Innovation. *Research-Technology Management*, *47*, 13-22. https://doi.org/10.1080/08956308.2004.11671647

Palich, L. E., Cardinal, L. B., & Miller, C. C. (2000). Curvilinearity in the diversification–performance linkage: an examination of over three decades of research. *Strategic Management Journal*, *21*(2), 155-174.

Patton, M. Q. (2005). *Qualitative research & evaluation methods: Integrating theory and practice* (4th ed.). Sage publications.

Peirce, C. S. (1992). How to Make Our Ideas Clear. *The Essential Peirce*, *1*, 1867-1893.

Peirce, C. S., Cohen, M. R., & Dewey, J. (2017). How to Make Our Ideas Clear. In *Chance, Love, and Logic* (pp. 32-60). Routledge.

Peirce, C. S., & de Waal, C. (2014). *Illustrations of the Logic of Science*. Open Court.

Petzold, N., Landinez, L., & Baaken, T. (2019). Disruptive innovation from a process view: A systematic literature review. *Creativity and Innovation Management*, *28*(2), 157-174. https://doi.org/10.1111/caim.12313

Porter, M. E. (1996). What Is Strategy? *Harvard Business Review*, *74*(6), 61–78. https://hbr.org/1996/11/what-is-strategy

Prahalad, C. K., & Hamel, G. (1994). *Competing for the Future* (Vol. 25). Harvard Business School Press Boston.

Pretorius, M., Wang, J., & Buitendag, J. (2022). An overview of developments in South Africa's payments industry. *Journal of Payments Strategy & Systems*, *16*(3), 318-334.

Prudential. (2020). *Prudential Authority Annual Report 2019/2020*. SARB. https://www.resbank.co.za/en/home/publications/publication-detail-pages/reports/annual-reports/2020/10042

Pugh, A. (2023). South Africa to pilot national rapid payments programme this year. Retrieved 29 April 2023, from https://www.fintechfutures.com/2023/02/south-africa-to-pilot-national-rapid-payments-programme-this-year/

PwC. (2022). *Payments and Open Banking Survey 2022*. PwC. https://www.pwc.co.za/en/publications/payments-and-open-banking-survey.html

Rafii, F., & Kampas, P. (2002). How to Identify your Enemies before they Destroy you. *Harvard Business Review*, *80*, 115-123, 134.

Rashid, Y., Rashid, A., Warraich, M. A., Sabir, S. S., & Waseem, A. (2019). Case study method: A step-by-step guide for business researchers. *International Journal of Qualitative Methods*, *18*, 1609406919862424.

Raynor, M. E. (2011). Disruption theory as a predictor of innovation success/failure. *Strategy & Leadership*, *39*(4), 27-30. https://doi.org/10.1108/10878571111147378

ResearchAndMarkets. (2019). *South Africa Blockchain Business Opportunities and Outlook Databook Series (2016-2025) - Blockchain Market Size / Spending Across 11 Sectors, 75+ Application Segments, Type of Blockchain, and Technology (Applications, Services, Hardware)*. https://www.researchandmarkets.com/reports/4527238/south-africa-blockchain-business-opportunities?utm_source=BW&utm_medium=PressRelease&utm_code=bpdmk3&utm_campaign=1298319+-+South+Africa%27s+Blockchain+Market%2c+2016-2025%3a+Size+%26+Spending+Across+11+Sectors%2c+75%2b+Application+Segments%2c+Type+of+Blockchain%2c+and+Technology+(Applications%2c+Services%2c+Hardware)&utm_exec=joca220prd

ResearchAndMarkets. (2021). *Banks in South Africa - Market Summary, Competitive Analysis and Forecast to 2025*. https://www.researchandmarkets.com/reports/5350285/banks-in-south-africa-market-summary#:~:text=The%20South%20African%20banks%20industry,by%20monetary%20and%20fiscal%20policy.

ResearchAndMarkets. (2022a). *Artificial Intelligence (AI) in Banking Market - Forecasts from 2022 to 2027*. https://www.researchandmarkets.com/reports/5602481/artificial-intelligence-ai-in-banking-market

ResearchAndMarkets. (2022b). *The Banking Industry in South Africa 2022*. https://www.researchandmarkets.com/reports/5661646/the-banking-industry-in-south-africa-2022

ResearchAndMarkets. (2022c). *South Africa Banking Industry Trends Report 2022: Mobile and Digital Banking are Key Drivers of Financial Inclusion in South Africa*. https://www.globenewswire.com/en/news-release/2022/11/02/2546209/28124/en/South-Africa-Banking-Industry-Trends-Report-2022-Mobile-and-Digital-Banking-are-Key-Drivers-of-Financial-Inclusion-in-South-Africa.html

Sainio, L.-M., & Puumalainen, K. (2007). Evaluating technology disruptiveness in a strategic corporate context: A case study. *Technological Forecasting and Social Change*, *74*(8), 1315-1333.

SARB. (2021). *Bank licensing in the Republic of South Africa*. SARB. https://www.resbank.co.za/content/dam/sarb/what-we-do/prudential-regulation/functions-of-the-prudential-authority/licensing/Banking%20licencing%20in%20the%20Republic%20of%20South%20Africa%20(2021%20update).pdf

SARB. (2022). *SA Registered Banks and Representative Offices*. Retrieved 17 July from https://www.resbank.co.za/en/home/what-we-do/Prudentialregulation/sa-registered-banks-and-representative-offices

SARB. (2023a). *Full Quarterly Bulletin – No 307 – March 2023* (Quarterly Bulletins, Issue. https://www.resbank.co.za/en/home/publications/publication-detail-pages/quarterly-bulletins/quarterly-bulletin-publications/2023/FullQuarterlyBulletinNo307March2023

SARB. (2023b). *SA Registered Banks and Representative Offices*. Retrieved 23 April 2023 from https://www.resbank.co.za/en/home/what-we-do/Prudentialregulation/sa-registered-banks-and-representative-offices

SARB. (2023c). *Selected Historical Rates*. https://www.resbank.co.za/en/home/what-we-do/statistics/key-statistics/selected-historical-rates

Saunders, M., Lewis, P., & Thornhill, A. (2007). *Research Methods for Business Students* (4th, Ed.). Pearson Education Limited.
Schmulow, A. (2022). Treating Customers Fairly (TCF) in the South African Banking Industry: Laying the Groundwork for Twin Peaks. *African Journal of International and Comparative Law*, *30*(1), 25-38.
Schoeman, L. (2023). 10 Best Cash Back Reward Cards. Retrieved 30 April 2023, from https://sashares.co.za/cash-back-reward-cards/#gs.ysan01
Scholz, R. W., & Tietje, O. (2002). *Embedded case study methods: Integrating quantitative and qualitative knowledge*. Sage.
Schumpeter, J. A. (1942). *Capitalism, socialism, and democracy* (3rd ed.). Harper & Brothers.
Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for information*, *22*(2), 63-75.
Sikorsky, M. (2021). How permissionless organization design gives your company an advantage. Retrieved 27 October 2022, from https://www.fastcompany.com/90645867/how-permissionless-organization-design-gives-your-company-an-advantage
Simatele, M. (2015). Market Structure and Competition in the South African Banking Sector. *Procedia Economics and Finance*, *30*, 825-835. https://doi.org/https://doi.org/10.1016/S2212-5671(15)01332-5
Snyder, P. J. (2019). The Prosperity Paradox: How Innovation Can Lift Nations Out of Poverty. *Christian Scholar's Review*, *49*(1), 103-106.
Sood, A., & Tellis, G. J. (2005). Technological evolution and radical innovation. *Journal of marketing*, *69*(3), 152-168.
Sood, A., & Tellis, G. J. (2011). Demystifying Disruption: A new model for understanding and predicting disruptive technologies. *Marketing Science*, *30*(2), 339-354.
StandardBank. (2020). *2020 Annual Results Summary*. Standard Bank Group. Retrieved 08 September from https://reporting.standardbank.com/2020-annual-results-summary/
StandardBank. (2021). *2021 Interim Results Summary*. Standard Bank Group. Retrieved 10 September 201 from https://reporting.standardbank.com/2021-interim-results-summary/
Statista. (2023a). *Deposit market share of leading South African banks as of 2021* https://www.statista.com/statistics/1121188/deposit-market-share-of-banks-in-south-africa/#:~:text=As%20of%202021%2C%20the%20leading,of%20deposits%20reported%20that%20year.
Statista. (2023b). *Digital Payments - South Africa* https://www.statista.com/outlook/dmo/fintech/digital-payments/south-africa#analyst-opinion
Statista. (2023c). *Economy - South Africa* https://www.statista.com/outlook/co/economy/south-africa
Statista. (2023d). *Leading banks in South Africa as of 2022, by assets* https://www.statista.com/statistics/1346961/leading-banks-in-south-africa-by-assets/
StatsSA. (2021). *GDP rises in the first quarter of 2021*. Department: Statistics South Africa. http://www.statssa.gov.za/?p=14423
Stulz, R. M. (2019). Fintech, bigtech, and the future of banks. *Journal of Applied Corporate Finance*, *31*(4), 86-97.
Tarrant, H. (2019). SA's 'big four' banks have shut down almost 700 branches this decade. Retrieved 30 April 2023, from https://www.citizen.co.za/business/sas-big-four-banks-have-shut-down-almost-700-branches-this-decade/
Teece, D. J. (2007). Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, *28*(13), 1319-1350.
TheWorldBank. (2023). *GDP growth (annual %) - South Africa*. The World Bank. Retrieved 10 April from https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=ZA
Thomond, P., & Lettice, F. (2008). Allocating Resources to Disruptive Innovation Projects: Challenging mental models and overcoming management resistance. *International journal of technology management*, *44*. https://doi.org/10.1504/IJTM.2008.020702
Thusi, P., & Maduku, D. K. (2020). South African millennials' acceptance and use of retail mobile banking apps: An integrated perspective. *Computers in Human Behavior*, *111*, 106405. https://doi.org/https://doi.org/10.1016/j.chb.2020.106405

Toesland, F. (2022). Why African banks are investing in AI. Retrieved 29 April 2023, from https://african.business/2022/03/technology-information/more-african-banks-turn-to-ai

Treasury. (2023). *Explanatory Policy Paper accompanying the Conduct of Financial Institutions Bill*. Retrieved from https://www.treasury.gov.za/twinpeaks/cofi%20bill%20policy%20paper.pdf

Tushman, M. L., & Anderson, P. (1986). Technological Discontinuities and Organizational Environments. *Administrative Science Quarterly*, *31*(3), 439-465. https://doi.org/10.2307/2392832

Van Vuuren, G. (2012). Basel III countercyclical capital rules: Implications for South Africa. *South African Journal of Economic and Management Sciences*, *15*(3), 309-324.

Vrande, V., Lemmens, C., & Vanhaverbeke, W. (2006). Choosing Governance Modes for External Technology Sourcing. *R and D Management*, *36*, 346-363. https://doi.org/10.1111/j.1467-9310.2006.00434.x

Walsham, G. (2006). Doing interpretive research. *European journal of information systems*, *15*(3), 320-330.

Ward, M., & Naude, R. (2019). *Banking for a Sustainable Economy*. BankSETA. https://bankseta.org.za/wp-content/uploads/2020/02/BANKSETA-Sustainable-Banking-just-transition-FINAL.pdf

Weeks, M. R. (2015). Is disruption theory wearing new clothes or just naked? Analyzing recent critiques of disruptive innovation theory. *Innovation*, *17*(4), 417-428.

Yang, S., Kim, Y., & Choi, S. (2022). How to Respond to Disruptive Innovation in Online Retail Platforms. *Journal of Open Innovation: Technology, Market, and Complexity*, *8*(3), 130. https://doi.org/https://doi.org/10.3390/joitmc8030130

Yin, R. K. (2009). *Case study research: Design and methods* (Vol. 5). Sage.

Yin, R. K. (2011). *Applications of case study research*. Sage

Yin, R. K. (2017). *Case Study Research and Applications: Design and Methods* (6 ed.). Sage Publishing

Yu, D., & Hang, C. C. (2010). A Reflective Review of Disruptive Innovation Theory *International Journal of Management Reviews*, *12*(4), 435-452. https://doi.org/https://doi.org/10.1111/j.1468-2370.2009.00272.x

Yu, D., & Hang Chang, C. (2008). A reflective review of disruptive innovation theory. PICMET '08 - 2008 Portland International Conference on Management of Engineering & Technology,

APPENDICES

APPENDIX A: INTERVIEW GUIDE

Interview No.	
Position of Interviewee	
Time in Current Position	
Name of Company	
Date of Interview	
Start Time	
End Time	

PREREQUISTES:

To be completed prior to commencement of the interview.

1) Describe to interviewee the purpose of the interview, an outline of the study and how their answers will contribute to findings and future use of the study

2) Inform interviewee that they may skip any of the questions if they do so wish

3) Inform interviewee that they will receive a written transcript of the interview with interviewer notes, and may review, amend, and retract answers if they do so wish

4) Request interviewee to disclose any preconditions or needs that they wish to share in order to avoid any harm being placed on them during the interview process

5) Obtain written consent from interviewee on being interviewed

6) Obtain verbal consent from interviewee on being recorded during the interview process

INTERVIEW GUIDE:

Note: this interview is semi-structured in nature and so the below questions are a guideline and not prescriptive in terms of the interview process.

Theme One: Industry Observations

Q1: To what degree do you believe the South African Banking industry is being disrupted? (Responder may only choose a single option)

- No disruption in the industry yet
- Disruptive innovation/s emerging but insignificant
- Disruptive innovation/s have emerged and is growing in performance
- Disruptive innovation/s have reached the mainstream market
- Industry disruption has already occurred and the basis of competition has changed
- Other (please specify)

Q2: Why have you chosen this option?

Q3: Who are the disruptors or potential disruptors?

Q4: What are some of the innovations that may disrupt your core market?

Theme Two: Response Strategy

Q1: How has your firm responded to the disruption? (Responder may choose more than one option)

- ❑ Further investing in the traditional business
- ❑ Ignoring the disruptive Innovation
- ❑ Disrupting itself and the disruptor first
- ❑ Adopting the disruptive Innovation during the disruption
- ❑ Embracing the disruptive Innovation only and scale
- ❑ Moving to the higher end of the market
- ❑ Catching up to the mainstream market post the disruption
- ❑ Exiting the market
- ❑ Other

Theme Three: Motivation

Rate the following attributes from 1 to 5 based on how high you believe the level is:

	Very Low (1)	Fairly Low (2)	Moderate (3)	Fairly High (4)	Very High (5)	Not Applicable (0)
Q1: The level to which the potential disruptor/s are connected to your current core market.						
Q2: The level to which the demand for the disruptive innovation/s are growing						
Q3: The level to which the disruptor/s are competitive with your firm						
Q4: The level of strategic relatedness between your firm and the potential disruptor/s						
Q5: The level of risk appetite your firm has for disruptive innovation						
Q6: Your firm's overall level of motivation to respond to disruptive innovation						

Q7: What are your individual opinions about disruptive innovation?

Q8: How many years of experience do you have within the banking industry?

Q9: Do you view disruptive innovation as a threat or an opportunity?

Theme Four: Ability

Rate the following attributes from 1 to 5 based on how high you believe the level is:

	Very Low (1)	Fairly Low (2)	Moderate (3)	Fairly High (4)	Very High (5)	Not Applicable (0)
Q1: The level of conflict between your firm and disruptor business models (conflict is low if your firm can easily replicate the disruptor)						
Q2: The level of competencies available within your firm required to promote disruptive innovation						
Q3: The level of resources available within your firm required to promote disruptive innovation						
Q4: The level of time capacity available within your firm required to promote disruptive innovation						
Q5: Your firm's overall level of ability to respond to disruptive innovation						

Q6: How does your firm's existing business model conflict with disruptors business model?

Theme Five: Other Influencing Factors

Q1: What do you believe are the biggest reasons for your firm responding the way that it has?

Theme Six: Overall Opinion

Q1: How do you feel the organisation can improve its response to achieve better growth?

- What are the hurdles faced in responding to the threat of disruption?
- What are some of the lessons learnt from the past?

Q2: Is there any other feedback you would like to provide?

APPENDIX B: INTERVIEW PARTICIPANT INFORMATION SHEET

The Graduate School of Business Administration
2 St David's Place, Parktown, Johannesburg, 2193, South Africa
PO Box 98, WITS, 2050
Telephone: +27 11 717 3600
Facsimile: +27 11 717 3514
Website: www.wbs.ac.za

Dear Sir / Madam,

My name is Nikhilia Ishwarlaal and I am a Master of Management student in the field of Innovation Studies at the University of the Witwatersrand, Johannesburg. As part of my studies, I have to undertake a research project, and I am investigating disruption response strategies by incumbent banks under the supervision of Dr Pelayo Omotoso. This research study seeks to understand how the top five banks within South Africa's banking sector have responded to the threat of disruption through their own business models, processes as well as product and service offerings. To build on this purpose, this investigation is posed to understand what factors influence these strategies and if these enhance the understanding of responses to disruptive innovation by incumbents in the banking industry of South Africa.

As part of this project, I would like to invite you to take part in an interview as you have been identified as a qualified source of information and insight due to your position and experience within incumbent banks in South Africa. This activity will involve a single online video call and will take around 60 minutes. With your permission, I would also like to record the interview using the Microsoft Teams functionality. This recording will be stored in Microsoft One Drive, and only the researcher will have access to this recording. It will be deleted after two years.

There will be no personal costs to you if you participate in this project. You will not receive any direct benefits from participation, but there are no disadvantages or penalties if you do not choose to participate or if you withdraw from the study. You may withdraw at any time or not answer any question if you do not want to. The interview will be completely confidential and anonymous as I will not be asking for your name or any identifying information, and the information you give to me will be held securely and not disclosed to anyone else. I will be using a pseudonym (false name) to represent your participation in my final research report. If you experience any distress or discomfort at any point in this process, we

will stop and withdraw the interview or resume another time. Please additionally note that I am an employee of Absa Bank Limited outside of my academic capacity, but I will not request you to provide any information that could lead to a possible conflict of interest.

If you have any questions during or afterwards about this research, feel free to contact me on the details listed below. This study will be written up as a research report, which will be available online through the university library website. If you wish to receive a summary of this report, I will be happy to send it to you. If you have any concerns or complaints regarding the ethical procedures of this study, you are welcome to contact the University Human Research Ethics Committee (Non-Medical); telephone +27(0) 11 717 1408, email hrecnon-medical@wits.ac.za.

Yours sincerely,

Researcher: Nikhilia Ishwarlaal

2506042@students.wits.ac.za, 061 430 9343

Supervisor: Dr P Omotoso

pelayo.omotoso@wits.ac.za, 0117173629

APPENDIX C: PARTICIPANT CONSENT FORM

Research Project Title: Incumbent Response Strategies to Disruptive Innovation in the South African Banking Industry

Researcher: Nikhilia Ishwarlaal

I, _____, agree to participate in this research project. The research has been explained to me and I understand what my participation will involve. I agree to the following:

(Please circle the relevant options below)

• I agree that my participation will remain anonymous	YES	NO
• I agree that the researcher may use anonymous quotes in his / her research report	YES	NO
• I agree that the interview may be video and audio recorded	YES	NO
• I agree that the information I provide may be used in an anonymised format after this project has ended, for academic purposes by other researchers, subject to their own ethics clearance being obtained	YES	NO
• I confirm that I have the authority to disclose information pertaining to [delete and enter employer's name here] and that none of the information I disclose is of a proprietary nature	YES	NO

…… (signature)
…… (name of participant)
…… (date)

…… (signature)
…… (name of person seeking consent)
…… (date)