

# Research Report on Mobile Money in South Africa

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September 2017

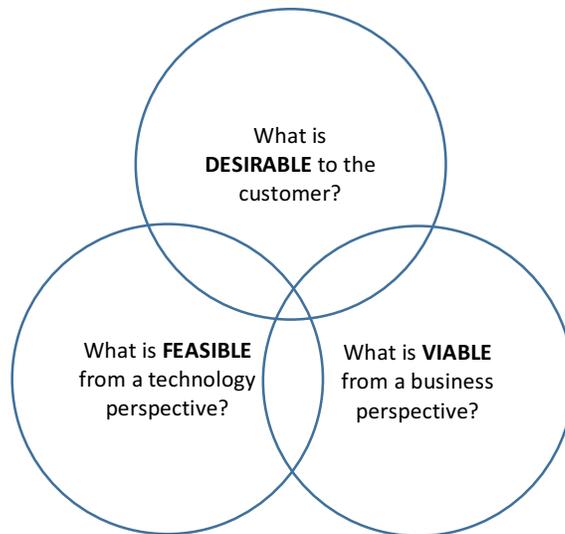
# EXECUTIVE SUMMARY

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The study focused on the factors that drove the termination of mobile money services in South Africa focusing on the institutional environment, market environment, end user environment and adoption and availability.

The secondary objective was to identify barriers to launching effective mobile financial services (MFS) in South Africa with a specific focus on the regulatory environment required to enable such opportunities.

The IDEO Human Centred Design model (IDEO, 2009) has been used to further interpret the findings of the report. At its core, the IDEO HCD model is a useful tool to provide insight into the design of products and/or services as it places people in the centre of the design, and ultimately, MFS and mobile money solutions are about people and how they use money.



Adapted from IDEO, 2009

## Objective one: assessment of MFS in South Africa

The services able to be offered through mobile money, including remittance and mobile payments (bill payments and merchant payments) are constrained in South Africa through regulation primarily due to the stipulation that e-money can only be issued by a bank and the definition of deposit limits the ability to offer mobile payments without a partnership with a bank. The structure of the national payments system creates barriers for non-bank participants to participate in clearing services and adds cost to participation in payment services. The effect of these barriers is that the ability to launch payment mechanisms that are able to compete with

the established mechanisms in cost, acceptance and interoperability is limited. The resulting enforced partnership models increased the overall cost of the service and limited the ability to innovate and challenge the existing models.

In markets where mobile money has been successful, one of the cornerstone services that has driven adoption and profitability is domestic remittance. The competitors in the formal sector for this service in South Africa are well established with significant market share combined with convenience, trust of the provider and accessible agent networks. The retailers dominate the formal domestic transfer market with limited price differentiation. The mobile money services offered were seen as augmenting these services by providing additional options, but not seen as sufficiently differentiated to change customer decision-making as to which service to prioritise – the preference being driven mainly by the choice of the recipient of the funds.

The South African end user environment has marked differences to those countries where Mobile Money has been successful, including high financial inclusion, easy access to ATM and retail branch networks and access to banking services through mobile channels. There is a propensity for individuals to withdraw the majority of their deposits into cash that challenges the substance of the banked statistics, further research is required to fully understand the reasons. The behaviour highlights that the benefits of financial inclusion are not being realised by these individuals. It is, however, well established that South Africa has a mix between formal and informal economies and cash is the one ubiquitous transacting mechanism that works equally well with street vendors as it does in high end stores. For this to be challenged, an alternative transacting mechanism with similar, or better utility would be required.

Additional factors that influenced the lack of sustainability include:

- Agent network challenges, including cash float, aggregation, trust and value proposition;
- Poor technology choices for the implementation of the services; and

In summary, the institutional environment constrained the services able to be offered through mobile money. The established competition in domestic remittances limited the opportunity for growth in the traditional cornerstone of mobile money solutions and the result of these factors was a lack of a significant value proposition to entice the banked, unbanked or the underbanked to switch from competitor offerings. The research showed that the termination of mobile money services did not leave a gap in the market's overall ability to transact or transfer money.

Using the IDEO model to further reflect, it is clear to see that while both M-PESA and MTN Mobile Money were technically feasible (they had their challenges, but none were insurmountable), and the customer desirability was high, the primary causes for failure lie within the business viability lens; that is, the business models were constrained by the institutional environment that limited

the product offering, a highly competitive domestic remittance market and an end user market with high financial inclusion.

### **Objective two: overcoming the barriers to launching MFS in South Africa**

It is evident from the withdrawal behaviour of consumers that a large portion of the South African banked population are not experiencing the benefits of financial inclusion. Cash is still the primary transacting mechanism, with the associated risk of safe storage and transport, and access to affordable credit is constrained through limited behavioural information. Incorporating the unbanked into formal financial services in a sustainable way will not only benefit the individual and help propel socio-economic development, it will provide a new market opportunities and overall commercial efficiency for the private sector and greater regulatory and tax efficiency ultimately contributing to the GDP.

FinMark Trust published research in December 2016 assessing the determinants of mobile money adoption across SADC (including South Africa) and the link between mobile money and financial inclusion. Although the study covered the regional dynamics, insights gained relevant to the MFS environment going forward, included:

- **Bank account ownership, access to ATMs, mobile banking and internet banking are inversely related to mobile money ownership.** Mobile money adoption is lower among those that own a bank account and also those who use ATMs, mobile banking, and internet banking to access their bank account which implies existence of substitutability.
- **Mobile money can act as a substitute for both formal and informal account ownership.**
- **Remittances are strongly related to mobile money adoption.** Both the descriptive analysis and regression results show a strong link between remittances and mobile money adoption.
- **Mobile money is mostly used to buy airtime, send and receive money and to a lesser extent to pay bills, access savings, credit, and insurance products.** This implies that further innovation in the sector is needed to make various financial products available to the unbanked.
- **Lack of information is cited as a significant barrier to mobile money ownership.** Both the descriptive and regression analysis shows that mobile money adoption is low among those with no education, which calls for designing mobile applications that focus on the utility of financial services and in a manner that usable by the uneducated.

The introduction of new mobile money financial products will be critical in allowing the poor to access saving, credit, and insurance products. Most adults use mobile money to buy airtime and make remittances which constitute a fraction of financial products needed by people. Therefore, the introduction of new mobile financial services such as savings, credit, insurance, and investment products should be introduced to allow people to access various alternative financial products.

For those explanations, stakeholders need to understand what is not currently working, and why the value propositions of their products are not attractive to customers. Sustainable financial inclusion has to address demand (what consumers want), supply (what financial institutions provide), and the environment (how the public sector and other private-sector companies play a facilitative role). Or, to put the challenge in other terms, sustainable financial inclusion is built on operating models, regulation, and infrastructure, as outlined below:

- **The Operating Models of Financial Institutions.** Innovations such as branchless banking, block chain, correspondent and agent banking, mobile payments, and flexible loan repayments are all potential solutions.
- **Enabling regulatory environments.** Regulatory environments that encourage competition and open the market to non-bank players while still maintaining stability and protecting the interests of consumers are more effective and increasing financial inclusion.
- **Focus on interoperability.** Many consumers rely on cash because the infrastructure that would support alternative payment mechanisms such as card, biometric or mobile money transactions is not in place. Allowing non-traditional players to offer interoperable services in payments has the potential to challenge the reliance on cash.

MFS offerings have the potential to provide a viable alternative to traditional banking and established remittance offerings, thereby increasing real financial inclusion with all the associated benefits. Fundamental to achieving this potential is a regulatory environment that enables innovation, encourages competition, ensures interoperability and provides fiscal stability and consumer protection. Changes to regulation can increase the range quality and suitability of financial products and services to low income consumers – thereby increasing financial inclusion. The following is recommended:

- Review the current position on e-money and consider the role of non-banks issuing e-money.

- Increasing access to the national payment system at a payments and clearing level, including non-banks.
- Review the definition of deposit and consider the option of introducing granularity into the usage of deposit (eg. Deposits for the purpose of transacting) and using that to guide appropriate oversight.
- Introducing regulation to enforce banks to provide access to their services to third parties through secure APIs.
- Introduction of inter-operable real-time-push mobile transactions.
- The use of regulatory sandboxes to enable innovation while leveraging technology to better manage risks.
- Improve co-ordination between different departments and explore the opportunities for South African Social Security Agency (SASSA) to better leverage existing payment and transacting infrastructure.
- Shift the focus from the regulation of institution to the regulation of activity, service or product.

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# 1. INTRODUCTION

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With the March 2016 decision to terminate the domestic M-PESA solution in South Africa, Vodacom and the FinMark Trust (FMT) identified an opportunity for an independent and reflective assessment of the journey taken by Vodacom to understand the limited market success that led to its termination.

This study focuses on the factors that drove the termination of mobile money services in South Africa focusing on the regulatory environment, market environment, end user environment and adoption and availability. Through a combination of desktop research, interviews with previous customers of the services, customers of competing services, unbanked individuals, SASSA clients, industry stakeholders and experts as well as previous agents of M-PESA, conclusions are drawn as to the likely reasons for the limited adoption of mobile money.

The secondary objective is to identify barriers to launching effective mobile financial services (MFS) in South Africa with a specific focus on the regulatory environment required to enable such opportunities.

FMT contracted Freethinking Business Consultants (“Freethinking”), a financial services consultancy, and KPI Research and Strategy (“KPI”), a research consultancy, to conduct the research on their behalf.

## 2. OBJECTIVES

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The study was initiated with the objectives listed below:

### 2.1 Assessment of MFS in South Africa

Assessment of the factors that drove the termination of mobile money services in South Africa focusing on the institutional environment, market environment, end user environment and adoption and availability. This includes the identification of factors that affect banking and mobile money in South Africa as opposed to other markets in Africa:

- a. Assessment of the conduciveness of the regulatory environment to Mobile Money in South Africa as opposed to other markets in Africa.
- b. Assessment of the distribution network for Vodacom M-PESA and marketing approaches used by Vodacom affected the performance of Vodacom M-PESA.
- c. Assessment of the performance of active and inactive customers towards M-PESA and other mobile money solutions offered in South Africa.
- d. Evaluation of Vodacom M-PESA's unique value proposition and Brand appeal to the Vodacom customers.
- e. An explanation of how other relevant information/processes, such as price, banking infrastructure and branding of the products affected performance and suggested potential solutions within MFS to meet current and future customer needs.

### 2.2 Overcoming the barriers to launching MFS in South Africa

Identification of barriers to launching effective mobile financial services (MFS) in South Africa with a specific focus on the regulatory environment required to enable such opportunities.

## 3. RESEARCH DESIGN AND METHODOLOGY

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The study has been designed in conjunction with FMT and implemented by Freethinking and KPI using the following approach.

### 3.1 Scope

The following institutions were included in the scope of the study:

1. M-PESA Agents across the country;
2. M-PESA Customers;
3. Central Bank of South Africa;
4. M-PESA Billers; and
5. M-PESA Business partners in South Africa including Banks and retail shops.

### 3.2 Primary Research / Interviews

A total of 419 interviews were conducted in the Gauteng region with a spread across metro and semi-rural areas.

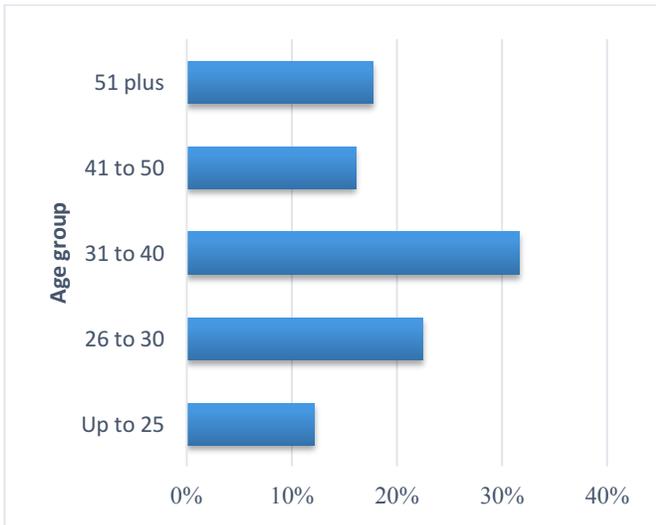
Respondents were split into four categories:

- 100 past users: M-PESA Users (80) and MTN Mobile Money Users (20);
- 115 current users of one or more money transfer and payment service providers and who have not previously used either M-PESA or MTN Mobile;
- 107 unbanked (currently unbanked or with a dormant bank account and had an income of R 1 000 plus per month); and
- 97 SASSA clients – 97 interviews of which 53 respondents (55%) are using one or more money transfer and payment service.

#### 3.2.1 Sample demographics and descriptive statistics

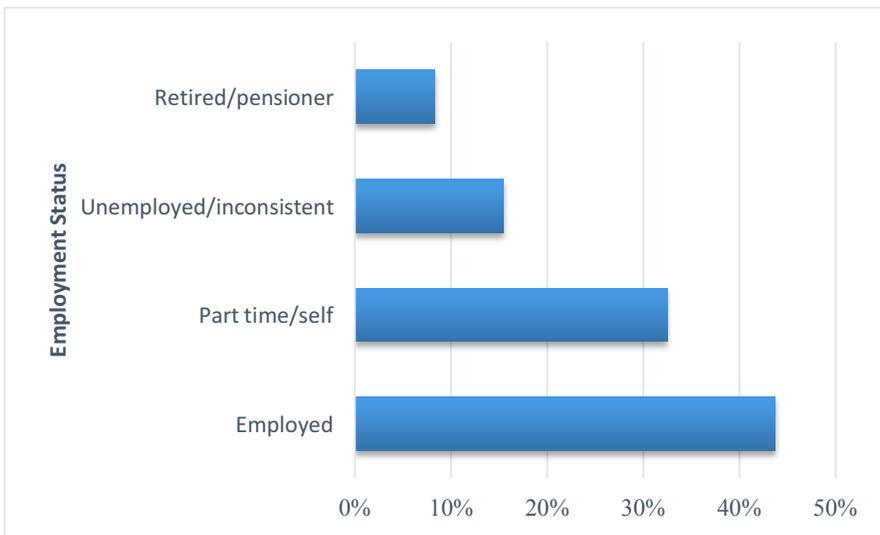
The respondents were sourced from Gauteng urban and semi-urban areas and cannot be assumed to be representative of the entire South African demographic. In addition, the small sample size does not allow for statistical relevance at a detailed analysis level. The figures below provide details of the demographics.

*Figure 1: Age group distribution*



The SASSA client distribution is skewed towards the 51 plus category with 48% of the interviewees falling into that category. The sample is skewed towards the 31 to 40 age group in comparison to the South African population - the view and behaviour of the younger generation may not be fully represented.

*Figure 2: Employment status*



The sample of past users of M-PESA and MTN mobile money as well as current users of money transfer and payment services are largely employed (85% and 82% respectively) while only 6% of the SASSA sample are employed with 43% retired or pensioners. The employment statistics are

relatively representative of the South African population, although the under 25 age group (where there is higher unemployment) is under-represented.

The sample size does not allow for statistical relevance at a detailed level. The focus on metro and semi-rural areas limits the applicability to areas with high access to retail and banking infrastructure and the findings in rural areas may be different. Further research should consider a larger and geographically diverse sample.

Stakeholders from the following organisations were interviewed. The stakeholders were chosen to represent the key players in the market, regulatory oversight and industry experts:

- Shoprite Checkers (Tremaine Hechter: Head of Financial Services);
- Bidvest Bank (Neil Capazorio: Head Products, Virtual Channels and Strategic Alliances);
- M-PESA Agents (3);
- SARB: National Payments Systems (NPS) team;
- SARB: Bank Supervision team;
- Vodacom (Junaid Munshi: CBU International Business Executive and ex MD of M-PESA South Africa; and Mutsa Sibanda: Vodacom Executive);
- Vodacom (Victoria Mojuto: Vodacom Executive);
- Vodacom (Ricardo Platt: Executive Head of Financial Services);
- FNB eWallet (Maude Gomes: Head Product Growth eWallet Solutions);
- Mukuru (Jon Louis Burke: Industry expert and former Business Developer at Mukuru);
- Tyme (Keith McGivor: Head of Corporate Payment Solutions);
- Vodafone (Michael Joseph: Founder of M-PESA)
- Wizzit (Brian Richardson: CEO); and
- Vodacom (Susie Lonie: former Head of Implementation of M-PESA South Africa tasked with the initial launch).

### **3.3 Secondary Research / Literature Review**

Secondary research was conducted to:

- Identify the factors driving success of mobile money implementations and review these factors in the South African context;
- Review the South African regulatory context and its potential impact on the implementation of MFS; and
- Review the competitive product offerings available in South Africa based on their ability to fulfil the customer service required.

The secondary research themes provide the basis of the model in which the results of the primary research and interviews are discussed.

### **3.4 Analysis Methodology**

The primary research phase of the project comprised two components:

1. A broad based 'bottom-up' research approach targeting the end-user/prospective end-user market, and
2. A 'top down' approach targeting key industry stakeholders, including regulators. The research and analysis methodology for each is summarized below

#### **3.4.1 End User Research Component**

For this primary research, face-to-face interviews were conducted with the following four respondent categories.

Pre-approved and structured questionnaires were used for these categories and the use of show cards to facilitate the interview process and ensure understanding for the line of questioning:

- Past users of M-PESA and MTN Mobile Money;
- Current users of money transfer and payment services;
- Unbanked sample (No bank account but currently earning R 1 000 plus per month), and
- SASSA clients.

Where applicable, the analysis illustrated two perspectives:

1. The differences and/or similarities between past users of M-PESA or MTN Mobile Money and current users of money transfer and payment services who have not used the services of M-PESA or MTN Mobile Money, or
2. The combined analysis showing the sample of current users of money transfer and payment services and past users of M-PESA and MTN Mobile Money.

Common areas for each of the four discrete questionnaires comprised:

1. Banking behaviour;
2. Transacting behaviour;
3. Past and current usage of money transfer and payment services; and
4. A general section covering: the number of mobile phone accounts, their data usage, mobile provider usage, the need for cross border remittances and where applicable, their current means of salary payment.

Organisations and the relevant related products that were evaluated in the primary research included the following:

- Absa – Cash Send;
- FNB – eWallet;
- Standard Bank – Instant Money;
- Pep Stores Money Transfer (Absa);
- Shoprite Checkers Money Market (Standard Bank); and
- SASSA and Cash Paymaster Services.

An introductory letter compiled by FMT was used to provide the respondents with the validity and background information of the study. And at the outset of the interview, the following paragraph was read to the respondents;

“The objective of the research is to gain a better understanding of the usage, both past and present, of mobile money in South Africa. Please be reassured that we operate under the SAMRA market research code of conduct and responses will be treated in confidence; your responses are used for analysis and statistical purposes only”

To ensure objectivity, the following questions and screeners were used at the beginning of the interview:

Do you, or any member of your family, or close friends work for any of these organisations? (Please disclose if any responses are yes).

- Market research company;
- Mobile telecoms providers such as MTN, Vodacom or Cell C;
- Banks or similar financial organisations; and
- SASSA or Cash Paymaster Services.

The interviews were conducted in the Gauteng region with a coverage of metro and semi-rural areas.

**Questionnaire structure and analysis:** The questionnaire structure for the four consumer categories outlined was a combination of quantitative and qualitative questions. For analysis, the data from the quantitative questions are entered directly into the SPSS database file.

The qualitative (open-ended) questions are post-coded and thus have a numerical code that is also captured and provides a measurement level for the qualitative aspects. Where applicable, verbatim comments are also used to illustrate a specific point.

**Timing and project process:** In December 2016, 100 interviews were conducted with past users of M-PESA and MTN Mobile Money with the sample breakdown being 80 interviews with past

users of M-PESA and 20 interviews with past users of MTN Mobile Money. These past users were sourced by the KPI research team.

The interview process was halted over the December period and restarted in February 2017. There were 107 interviews with unbanked respondents, 97 interviews with SASSA users and 115 interviews with current users of money transfer and payment services. A total of 419 interviews.

### **3.4.2 Key Stakeholder Research Component**

This research phase comprised qualitative, in-depth interviews with representatives from key stakeholder organisations and industry experts. These interviews were undertaken by KPI and Freethinking consultants appointed to the project.

A qualitative discussion guideline was used to direct the interviews, but understandably certain factors were more relevant to certain respondents/organisations and certain factors less relevant. Therefore, the focus of each interview favoured the topics more relevant to the representative being interviewed.

A sample of 15 interviews was conducted and the qualitative outputs served to identify perceived key and common themes that influenced the success of mobile money solutions offered by Vodacom and MTN, as well as validating the opportunity in the market and critical success factors with respect to the provision of mobile money/transfer and financial services in South Africa.

## 4. ASSESSMENT OF MFS IN SOUTH AFRICA

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The primary objective of the study is the assessment of the factors that drove the termination of mobile money services in South Africa focusing on the institutional environment, market environment, end user environment and adoption and availability. This includes the identification of factors that affect banking and mobile money in South Africa as opposed to other markets in Africa:

- a. Assessment of the conduciveness of the regulatory environment to Mobile Money in South Africa as opposed to other markets in Africa.
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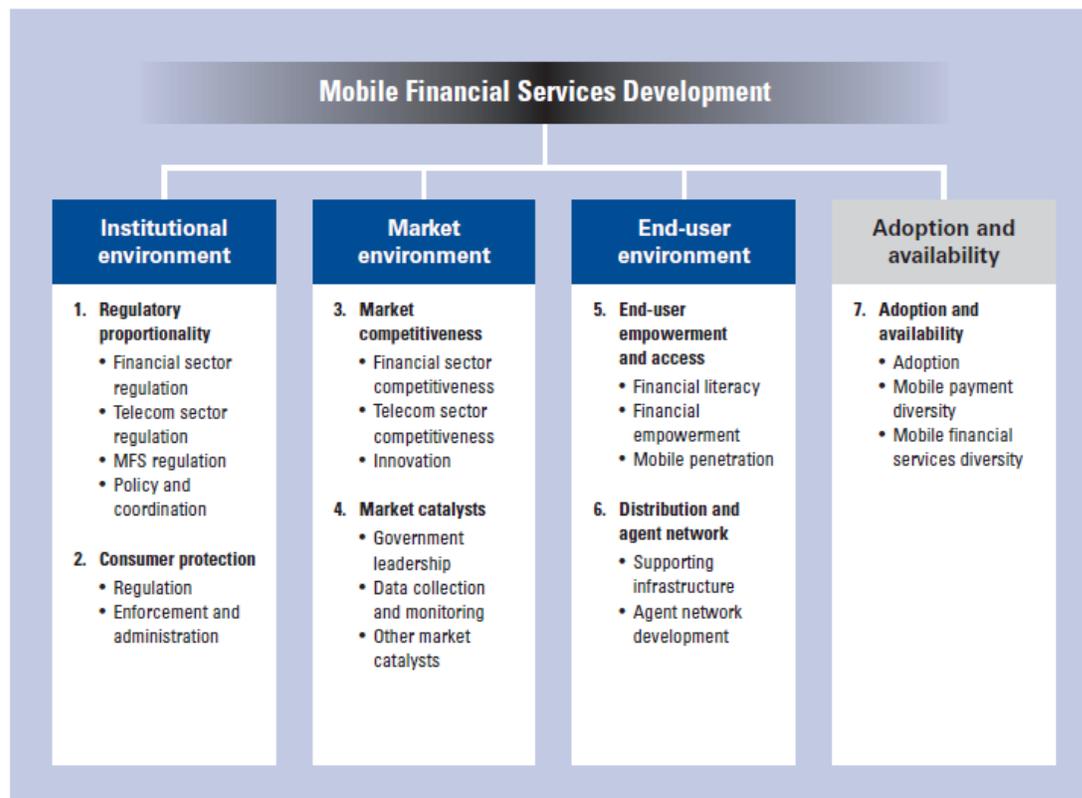
The World Economic Forum (WEF) identify seven pillars of MFS development (World Economic Forum, 2011). The seven pillars are grouped into the three categories summarised below:

**Category 1:** The institutional environment: The pillars related to regulation and consumer protection that influence the development of MFS

**Category 2:** The market environment: The market competitiveness of the private sector, innovation and presence of market catalysts.

**Category 3:** The end-user environment: The distribution and empowerment of individuals to access and adopt MFS.

*Figure 3: The seven pillars of MFS development (World Economic Forum, 2011)*



While published in 2011, the framework provides a useful context in which to assess MFS in South Africa due to its broad coverage of influencing factors. Twenty countries were compared. Based on the strength of the institutional and market environment, South Africa was categorised as a country with high readiness due to a neutral institutional, and favourable market environment.

The pillars are reinforced through (GSMA) where factors influencing adoption and availability are expanded to include:

- Services offered;
- Pricing;
- Ease of registration and incentives;
- Interoperability; and
- Ease of use.

An additional factor of the trust of the provider is also highlighted as a key factor influencing the success of MFS within a market.

In order to assess the factors mentioned above, the study focuses throughout this section on a comparison between the case of South Africa, and the cases of Kenya and Tanzania, where the introduction of Mobile Money into the market was a success.

In 2007 M-PESA was launched in Kenya and an unprecedented adoption was witnessed. The service was started to transfer money from one person to another (P2P). Safaricom, the Mobile Network Operators (MNO) who launched M-PESA in Kenya, was just as surprised as the market with its rate of adoption, characterised as “an explosion” by one member of the implementation team. In light of this success, Vodafone, who owned 40% of Safaricom at the time, launched the service across a few other markets, including Tanzania. Upon introduction to the market in Tanzania, MFS saw a slower uptake rate at the beginning.

In a report on the suspension of operations (Prinsloo, 2016), Vodacom Chief Executive Officer, Shameel Joosub, cited the following reasons for the decision: “The business sustainability of M-PESA is predicated on achieving a critical mass of users. Based on our revised projections and high levels of financial inclusion in South Africa there is little prospect of the M-PESA product achieving this in its current format in the mid-term.”

MTN’s press statement when shutting down MTN Mobile Money stated that “... it was not viable in a country where around three quarters of the population already has a bank account. The operating costs of providing a mobile money platform has become prohibitive. (Reuters, 2016)”. MTN recently cut ties with their former banking partner Tyme, whilst maintaining their second partnership with South African bank of Athens. Tyme, which was left with retailer Pick ‘n Pay as their only partner in with direct access to South African consumers, is currently attempting to obtain a banking license in South Africa, and spokesperson Thoraya Pandey reiterated on February 2017 their capacity to compete effectively in South Africa without MTN’s partnership (Bonorci & Prinsloo, 16). Tyme’s approach and success remains to be seen.

In both Vodacom and MTN’s cases, within the context of South Africa, the operating models for Mobile Money were slightly different to the Kenyan and Tanzanian models, in particular due to financial regulations in the country. The services of M-PESA and MTN Mobile Money were more closely linked, and thus more similar, to bank accounts. In the case of MTN Mobile Money, the receiver had to register (i.e. open an account) in order to receive the funds, or the money was sent back to the sender.

The sections below assess different factors affecting the successful uptake of mobile money in Kenya and Tanzania, and how it compared to South Africa.

#### **4.1 Institutional environment**

Kenya and Tanzania. Canmer et al’s study of both countries’ cases did not consider the role of the central bank and regulations impacting mobile money (Canmer, Pulver, & Sjoblom, 2009). The authors excluded this variable as it was felt mobile operators have little influence

over the central bank. However, both in Kenya and Tanzania, the Central Banks' role and approach to innovation in financial inclusion provided a conducive environment for Mobile Money to flourish (Di Castri & Gidvani, 2014).

South Africa. The South African regulatory environment is highlighted as a constraining factor by Perlman and as a neutral factor by the World Economic Forum (Perlman, 2012) (World Economic Forum, 2011). To better understand this view, it is necessary to review the related regulation. Four primary components influenced the need for MNO in South Africa to partner with a bank:

- The definition of a deposit: As defined by the Banks Act and elaborated in the definitions section of this document;
- The determination of whether the offering would result in performing the business of banking. Key components of the definition of the business of a bank include:
  - The acceptance of deposits as a regular feature of the business;
  - Soliciting or advertising for deposits;
  - Utilisation of money accepted by way of deposit for lending, investment or financing of business activity;
- The position that only banks are authorised to issue e-money; and
- The National Payment System Act (NSPA) only allows for fiat money to be stored in a Store of Value (SOV) when payment is due to a third party. If nothing is due, it is seen as deposit taking.

Further, (Norton Rose Fulbright, 2015) published a summary of an interview where they responded to the question 'From a regulatory perspective, is there anything stopping the development of mobile payments in South Africa?' (summarised from the publication):

- The payment of funds into a mobile money account would constitute a deposit because the depositor will be allowed to withdraw the funds on demand. The entity offering the mobile money account by accepting deposits is conducting the business of a bank.
- In the absence of a stance on mobile money, the SARB published a position paper on e-money in 2009 (NPS 01/2009) where it provided that only registered South African banks can issue e-money. A mobile money account may constitute e-money.
- A non-banking entity is prohibited from accepting deposits or issuing e-money unless a specific joint venture with a bank is approved.

To launch an offering without partnering with a bank, the MNO would not have been able to provide a fiat-based store of value (SOV) to enable transactions resulting in an offering limited either to the walled-garden airtime SOV transactions or a direct payment offering where the exact amount required for payment is transferred each time. The result of these restrictions would have

resulted in a product without a clear and defined market leaving the MNO's with two options - apply for a banking license, or partner with an existing bank - the latter was chosen.

Interviews with mobile operators and various subject matter experts indicated that the regulatory environment was found to be constraining. The following comments are extracted from the interviews:

- The banking relationship hindered our ability to innovate and react quickly to market needs;
- A difficulty we faced as an MNO was that the central bank refused to have any discussion directly with us, we had to always arrange meetings through our sponsoring bank, and it was this lack of openness that frustrated the process and ability to innovate;
- Having a bank as a partner was fine, Payments Association of South Africa (PASA) regulation was our biggest obstacle as an MNO;
- The South African payment system is set up to favour cash. Until the interchange fee is removed or dramatically reduced, big retailers will favour cash as a means of payment over card. The regulator needs to assess the interchange fee regularly;
- Mobile money is a success when it goes against the establishment. The existing status quo (banking) needs to be shaken up. With regulation insisting that a bank be involved and part of the day to day running of the service the regulator was in effect hiding behind "the need for stability" and thus the establishment could not be challenged; and
- Regulation in general needs to be written for mobile banking. It is a completely different way of doing things, and the regulator needs to recognise this. Rather than setting regulation up front, we should work it out together while running and innovating the service to best meet customer needs.

The need to partner with a bank was felt to have constrained innovation and prevented competition that could have challenged the established players. In addition, the incentive for the bank to market and distribute the product was perceived to be compromised due to its potential to cannibalise the bank's existing business. There was a less prevalent theme in the interviews that challenged the primary view:

- Our bank was only concerned with not getting a fine, other than that we were left to run the service as we wanted; and
- There is always a way around regulation. There needs to be an impact assessment done, and the service adopted accordingly.

The following questions were explored with representatives from bank supervision in a meeting held 21 April 2017:

1. What is the primary risk being addressed through the definitions that resulted in the MNO partnering with a bank?
2. Is there an opportunity to re-visit the definitions of deposits and the business of banking to enable a competitive offering to be launched without the partnership with a bank?

In response, the participants highlighted that the primary risk being addressed is to protect the depositor against the risk of institutional failure, followed by ensuring efficiency, integrity and transparency and improving financial inclusion. Additionally, any regulation that allowed for the launch of services outside of a bank would need to ensure a level playing field for all potential players and not unduly benefit any specific party. Interoperability would also need to be ensured. There are a number of initiatives underway that may change the regulatory environment over the coming years. These include:

- A review of the National Payment System Act (NPSA) to strike a balance between the NPS and banking. This includes a review of the implementation of e-money and is covering remittances but has only recently been initiated and has not yet made any recommendations.
- There is a recognised need to revisit the banks frameworks, including mutual banks, co-operative banks and the concepts in the dedicated banks bill. A working group on virtual currencies has been established.
- The Twin Peaks bill may result in a shift of the focus to regulating the activity, service or product rather than the institution

While the combination of these initiatives may result in a more enabling regulatory environment, the timeline of the impact is expected to be measure in years and not months. A shift towards regulating the service or product will result in the application of appropriate regulation and governance and allow for the launch of products and services that will be able to compete with the established players.

The market felt it was an unnecessary layer to have a relationship with a sponsoring bank, resulting in a constrained product offering and limited capability to challenge the existing product offerings.

(Perlman, 2012) concludes that Safaricom was able to structure the M-PESA system such that it did not fall under the definition of banking business as defined in the banking act. This was primarily due to the definition of a deposit requiring that part of the money must be employed in lending. Similarly, they were able to avoid being defined as financial business as the money held on deposit was not employed in any way that would create risk for the deposit taker. While this allowed Safaricom to launch without a banking partner, the regulators “played a very

progressive role and allowed regulation to follow innovation, while reassuring the market of its oversight” (Fengler, 2012).

The institutional environment was found to be a significant limiting factor in the product offering that was able to be provided to the consumer. The requirement to partner with a bank limited the opportunity to launch a disruptive product and the limited access to the national payment system meant that the transactional capability was constrained beyond the traditional payment methods.

## **4.2 Market and end user environment**

The GSMA identifies two types of markets based on key features identified in markets in Latin America and the Caribbean:

- Type 1: Characteristics that make it difficult for financial service providers to reach the underserved through traditional banking including low penetration of bank accounts contrasted against relative high mobile phone access. MFS launches in the markets tend to be led by MNOs as opposed to banks.
- Type 2: Banks are firmly rooted in the economy and mobile operators and retailers have high penetration levels and have built strong customer relationships. Contenders for the launch of MFS can come from retail, banking or telecommunications sectors and tend to be more integrated with existing financial and retail infrastructure (GSMA, 2015).

The Kenyan market was clearly a Type 1 market when M-PESA was launched in contrast to South Africa which falls into the Type 2 definition.

### **4.2.1 Financial inclusion – or lack thereof**

Kenya. At the time of M-PESA’s inception, Kenya had high levels of financial exclusion, banks were not accessible in remote areas, and bank account opening requirements were stringent with bank accounts offering little to low-income earners. M-PESA offered an accessible 'banking' option that was simple to use, and appropriate to the cash exchange requirements of many Kenyans (Masinde, 2016). M-PESA was designed as a service for the unbanked in emerging markets (Camner, Pulver, & Sjoblom, 2009).

Tanzania. While the Mobile Money service is designed for the unbanked in emerging markets it cannot function without a formal financial sector. It seems that while the added value of Mobile Money is to provide financial services to the unbanked, an established formal financial sector allows for a conducive environment to early adopters (shown to be banked in both countries), a higher financial literacy and basic knowledge of financial services in the general population, thus

enabling faster uptake of the service. In Kenya, 38% of people were unbanked, compared to 54% in Tanzania, which could explain the difference in uptake rates.

South Africa. South Africa has low financial exclusion, but one could argue that mobile money provides value to both the unbanked as well as the underserved. According to (FinMark Trust, 2016), 77% of South African adults are banked. This figure includes SASSA cardholders (grant payments made by the government). As this percentage has been seen for two years, FinScope concludes that the unbanked are likely unemployed and under 30. South Africa has high levels of unemployment and as there is no flow of income to these individuals having a bank account and maintaining the fees needed to service a bank account is a challenge.

South Africa has a well-established financial sector, allowing for the flow of cash needed to maintain the operating system for mobile money. According to (FinMark Trust, 2016), what is interesting to note within this cash flow system is how over 14m South African adults withdraw their cash as soon as it is deposited, effectively using their accounts as mailboxes.

There is evidence that:

- 6,1m SASSA cardholders withdraw their money as soon as it is deposited, and
- 8,4m non-SASSA cardholders withdraw their money as soon as it is deposited

If users are withdrawing their cash as soon as it is deposited, can they be considered banked and/or financially included? The World Bank vision for universal financial access is that by 2020 adults who currently are not part of the formal financial system have access to a transaction account to store money and send and receive payments as the basic building block to manage their financial lives. (World Bank, 2016)

FinScope further extends this by offering metrics to measure the quality of financial inclusion:

- Ability to use a transactional account (digital and e-payments);
- A savings account to preserve wealth;
- Credit to increase productive capacity or improve the quality of life; and
- Insurance services as a bulwark against unforeseen events and risks.

This suggests that while South Africa has low levels of financial exclusion as per the strict definition of banked versus unbanked groups, it can be argued that a significant proportion of South Africans is “underbanked”, or “underserved”. Furthermore, the majority of money transfers are performed through retail using OTC services. This is reinforced through the research where it was found that the availability and adoption of both financial services (banking and money transfer and payment services) as well as telecommunication services was high. There is a strong correlation between having a banking account and being employed with likely causality due to the number one reason stated for opening a bank account being the need to have the salary

deposited into the account. The majority (97%) of users had a bank account before opening mobile money accounts or registering for a money transfer and payment service. This, however, is not considered unusual even in other markets where early adopters are banked – as markets mature, penetration extends to the unbanked.

Figure 4: Access to telecommunications services in South Africa (%)

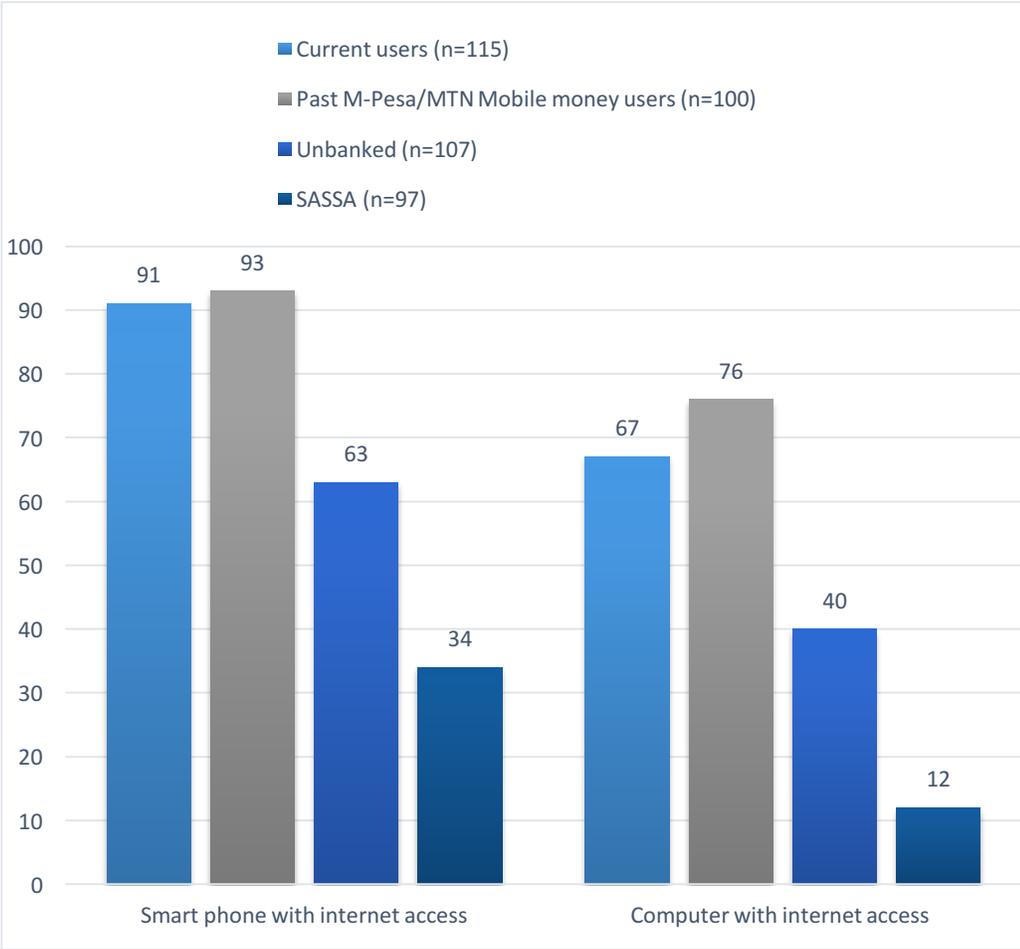
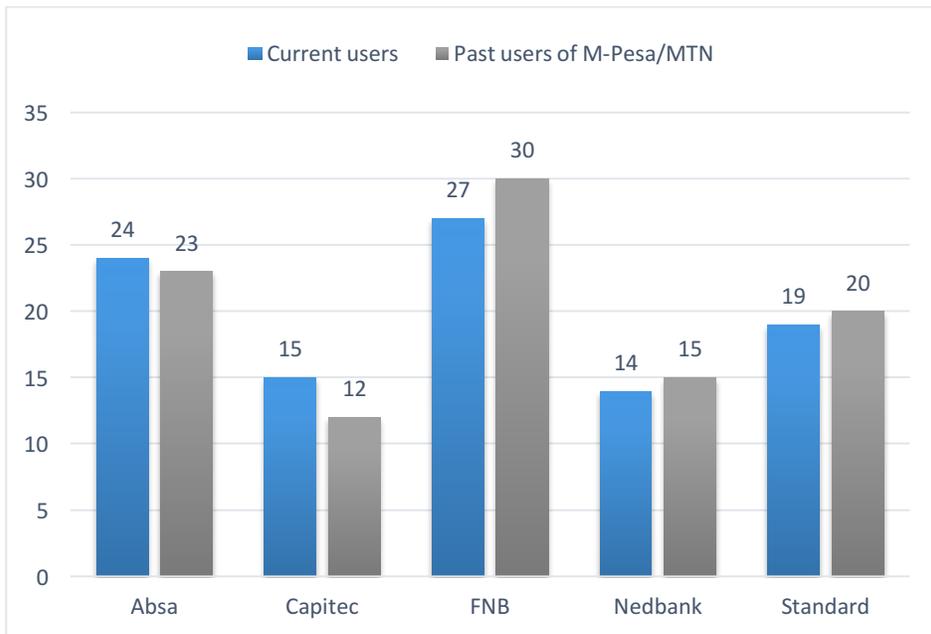


Figure 5: Bank accounts by institution (%)



#### 4.2.2 Competitive Market and Value proposition

Operators must build clear propositions for potential customers, addressing existing remittance streams to understand why and where people are sending money (Camner, Pulver, & Sjoblom, 2009). In Kenya, there was a clear dominant trend of urban to rural remittances being sent, which became the main value proposition of M-PESA (easy and affordable service to send money domestically). In Tanzania, there was a wider range of remittance trends, with the value proposition of M-PESA for each one needing to be established by Vodacom.

Kenya. “M-PESA is the creation of its users” describes the evolution of M-PESA’s additional services: users realised they could gift their airtime as a form of payment, while the provider, Safaricom, saw further opportunities of development, and began issuing credits directly (Fengler, 2012). This was reinforced during the primary research phase where it was noted by an interviewee that users in Kenya had little choice, while users in South Africa needed to be enticed. In Kenya, the general lack of banking infrastructure meant that M-PESA users had no other choice, whereas in South Africa, users are well-served by the formal financial systems in place.

Tanzania. The services offered were expanded to include utility bill payments (electricity, water and television), loan repayments and donations. This enhanced the initial proposition of “sending money home” significantly.

South Africa. While there is a need to remit cash throughout South Africa, this need is (and has been) serviced through several solutions offered by banks and/or retailers. The questions to be answered are:

- To what extent is this need understood and successfully being serviced?
- Is there any need not currently being met?

Even with the removal of mobile money offerings, South African consumers are able to remit cash securely without having a bank account, the majority through retailers. This is different to Kenya where before M-PESA the majority of remittances were managed by hand. (Camner, Pulver, & Sjoblom, 2009) and (FinMark Trust, 2016) below highlight the differences between Kenya at the time of the M-PESA launch and South Africa currently.

Figure 6: Kenyan remittance at the time of M-PESA launch (Camner, Pulver, & Sjoblom, 2009)

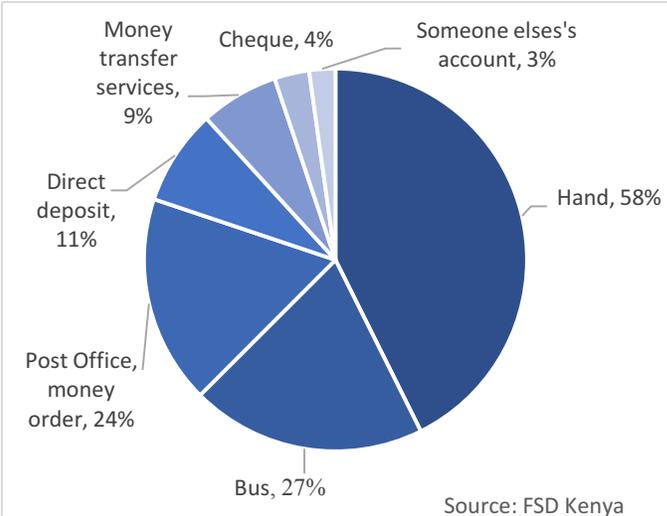
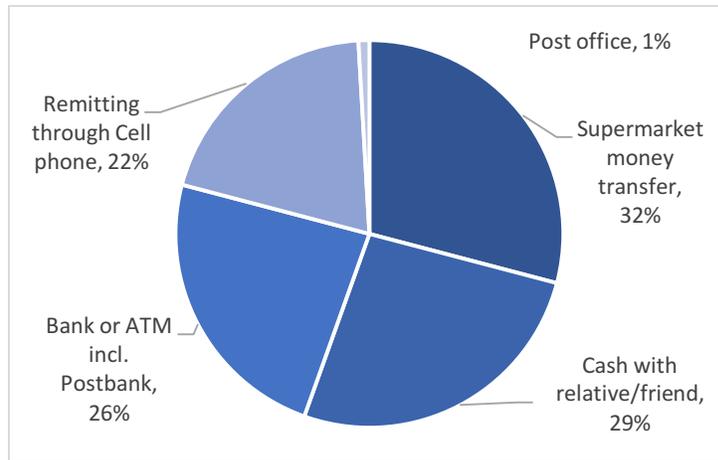


Figure 7: South African remittance overview (adapted from FinMark Trust, 2016)



Retailers in South Africa appear to be servicing the need to remit cash successfully. This service is being offered through Shoprite and Checkers, Spar and Pep. A money transfer through these retailers is:

- Secure: Money is taken from the consumer and put into a system.
- Convenient: These retailers have national footprints.
- Fees are easy to understand: There are flat fees in place, ranging between R7.99 and R 9.99 per transaction.
- Easy on-boarding: Users need only be RICA'd (SA ID and cell phone number need to be present) to use this service.

Table 1: Overview of South African service offerings

		Transfer and Pay (local)	Transfer and Pay (cross-border)	Credit and Savings
MNOs	All	No	No	No
Retail	Shoprite & Checkers	InstantMoney powered by Standard Bank	Ability to transfer to Lesotho	No
	Spar	InstantMoney powered by Standard Bank	No	No
	Pep	Money Transfer	Ability to transfer to Zimbabwe powered by a number of	Yes

			providers including Mukuru	
Banks	All	Some banks allow payments and transfer from their bank account to non-bank account holders	Some banks allow payments and transfers from their bank account to non-bank account holders in select African countries	Standard Bank Mobile Wallet (coming soon)
Other	Mukuru		Ability to transfer to Zimbabwe, Malawi, Zambia, Mozambique, Botswana and Lesotho (partnerships include Pep, Shoprite, Pick n Pay)	Standard Bank Mobile Wallet (coming soon)

To understand the competitive landscape in more detail, it is relevant to introduce a channel dimension to understand the current customer options for the initiation and fulfilment of services.

Table 2 maps the customer services against suitable channels for initiation and fulfilment:

- Over the counter (OTC): This could be at a bank branch, retailer or agent;
- Online: Refers to web interaction through mobile, desktop or laptop;
- Mobile banking: App-based interaction through a mobile device reliant on a bank account;
- USSD (Unstructured Supplementary Service Data): Text message based interaction through a mobile device;
- SMS: SMS interaction through a mobile device;
- Mobile wallet: App-based interaction through a mobile device that is not reliant on a bank account; and
- ATM: Automated teller machines.

*Table 2: Customer services vs channels for initiation and fulfilment*

CUSTOMER SERVICE	OTC		Online		Mobile banking		Mobile wallet		USSD		SMS		ATM	
	I	F	I	F	I	F	I	F	I	F	I	F	I	F
Deposit salary	Y		Y		Y		Y		Y		Y		Y	
Receive money		Y		Y		Y		Y		Y				Y
Pay suppliers	Y		Y		Y		Y		Y		Y		Y	
Transfer money	Y		Y		Y		Y		Y		Y		Y	
Borrow money	Y	Y	Y	Y	Y	Y	Y	Y					Y	Y
Buy airtime	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Pay at shops	Y		Y		Y		Y		Y					
Withdraw money	Y												Y	
Cross border payment	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Retailers in South Africa have a strong channel presence in OTC, while banks enjoy dominance in online, mobile banking, USSD, SMS and ATM channels while also having strong OTC reach in their branch networks.

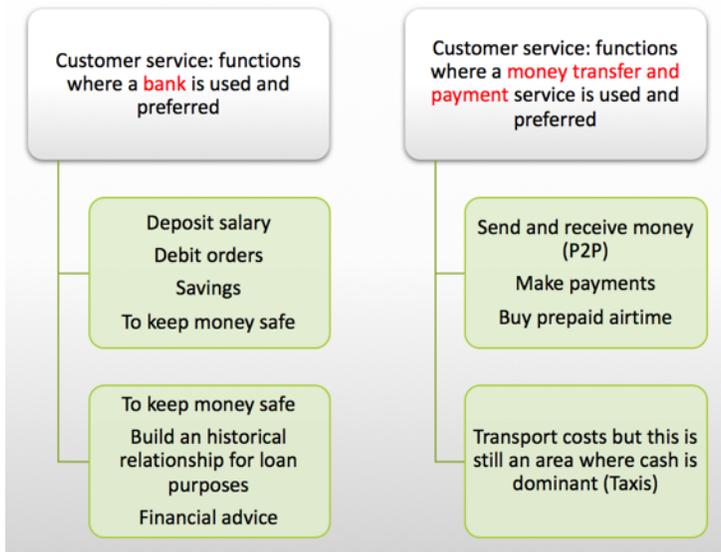
For an alternative model to be successful, it will require a competitive set of channels for the initiation and fulfilment of services and need to provide additional value as an alternative mechanism for payments.

Given the strong competition for services from both the retail and banking sector, organizations offering money transfer and payment services were included in the research based on their market share of the major services offered. The research also explored competing services offered by banks. The following money transfer and payment service offerings were included in the research:

- Absa – Cash Send
- FNB – eWallet
- Standard Bank – Instant Money
- Pep Stores Money Transfer (Absa)
- Shoprite Checkers Money Market (Standard Bank)
- SASSA and Cash Paymaster Services

As much as there is overlap between the services previously offered through M-PESA and MTN Mobile Money and those offered by the retail and banking sectors, distinct user preferences were identified based on service offerings. The detail of behaviour and potential reasons for the preferences are explored in the sections that follow.

*Figure 8: Customer service and institution preferences*



### 4.2.3 Customer Service Fulfilment

The reasons for opening bank accounts as stated by all participants is overwhelmingly for the purposes of receiving salary deposits\* and saving money. Given that this is the only method currently available for these services (or through a mobile money solution backed by a bank account), it is possible that alternative methods may be preferred if available.

\*Technically possible with M-PESA, too. However, due to Exemption 17, KYC limits were an issue in some cases, therefore requiring full FICA.

Figure 9: Reasons for having a bank account, current users (sample size 115 – number of respondents)

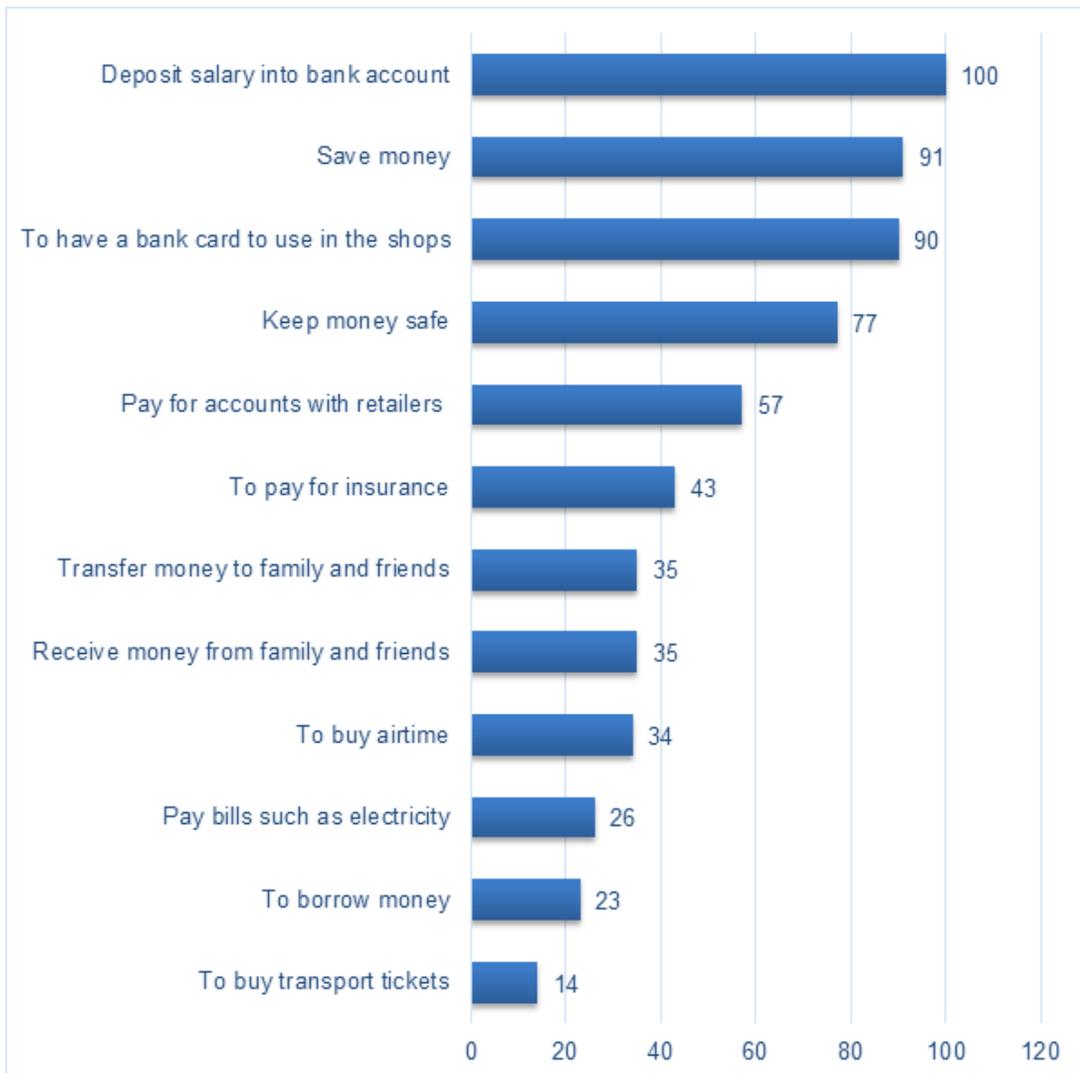
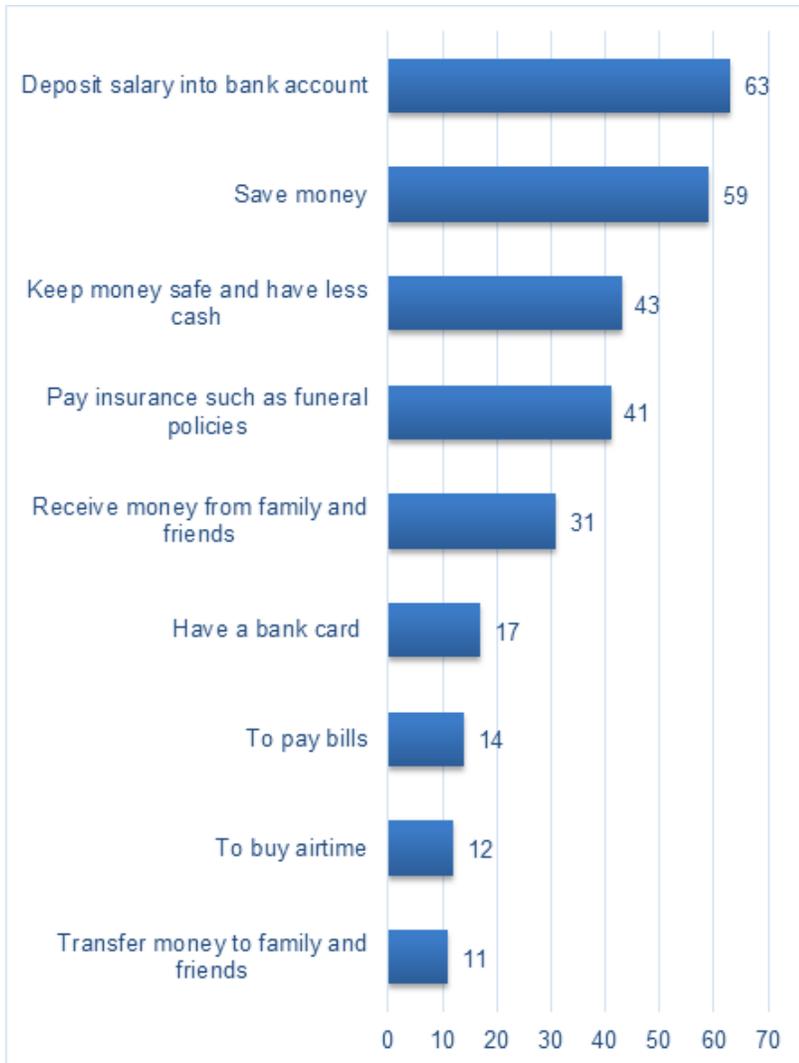
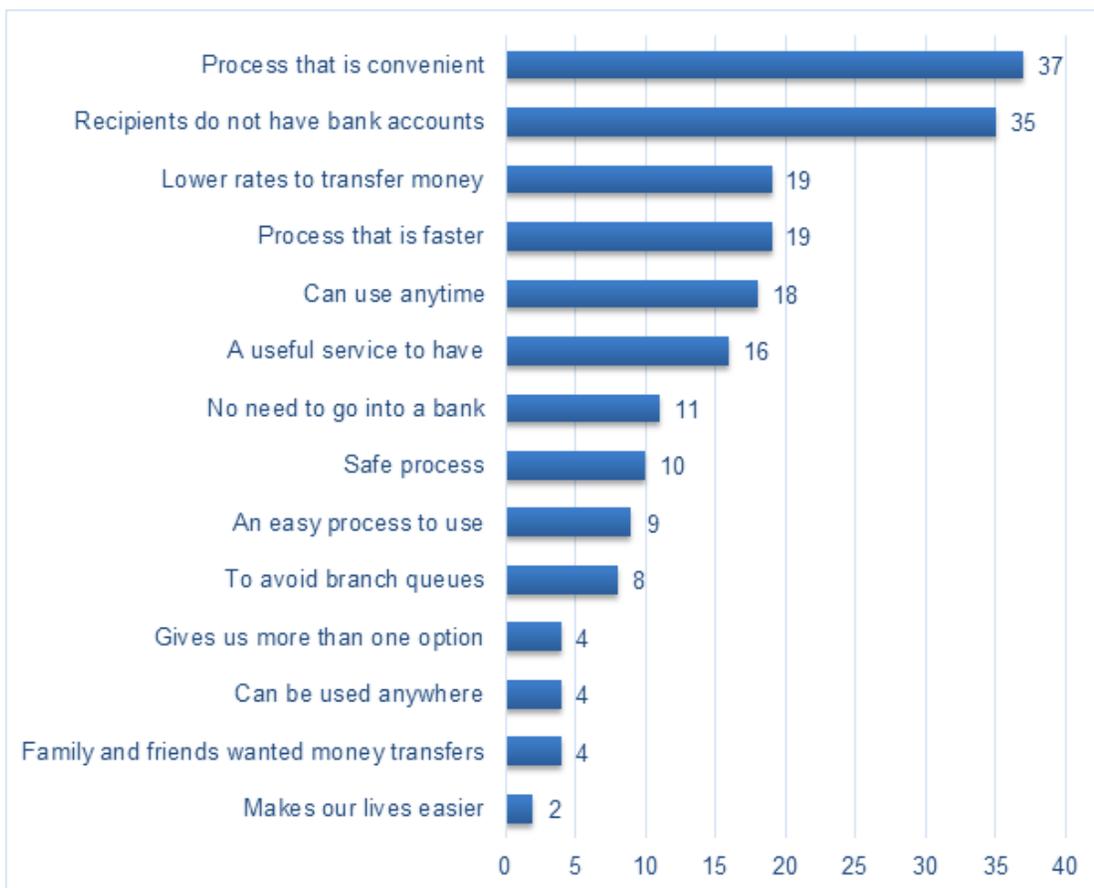


Figure 10: Reasons for having a bank account – unbanked (sample size 107 – number of respondents)



However, the majority of participants (98% of current, 67% of unbanked and 53% of SASSA) indicated that they prefer to have a bank account and utilise money transfer and payment services for the reasons below:

Figure 11: Reasons for utilising money transfer and payment services in addition to having a bank account (sample size 233 – number of respondents)



The themes above reveal that convenience, price and the ability to transfer funds to individuals without bank accounts are the key drivers behind the utilisation of money transfer and payment services.

The services for which money transfer and payment services are used are primarily for sending and receiving of money and bill payment. 56% percent of respondents indicated that they utilise more than one service for the reasons below:

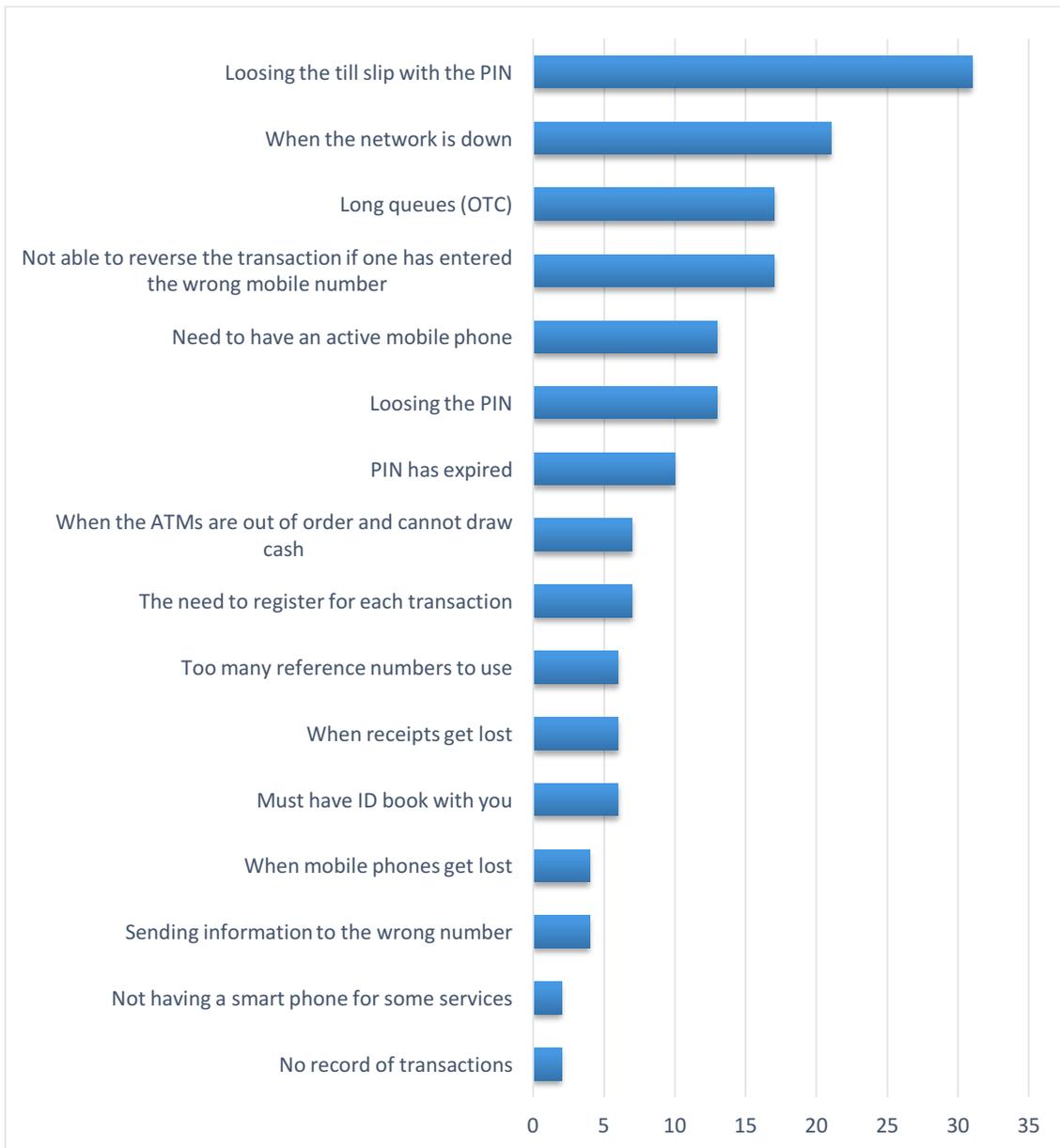
- One system could be offline

- There is no fee differentiation
- It depends on to whom the funds are being sent - convenience for the recipient
- Dependent on month-end queues, the service with the shortest queue is utilised

This indicates an underlying opportunity for an improved offering that allows for greater interoperability and is not reliant on the OTC channel for initiation and fulfilment.

In addition to these factors, the respondents identified a number of disadvantages in relation to the current services.

Figure 12: Disadvantages of using money transfer and payment services (sample size 107 - number of respondents)



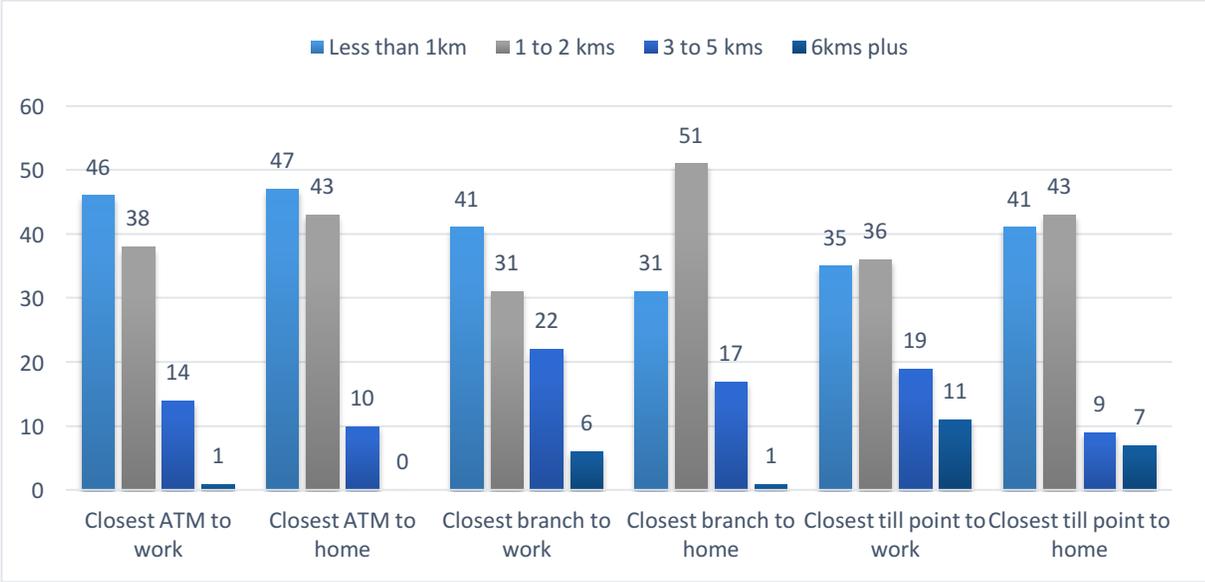
Many of these disadvantages could be mitigated through the effective use of mobile money. However, while cash remains as the main method of initiating and receiving money transfers the current methods are likely to remain dominant. To reduce the need for cash, mobile money would need to be able to be used for transactions in the retailers as well as informal markets.

However, one of the respondents during our in-depth interviews felt strongly that for consumers to move from underbanked to banked, they need to be educated. They need to be taught what they can do with their bank account and how.

#### 4.2.4 Accessibility

The accessibility of bank and retail infrastructure in South Africa is high, with a large percentage of users indicating that the nearest ATM, branch and till point is within two kilometres of home and work. The market shared opinions on how banks refused to make their ATM's available to mobile money customers. When this was explored further it was found to be a misconception, banks would allow use of ATM's, for a fee – however, the fee was too high for the service to afford and was card-based only (even today, cardless ATM transactions are closed-loop). Additionally, retail outlets and ATMs offer services outside of traditional working hours, to ensure competitive parity any mobile money solution would need to offer a comparable level of access through its agent and related networks.

Figure 13: Proximity of service points to home and work (sample size 115 - %)



4.2.4.1 Agents

Relationships with agents are key to users' trust in the market, as well as the ease of ongoing management of these relationships. In Kenya, Safaricom had 79% of the subscriber user base and had existing relationships with its agent network: there were 1000 access points, but as some distributors had multiple points, only 300 agent relationships were signed up initially. This distribution model can be called Direct, where agents sign up directly with the service. In Tanzania, Vodacom had 45% of the subscriber user base and initially, formed direct relationships with each agent to operationalise the solution. In light of the slower uptake of the service in Tanzania, Vodacom introduced the aggregator model to agent distribution network, thus making it easier for agents to join and maintain their required floats. This model was partly responsible for increasing uptake of service in the country (Di Castri & Gidvani, 2014).

Vodacom felt that the direct model – such as Kenya’s – would not be a good approach for the South African environment, and decided to launch using an indirect model where aggregators signed up with the service as agents.

In South Africa, Vodacom started with an indirect model, moved to direct, and then moved back to indirect. There are many opinions in the market as to why each model was adopted and which was more successful:

- Agents (distributors) were expecting an M-PESA launch from 2008 and were repeatedly disappointed when it did not materialize. By the time the service landed in 2010, the launch lacked the momentum it should have had as a result of these false starts.
- Vodacom worked with six major aggregators during the first launch. Negotiations with these aggregators were complicated as these aggregators were existing distributors for prepaid airtime and expected similar commission structures which were not possible for a mobile money agent. Across the stakeholder interviews there was a feeling that the balance of power between Vodacom and these aggregators was not favourable toward Vodacom and as a result Vodacom decided to move to a Direct model.

With this model Vodacom now needed to build its own agent network and not rely on aggregators. Vodacom soon realized the undertaking was too costly and time-consuming as it required resources to sign up agents as well as maintain these relationships. During our interviews with agents the lack of support from Vodacom came through strongly: “Firstly people did not have enough information about this service. Even as agents, we did not have enough information and we never received help after telling our problems to the Vodacom representative. They never got back to us or used to send us to a Vodacom shop only to find that the people behind the desks have no information as well”

Agents also struggled with the cash requirements of customers, as an agent explained during an interview: “For small outlets, M-PESA did not work as there were no funds. It only worked at the big retail shops where they have cash”.

Notwithstanding the issue of commercial sustainability – the 2015 model proved the most success in terms of ensuring the availability of the M-PESA service. However, in 2015 the decision was made to move back to the indirect Model and Vodacom negotiated contracts with the aggregators. There is a view point in the market that these contracts did not make sense commercially and lead to the operating model being too costly to continue with the service.

While others understand the decision to have been made with the intention set with aggregators that contracts would be revisited once the service had gained adoption in the market. Vodacom had put these contracts in place to entice aggregators to take up the service.

#### **4.2.4.2 Trust**

In Kenya, users' trust in Safaricom has been also identified as a fast uptake factor. According to Fengler, in Kenya, the provider of mobile money had a captive market (Fengler, 2012). In 2007, Safaricom already had more than 70 percent market share. This strong position and national presence helped it reach scale.

The research revealed additional factors that must be considered when understanding user preferences, the failure of mobile money services and the potential opportunities moving forward. Central to this is trust, where it was revealed that banks and supermarkets (retailers) are trusted more than MNOs and their agents.

Figure 14: Current users trust (Sample size 115 - scale 10)

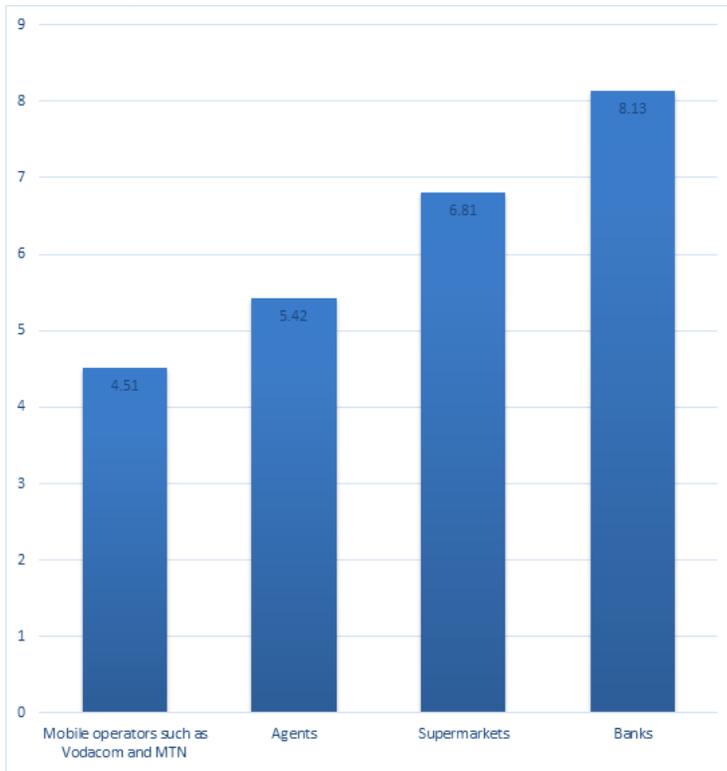
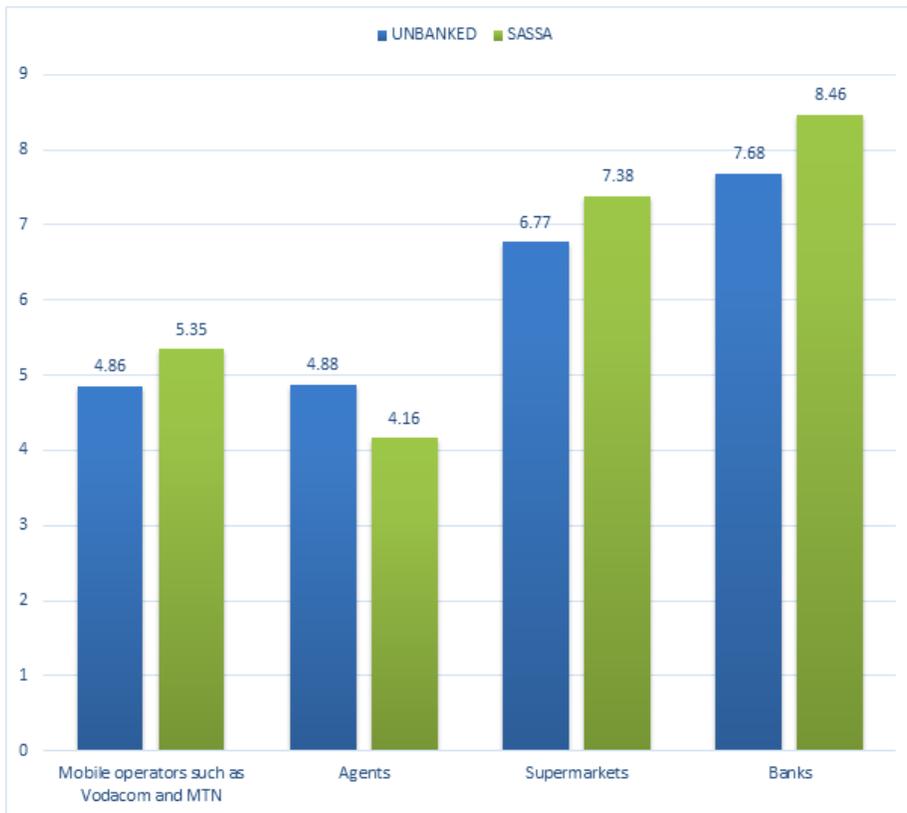


Figure 15: Unbanked and SASSA user trust (Sample 204 - scale 10)



The reasons for the difference in trust were not explored directly, however some insight can be gained from the questions dealing with the safety and security of opening the service and using agents where the mean scores (from a 10-point scale) were 6.74 and 5.87 respectively in comparison to 7.53 when referring to their bank. Additional comments were made relating to the reliability of network coverage, especially in the rural areas, and the dispute resolution process in the instance of errors.

#### 4.2.5 Dangers of holding cash

Mobile money is better suited to environments of high risk in holding cash, where users are at risk of being robbed when holding cash and thus have a need to remove cash from themselves (Camner, Pulver, & Sjoblom, 2009). In Kenya, the high crime rate may have contributed to increased demand compared to Tanzania, with its lower risk of theft and robbery.

With a high crime rate, South Africa is well-positioned for users wanting to remove their personal risk of holding cash.

### 4.3 Implementation: Poor Technology Choices

According to one of the stakeholders interviewed both Vodacom and MTN suffered similar consequences with inappropriate and extremely expensive technology. The wrong choice of partners was mentioned by several stakeholders and examples of what made them wrong were a combination of expensive maintenance fees and inflexibility. Better models were suggested that could have made use of per transaction billing rather than flat, monthly fees.

Many stakeholders hold personal opinions on what should have been done for the M-PESA operating model to make the service more affordable to Vodacom and the service more appealing. The evolution of M-PESA in Kenya provides some insight. The technology developed for Kenya, called G1, was a proof of concept and designed as a closed loop network (for direct distribution). The intention was to re-write the software during the 2007 year. However, with the unexpected success of the product all resources were needed to keep the service running, and the rewrite did not take place. It is worth mentioning that at the time Vodafone was running its operations in Kenya on a tight budget, with limited resources available and low up-front costs enabled a successful operation. According to a number of stakeholders, G1 was not appropriate for South Africa due to the established banking and retail systems. For example, integration was needed to major retailers' point of sale (POS) systems, and as the retailers utilise ERP systems. The M-PESA service required sophisticated integration that are not supported in G1. This was vastly different to the Kenyan environment and these integration layers did not exist resulting in additional work to integrate to retailers.

Vodacom initially launched with G1 but because of the challenges they made the decision to build a separate platform in South Africa (partly-owned by Vodacom) for the relaunch when partnering with Bidvest Bank. This product was made up of several components from multiple providers which included DrawCard who hosted the M-PESA wallet, and WiGroup International who offered WiCodes for retailer integration. This model had onerous relationships needing to be managed and was expensive for the MNO. Vodacom then made the decision to move to G2, a system which varied to that of G1 in numerous ways. However, M-PESA was shut-down before G2 could be launched.

#### **4.4 Analysis of past users of M-PESA and MTN Mobile Money**

80% of respondents indicated that their initial expectations of using mobile money were met and only 22% responded that they were unlikely to resume using the services if it were offered again. The primary services used by the respondents include:

- Transfer money to family and friends
- Pay bills
- Buy airtime
- Buy transport tickets

These services are also available through money transfer and payment services and most users have simply switched to using these since the termination of services.

The respondents highlighted that the initial registration was easy and that the training and education was sufficient. When asked their opinion on the reasons for the services being terminated, 83% did not have an opinion while of those who did have an opinion the primary reasons stated were poor client service and lack of market awareness.

The responses do not indicate any fundamental issues with the services from a user perspective, however their termination does not appear to have left a gap in the market as the users have switched to money transfer and payment services to achieve the same result.

#### **4.5 User Interviews**

The interviews were conducted in Gauteng in metro and semi-rural areas and do not have statistical relevance at a detailed analysis level due to the small sample size (419). However, a number of insights into the market and end-user environment were generated.

The sample has high access to bank accounts and smart phones with internet access, particularly those components with correspondingly high employment. This is reflective of the broader South African context where financial services inclusion and access to mobile phones is high.

Of interviewees, 98% of current, 67% of unbanked and 53% of SASSA users preferred to use both bank accounts and money transfer and payment services with distinct preferences for the services utilised through each mechanism. Bank accounts are primarily used for salary deposits, debit orders and savings while money transfer and payment services were rather used for sending and receiving money, making payments and buying pre-paid airtime. The bouquet of services offered by Vodacom M-PESA and MTN Mobile Money meant that they were competing with the banks as well as the retailers offering money transfer and payment services; thus value proposition may not have been sufficient to significantly impact user behaviour. Adding to the challenge is the evidence that trust in the MNOs and Agent networks is low when compared to trust in the banks and retailers.

There is evidence that users utilise multiple money transfer and payment services due to the lack of interoperability between the offerings, convenience, recipient preference and perceived stability of the networks. In addition, the need to always have an ID book, the process issuing PINs and paper around till slips with associated loss and potential reversal issues were highlighted as disadvantages of the current money transfer and payment services.

The accessibility of bank and retailer points of presence was also high in the study sample – although this may not be the case in rural areas and outside of Gauteng.

Past users of mobile money services indicated that the service met their expectations, however the termination of the services did not leave a gap in the market, as users moved their transactions to the money transfer and payment service providers such as the Shoprite offering.

For a mobile money service to be competitive, it needs to offer value beyond that of the current market offerings. Functionality must include the ability to receive deposits and transact in retailers to challenge the banking offering, while accessibility to points of presence must rival that of the bank and retail networks. From the perspective of M-PESA, it is argued that they largely meet the above requirements: deposits were received; transactions were conducted in retailers (via card); whilst they could probably only partially match the points of access that banks and retail networks offer. In summation, the offerings faced significant competition in the local remittance market from the retailers and were unable to compete with the banks and cash in terms of transactability and access to points of presence.

#### **4.6 In-depth Stakeholder Interviews**

The in-depth interviews highlighted challenges in the institutional environment, market and end user environments, and adoption and availability. An additional dimension of the choice of technology appropriate for the South African context was also raised.

The need to partner with a sponsoring bank was seen as hindering innovation and the ability to react to market needs. The regulator was perceived as being inaccessible outside of engagement through the sponsoring bank and access to the payments networks with alternative payment mechanisms was a challenge. The current structure of interchange fees combined with the difficulty of introducing alternative payment mechanisms due to limited interoperability incentivised cash utilisation, thus reinforcing the current model of money transfer and payment service and bank domination.

For mobile money to be successful it needs the ability to compete with banks and for this, regulation needs to adapt. The regulator highlighted the responsibility to protect depositors against institutional failure, manage the integrity of the payments system and increase financial inclusion as key to its role in South Africa and that any changes in regulation need to ensure that no party receives undue benefit. There are a number of initiatives underway that will likely alter the regulatory context over the coming years. The regulatory environment was highlighted as a constraint in the ability to innovate the financial services environment, restricting the products able to be offered and limiting the ability to provide a competitive service.

The perception that the market and end user needs are being sufficiently serviced by the current offerings in money transfer and payment services was present among interviewees. The challenge is to create a viable alternative for cash at the initiation and fulfilment of the services and to improve interoperability. In terms of the M-PESA offering, challenges in building, incentivising, educating and ensuring cash availability in the agent network were highlighted as impacting the availability of service to the end-user.

Technology choices may further have impacted the success of the mobile money offerings where it appears that the original choice of technology did not allow for the complexity of the integration into the established players in the South African environment and subsequent choices were expensive and impacted the profitability of the service.

#### **4.7 Summary**

The World Economic Forum identifies seven pillars of MFS and provides a framework for the analysis of country characteristics against these pillars (World Economic Forum, 2011).

South Africa is identified as a country with high readiness for MFS based on a neutral institutional environment and favourable market environment.

However, other studies (Perlman, 2012) as well as the interviewees of this study have characterised the institutional environment as constraining. The definition of a deposit and the determination of the business of banking has required that companies looking to launch mobile money in South Africa partner with banks or obtain banking licenses themselves. Comparisons with the cases of Kenya and Tanzania suggest the need to have Mobile Money as a stand-alone service and an alternative to banks. The institutional environment restricted the ability to launch an offering that was able to provide an alternative to banking products in transactability and interoperability.

A review of the market environment indicates that a weak value proposition, a highly competitive environment for similar services, lack of trust in the agents, unsuccessful agent relationships, poor technology choices, and a wrong choice of target market, among others, contribute to an unwelcoming environment for MFS.

On the other hand, South Africa does have certain conducive factors and a potential need for Mobile Money. These include a seemingly high financial inclusion environment, with 77% of the population currently banked, but an underlying issue of financially underserved groups of the population, which could highly benefit from MFS. In addition, the high crime rate in South Africa also leads to a need for safer money transfer than cash, especially in lower-income neighbourhoods most affected by crime.

It is evident that Mobile money, in its current form, is unlikely to be successful in the current South African context.

## 5. OVERCOMING THE BARRIERS TO LAUNCHING MFS IN SOUTH AFRICA

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The previous section findings shed light on the factors which, in combination, led to a failure of Mobile Money in South Africa.

The secondary objective was to identify barriers to launching effective mobile financial services (MFS) in South Africa with a specific focus on the regulatory environment required to enable such opportunities.

As evidenced in Section 4.2.1 (financial inclusion - or lack thereof), despite the seemingly high levels of financial inclusion in South Africa, with 70% of the population having a bank account, there is an underlying significant proportion of the banked population not experiencing the benefits of financial inclusion. Cash is still the primary transaction mechanism, which comes with risks in a country with a high crime rate, and limited access to credit.

Based on GSMA definition of Mobile Money, the service must offer at least one of the following:

- Domestic or international transfer; or
- Mobile payments including bill payment, bulk disbursement and merchant payment.

The domestic transfer market is well served by the current providers of money transfer and payment services, merchant payment is dominated by the banks and bill payment and bulk disbursement is available through both mechanisms. It is difficult to envisage these incumbents being challenged within the current regulatory environment in South Africa. By considering the following foresight trends we can deduce plausible and even more interesting and radical opportunities within the mobile money space. It is a lucrative and strong force for financial inclusion.

## 5.1 The future of currency

Money allows us to store and exchange value through purchases and it's heading rapidly into a faster, smarter and more mobile future (Rampton, 2017). One of the key factors affecting how currency is implemented is trust. In the past, trust was achieved by a physical exchange of hard currency while currently the trust is placed in large institutions to ensure, and assure, that transactions are carried out in a safe and secure manner. We are currently entering the third age of money, one where trust is achieved not through physical exchange or digital transfers through an institution but rather through the technology by which you are transferring it, also known as blockchain (Narula, 2016).

Blockchain is a distributed ledger system that can record transactions between two parties in a permanent and verifiable way. One of the most well-known applications of blockchain technology is the cryptocurrency Bitcoin which can be securely traded internationally (Sloane, 2017). About 20% of global cryptocurrencies account for approximately \$1.3 billion worth of transaction per day with further growth expected due to an increase in adoption as well as venture capital investment (Bitwinwin Technologies). Alternative uses for blockchain technology are still in their infancy stage, and banks, financial service providers, insurance companies and countries are exploring its numerous possibilities and application (Rampton, 2017).

The reactions from governments with regards to cryptocurrency have varied greatly. This can be seen by the Columbian government illegalizing Bitcoin exchange points as they do not consider Bitcoin a currency (Breitman, 2017). On the other side of the spectrum Japan has embraced the rise of cryptocurrencies passing legislation that declares and regulates it as legal currency. From an African perspective the introduction of blockchain technology is being explored by the South African reserve bank (Higgins, 2016).

In late 2015, Tunisia became the first country to offer a national digital currency for transmission built on a blockchain. This allows citizens to use their smartphones to make instant mobile money transfers, pay for goods and services online and in person, send remittance, pay salaries and bills, and manage official government identification documents (Cummings, 2016).

## 5.2 Cash vs Cashless going forward

Cashless payments, in the form of digital, card or mobile money payments, are on the rise, especially in Africa. Although mobile money has not taken off in South Africa, the market for digital payment appears to be there. For instance, in 2014, First National Bank (FNB) reported '230 million mobile payments transactions per month (Mulligan, 2017).

Furthermore, with increasing awareness of the high costs and risks that are associated with using cash, more and more people may shift towards digital payment methods. A MasterCard study recently revealed that an estimated R23 billion was spent by consumers in 2015 on cash usage costs, including ATM and banks fees (accounting for R6.6 billion), (Pays, 2017). In addition to this, globally, the cost of cash transaction is estimated to be 1.5% of GDP (Mulligan, 2017). According to i-Pay CEO and co-founder, Thomas Pays, "Online payment services, such as i-Pay, eliminates many of the costs that physical cash is subjected to (Pays, 2017).

South Africa was classified as being in the inception stage, where cash accounts for 90% of all consumer transactions and its non-cash payments are in the area of 6% (Pays, 2017). However, due to the financial inclusions efforts and the financial system infrastructure in South Africa, the country was ranked in the top 3, along with Kenya and the United Arab Emirates, of countries that have experienced growth in their cashless transactions, in the past five years.

Therefore, it is safe to say that the progress towards cashless transactions has begun, however, more needs to be done in terms of policy and legislation around cash to reach the state of a cashless society. Until then, cash will remain king.

## 5.3 Visa and MasterCard dominance as a trend

VISA and MasterCard have formed a duopoly, together owning approximately 82% of the global market share for the card payment industry (Lim, 2016). The closest contender is UnionPay, at 13 %, followed by American Express at 7% (Lim, 2017). The Chinese UnionPay (CUP), may soon be a serious competitor to the duopoly, as CUP is currently dominant in China and in terms of the value of transactions, it is the second largest payment network, after VISA (Stuenkel, 2017). CUP will however, need to be innovative if they plan on challenging the status quo, as mentioned by Bain & Co Beijing Financial Services Advisor, Alfred Shang, "New technology and the availability of better data are changing how the global payments market operates, and new entrants such as UnionPay will have to provide something new in terms of pricing, service, technology or scale. (Stuenkel, 2017).

On the other hand, in 2015 MasterCard secured an agreement with the Egyptian government to provide 54 million Egyptians citizens with "digital identification cards with built-in payment devices... enabling them to pay for government fees, mobile phone bills, shop purchases and other

goods and services.” (Arnold, 2015). With opportunities such as this and innovations, such as the biometric bank card that MasterCard has been testing in South Africa (Lotz, 2017), the status quo is likely to prevail.

#### **5.4 MFS**

Mobile money enables significant financial value for the unbanked or underbanked. These are encompassed within the safety associated with using mobile money instead of cash. The other major factor is the convenience of having your “money” in a central depository that you have access to at any location and time. The value proposition is further extended by giving the unbanked and underbanked access to financial services.

These financial services include insurance, credit, savings and investing. In South Africa a large financial market is the estimated R25 billion and 8.6 million member untapped stokvel market (SME South Africa, 2014). The benefits of financial services for the poor could be a significantly desired value proposition (Shameran, 2015):

- It can provide access to healthcare services that would otherwise be out of reach;
- It promotes the challenges faced by women and the gender inequality they face to access opportunities in patriarchal societies; and
- They enable entrepreneurs to flourish.

Combined with a process of awareness and financial literacy, the user’s desire to adopt and engage with better financial management behaviour could increase (Deloitte Center for Financial Services, 2014).

Mobile Insurance has grown at a rate of 263% since about 2011 (GSMA, 2015). It has a high appeal for low income populations such as those in Africa because a tragic financial shock could mean the difference between a family being above or below the poverty line (GSMA, 2015). The African life and property insurance market is 44 million people as opposed to the potential scale of 600 million cellphone users (GSMA, 2015).

Mobile savings is also a growing value proposition for mobile money providers. In Tanzania, Tigo has begun offering up to 11% interest on their mobile money accounts (GSMA, 2015). This attracts customers to join and use the platform. The R25 billion stokvel market in South Africa could be captured using a group saving model similar to that implemented in Uganda by Airtel Uganda and the Grameen foundation (GSMA, 2015). The result is the possibility of offering investment like financial inclusion services to the bottom of the pyramid. 50% of the mobile money accounts across the world were positive by the end of 2014 with 50% that being \$1-\$10 (GSMA, 2015).

Mobile credit saw a 50% growth in 2014 (GSMA, 2015). The ability to have access to the spending patterns of the unbanked provides an opportunity to avail credit services to the unbanked. The examples of useful data include the frequency of airtime top-ups, similarity of movement between connection stations representing stability and social networks through consistency and number of phones called (GSMA, 2015).

## 5.5 Loyalty Programs in South Africa

South African consumers are increasing their membership to loyalty programmes. According to the white paper on brand loyalty and the brandmapp survey 2015, “economically active South African consumers currently belong to an average of 4.6 loyalty programmes, a noteworthy increase from the previous year’s average of 3.6 loyalty programmes” (Truth, 2016).

Despite the popularity of loyalty programmes in South Africa, it is significantly higher in the mid to high-income groups than in the low-income group. However, loyalty programmes which provide discounts and everyday savings on goods such as airtime and groceries are among the most popular in the low income group, rather than programmes with a “spend to get” model.

The most popular loyalty programmes in South Africa are in the retail industry (Pick n Pay Smart Shopper, Edgars Thank U), Financial services (FNB eBucks), and Health & Wellness (Discover Vitality). What is interesting about these top loyalty programmes, is the partnerships and interoperability that are provided. Pick n Pay Smart Shopper points can be linked to a momentum multiply loyalty account to earn more points per rand.

A summary table of the top loyalty programmes in South Africa is provided in Annex F.

## 5.6 Recommendations

Sustainable financial inclusion has to address demand – what consumers want –, supply – what financial institutions provide –, and the environment – how the public sector and private sector play a facilitative role.

The following recommendations address three main categories:

- **The Operating Models of Financial Institutions.** Innovations such as branchless banking, block chain, correspondent and agent banking, mobile payments, and flexible loan repayments are all potential solutions.

- **Enabling regulatory environments.** Regulatory environments that encourage competition and open the market to non-bank players while still maintaining stability and protecting the interests of consumers are more effective and increasing financial inclusion.
- **Focus on interoperability.** Many consumers rely on cash because the infrastructure that would support alternative payment mechanisms such as card, biometric or mobile money transactions is not in place. Allowing non-traditional players to offer interoperable services in payments has the potential to challenge the reliance on cash.

### 5.6.1 The Operating Models of Financial Institutions

**Review the current position on e-money and consider the role of non-banks issuing e-money.**

The South African Reserve Bank requires a banking license in order to issue e-money. E-money is defined in by the SARB as “monetary value represented by a claim on the issuer. This money is stored electronically and issued on receipt of funds, [...] and is redeemable for physical cash or a deposit into a bank account on demand.” (SARB, 2009).

The motivation for restricting e-money issuance to banking entities by the SARB is to limit the risk in the National Payment System, assist other regulatory authorities in providing consumers with adequate protection from unfair practices, fraud and financial loss, and a better prevention of criminal activity (SARB, 2009).

The option thus left by MNOs in order to issue e-money (including mobile money) in South Africa are to go through the lengthy and costly process of obtaining a banking license, or partnering with a bank for mobile money services. The latter was the approach adopted by both MTN and Vodacom for mobile money.

However, partnering with banking institutions in order to roll out mobile money does not only threaten this duopoly but also directly impacts the banking institution’s bottom lines. Collectively the banks collected R6.6 billion in 2015, in banking fees alone (van Rensburg, 2017). This is a revenue stream they are unlikely to give up in order to facilitate a mobile money platform that they do not control.

The European Union, India, Russia, Turkey, and Uruguay are examples where regulation has adapted to the growing trend of e-money for further financial inclusion. In these places, it is possible for non-bank entities to act as payment service providers, and issue electronic money, within a regulatory framework to ensure security is not compromised (World Bank , 2016).

In the SADC context, only DRC and Namibia have issued legally enforceable guidance on the issuance of e-money. The Namibian Payment System Determination (PSD-3) Determination on Issuing of Electronic Money from 2012, applies to all potential e-money issuers in Namibia. Under this legislation, all e-money related services must be approved by the Central Bank, and non-bank e-money issuers are limited to providing e-money services only, and may not provide any unrelated services. However, a non-banking actor wishing to offer e-money services in addition to other services, must establish a separate entity for e-money (Langhan & Smith, 2014).

This approach has provided more flexibility to e-money: the regulation provides a good framework to limit fraud and criminality, all the while encouraging innovation, competition, and ultimately, more accessible financial options for the underserved (World Bank , 2016).

**Review the definition of deposit and consider the option of introducing granularity into the usage of deposit (e.g. deposits for the purpose of transacting) and using that to guide appropriate oversight.**

The South African Reserve Bank's position paper on e-money additionally argues the need for banking license in order to issue e-money given the definition of a "deposit". The position paper revisits the definition ("an amount of money paid by one person to another person subject to an agreement in terms of which an equal amount or any part thereof will be repaid on demand, on a specified or unspecified date or in circumstance agreed upon") originating from the Banks Act, and stipulates the following:

"The legal nature of money is, however, such that when one person hands over an amount of money to another person in trust, the money (physical notes and coin) generally becomes the property of the person receiving it and hence part of his/her estate. In the case where such a person loses the money, steals the money or becomes insolvent, the person that handed over the money merely has an (unsecured) claim against the other person or his/her estate."

SARB (2009) p. 6

If this strict definition of deposit is considered, the position on banking licenses and e-money is understandable to avoid mishandling or mismanagement of deposits.

In the case of PayPal within the United States, most jurisdictions consider its operations as limited to e-money as opposed to traditional banking activities. As such, the Federal Deposit Insurance Corporation (FDIC), stated that it does not consider PayPal a bank as it is not involved in accepting deposits for the purposes of making loans under the Federal Deposit Insurance Act of 1950, and

thus is rather subject to AML/CTF laws and consumer protection regulations (Bank for International Settlements, 2014).

There is thus the opportunity of introducing further granularity to the definition of deposit, allowing for deposits to be made with specific purposes (e.g. transacting), by non-banking entities. This would then allow for innovation in fintech (new, alternative financial services), whilst still protecting the consumer and the state.

#### **Increase access to the national payment system at a payments and clearing level, including non-banks.**

Given the traditional role of banks as the only providers of payment services, the regulatory framework for payment services has historically reflected this as an assumption. Within this framework, is that the National Payment System in South Africa has been developed. However, with the advancement of fintech, many countries have adapted the payment systems to reflect technological progress (World Bank , 2016).

Increased access to the national payment system at a payments and clearing level has been seen in cases such as the EU Payment Services Directive, money transmitters in various states of the United States (non-banks with a specific status or license other than a banking license, in relation to the payment services they provide) (Bank for International Settlements, 2014). Allowing non-bank entities to operate with e-money, with oversight of SARB but different licensing requirements could be another way to promote innovation but without compromising security.

### **5.6.2 Enabling regulatory environments**

#### **Introduce regulation to enforce banks to provide access to their services to third parties through secure APIs.**

#### **Use regulatory sandboxes to enable innovation while leveraging technology to better manage risks**

The challenge in financial technology (Fintech) is to have a regulatory system flexible enough to enable innovations with high potential of economic welfare improvement of populations, whilst still protecting the end-users from potential pitfalls of these innovations (Goodspeed, 2017). The US, the European Commission, the UK, and others have been recently looking at establishing a regulatory sandbox for Fintech to flourish within a controlled environment. A regulatory sandbox is defined as:

“[...] A ‘safe space’ in which businesses can test innovative products, services, business models and delivery mechanisms without immediately incurring all the normal regulatory consequences of engaging in the activity in question.”

UK Financial Conduct Authority (FCA) (2015)

According to the UK FCA, introducing a regulatory sandbox in fintech has the potential to lower cost of roll out and time-to-market, easier access to investment opportunities by start-ups and small entrepreneurs, and more innovative products reaching the market (Financial Conduct Authority, United Kingdom Government, 2015).

According to the South African National Treasury, the financial technology hubs established in Cape Town and Johannesburg began to attract investor interest and funding in 2015. The Treasury also noted the potential of fintech to enable financial inclusion. To this end, a fintech regulatory framework is planned to form part of the Conduct of Financial Institutions Bill in 2017. The framework could include a regulatory sandbox, in order to encourage innovation within a controlled environment while managing any potential risks. (National Treasury, 2017).

**Shift the focus from the regulation of institution to the regulation of activity, service or product.**

The regulatory focus is currently based on the e-money institution or e-money issuer. It can be a limiting approach to providing regulatory elements to the e-money and mobile money space. The “electronics money institution” is a legal entity that is given the authorisation to issue electronic money (“Electronic money”, 2017). The different ways in which different e-money institutions may exploit opportunities in the mobile money space are vast. This is because firms form differently and regulation can’t be a one size fits all (Beal, Rueda-Sabater, En Yong & Ling-Heng, 2017). These variations in value propositions are at the heart of innovative solutions. However the purposes of regulation in the financial industry are to manage illegal activities such as money laundering and fraud. In the South African context they are also to enable financial inclusion. With these regulatory purposes it is better to then regulate the mobile money with these outcomes in mind, instead of the institutions (Beal, Rueda-Sabater, En Yong & Ling-Heng, 2017). This gives the institutions rope to innovate and play within the boundary of safety and financial inclusion. Otherwise the regulator runs the risk of inhibiting innovation (Beal, Rueda-Sabater, En Yong & Ling-Heng, 2017).

There are observed examples of this shift in regulation can be found in Turkey and the EU, with transparency requirements for provision of payment services (World Bank , 2016). This means regulation should be going beyond how things should be done and rather focus on the outcome (Beal, Rueda-Sabater, En Yong & Ling-Heng, 2017). Similarly to the Know Your Customer regulations that ultimately combat crime (Beal, Rueda-Sabater, En Yong & Ling-Heng, 2017). How this is achieved, whether biometric or by other forms of identification is irrelevant as long as it meets the resultant requirements (Beal, Rueda-Sabater, En Yong & Ling-Heng, 2017).

### 5.6.3 Focus on interoperability

The best thing any regulatory body can do in order to improve financial is purely driven by the environment they can provide. Among these is the ability to ensure and promote a national identification system. Many states struggle to develop a financial industry because of this limitation (Beal, Rueda-Sabater, En Yong & Ling-Heng, 2017).

In the current from the South African Reserve Bank is dedicated to improving and sustaining operability (Position Paper on Interoperability, 2017). Not only does this enable innovations but it also lowers the costs of operation and simplifies it for the customers (Position Paper on Interoperability, 2017). In the context of mobile, interoperability will ensure greater adoption of the service. This is because of the ecosystem factor of the service. When there are certain delays for customers, this can drastically limit the account activation (di Castri, 2013).

This process requires a multistakeholder approach with extensive collaboration and co-creation (di Castri, 2013). This is to ensure that the regulators are able to mitigate risks and optimise financial inclusion. The operators require it to make financial sense while other entities can also gain and share resources (di Castri, 2013).

The South African Social Services Agency (SASSA) is an economic development agency that provides social welfare services on behalf of the state. The beneficiaries of SASSA are often the profile of the financially excluded citizen. SASSA therefore could be a key stakeholder as it has established operational knowledge, reach and infrastructure to access these beneficiaries. SASSA is also recognising the collaborative impotence by collaborating with another arm of government, the South Africa Post Office.

The Post Office is also another stakeholder, which has experience as a bank, it has the infrastructure and operational knowledge. As arms of government they could be instrumental to catalysing the process. As arms of government their drive is beyond profit and also includes partnering with the South African Reserve Bank to ensure financial inclusion.

In Peru, the world's first fully interoperable mobile money platform between telecoms has been established nationwide, as a drive between government, financial institutions, telco's and other stakeholders (Center for Financial Inclusion Blog, 2016)

## 6. CONCLUSION

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The study focused on the following two objectives:

### 6.1 Objective one: assessment of MFS in South Africa

The research did not uncover a negative reaction to mobile money in South Africa, the past users of Vodacom M-PESA and MTN Mobile Money indicated satisfaction with the service offered willingness to take it up again if it were offered.

There is a thriving market for money transfer and payment services offered primarily by large retailers and distinct preference as to which services are fulfilled through banking and which through money transfer and payment services. Individuals also displayed a tendency to utilise multiple services depending on the end recipient's preference, convenience and availability.

The trust in MNOs and their agent networks was found to be lower than that in the banks and retailers, this may have negatively influenced adoption.

The termination of mobile money services did not leave a gap in their ability to transact or transfer money – the need was already met by existing service providers.

The factors affecting mobile money in South Africa were reviewed through the institutional environment, market environment and end user.

- **Institutional environment:** The institutional environment in South Africa is not as enabling as that in Kenya and Tanzania and essentially requires the MNO to partner with a bank to offer mobile money services. This was seen by industry representatives as constraining innovation. The restrictive definitions of the of the business of banking, deposits, e-money and limited access to the NPS were primary factors in limiting the ability of the providers to launch an offering that could provide a viable alternative to banking. Initiatives are underway to review the regulations that may result in a more enabling environment, however, the impact of these reviews will not be realised in the short term.
- **Market environment:** The South African market environment is distinctly different from that in countries where mobile money has been successful in that it has high financial inclusion, an established and effective financial sector and competition for money transfer and payment services. Additionally, no MNO has market dominance to the extent that Safaricom had in Kenya at the time of the M-PESA launch. This impacted the mobile money adoption as there was no distinct gap that it filled. In

contrast, the M-PESA solution in Kenya offered functionality that was not available through alternative providers and had distinct utility to the user base.

The cornerstone of successful mobile money implementation is traditionally local remittance. There is strong competition for these services through the retailers where the preference of the recipient, convenience and accessibility are the main drivers of consumer decisions on the mechanism to be used. In addition, the researched showed that the trust in the retailers and banks is higher than the trust in the mobile network providers and their agents. Without being able to offer a transacting advantage over the retailer offerings, the value proposition was insufficient to cause a behavioural shift.

- **End user environment:** Mobile and internet penetration in the target market is high as is access to traditional banking services. Combined with the challenges Vodacom experienced in expanding their agent network and the accessibility of bank and retailer points of presence, it is more convenient for users to leverage the competitive services.

The constraining regulatory environment resulted in a restricted product offering that was not able to successfully compete with the retailers and banks in the local remittance or transaction markets. The resultant business models were not sustainable.

## **6.2 Objective two: overcoming the barriers to launching MFS in South Africa**

In South Africa, it is unlikely that another iteration mobile money in the existing context will be successful. To create an environment where MFS can operate, it is necessary that the current regulatory environment is revisited to encourage competition to the banking environment in a manner that enables financial inclusion, protects the consumer and ensures continued stability. Aspects of this review are already underway, however the benefits are not expected to be realised in the near term. The aspects below should be considered when reviewing the current regulation:

- Review the current position on e-money and consider the role of non-banks issuing e-money.
- Review the definition of deposit and consider the option of introducing granularity into the usage of deposit (e.g. Deposits for the purpose of transacting) and using that to guide appropriate oversight.
- Increasing access to the national payment system at a payments and clearing level, including non-banks
- Introducing regulation to enforce banks to provide access to their services to third parties through secure APIs.
- Introduction of inter-operable real-time-push mobile transactions

- The use of regulatory sandboxes to enable innovation while leveraging technology to better manage risks
- Improve co-ordination between different departments and explore the opportunities for South African Social Security Agency (SASSA) to better leverage existing payment and transacting infrastructure.
- Shift the focus from the regulation of institution to the regulation of activity, service or product.

Through these interventions, an enabling environment that will allow for the emergence of a alternative, low cost, interoperable transacting mechanism from a store of value not necessarily held with a bank can be created – the primary objective of which will be to improve real financial inclusion.

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## 8. ANNEXURES

### 8.1 Key Definitions

Term	Definition
Electronic Money (E-Money)	Short for “electronic money,” is stored value held in the accounts of users, agents, and the provider of the mobile money service. Typically, the total value of e-money is mirrored in (a) bank account(s) - typically trust accounts, such that even if the provider of the mobile money service were to fail, users could recover 100% of the value stored in their accounts. That said, bank deposits can earn interest, while e-money traditionally cannot. (State of the Industry 2014 - Mobile Financial Services for the Unbanked).
Fiat Money	Fiat money is a currency established as money government regulation or law. The term derives from the latin fiat (“let it become”, “it will become”) used in the sense of an order or decree. It differs from commodity money and representative money. Commodity money is created from a good, often a precious metal such as gold or silver, which has uses other than as a medium of exchange (such a good is called a commodity), while representative money simply represents a claim on such a good (Legal and Regulatory Aspects of Mobile Financial Services by Leon Joseph Perlman, Doctor of Laws at Unisa, November 2012).
Global System for Mobile Communications (GSM)	The Global System for Mobile Communications (GSM) was invented in the late 1980s in Europe. It has become the dominant mobile technology today with over 4 billion global users. GSM was one of the first digital mobile systems. (Legal and Regulatory Aspects of Mobile Financial Services by Leon Joseph Perlman, Doctor of Laws at Unisa, November 2012, p197).
Interoperability	Interoperability of mobile money services refers to the development of the digital ecosystem by facilitating the integration of third parties to mobile money schemes (GSMA) E.g. integration between mobile money and bank accounts, mobile money as a payment mechanism at tillpoint. (State of the Industry 2014 - Mobile Financial Services for the Unbanked).
International Remittance	The Committee on Payment and Settlement Systems (CPSS) (1996) ‘Security of Electronic Money’ defines ‘remittances’ as

	<p>'cross-border person-to-person payments of relatively low value'. The user simply uses an appropriate device or system to obtain access to the value and associated payment facilities through computer and telecommunications links.</p>
Mobile financial services (MFS)	<p>The use of a mobile phone to access financial services and execute financial transactions. This includes both transactional and non-transactional services, such as viewing financial information on a user's mobile phone. Mobile money, mobile insurance, mobile credit and mobile savings are mobile financial services. (GSMA)</p> <p>The entire ecosystem that allows basic banking functionality to be provided by non-bank entities such as Mobile Network Operators (defined further on), the transforming of cash into an electronic Store of Value (defined further on), the payment of bills by mobile phone, transferring and receiving money to and from other account holders as a remittance, all without ever setting foot in a bank or bank-like institution, is known as MFS (Legal and Regulatory Aspects of Mobile Financial Services by Leon Joseph Perlman, Doctor of Laws at Unisa, November 2012, p20).</p>
Mobile Credit	<p>Mobile credit uses the mobile phone to provide credit services to the underserved.</p> <p>The GSMA's Mobile Money for the Unbanked MMU Programme team tracks mobile credit services which meet the following criteria:</p> <p>The service allows subscribers to borrow a certain amount of money that they agree to repay within a specified period of time.</p> <p>The service must allow underserved people to apply for credit and repay it more easily using a mobile device. Airtime credit products or services which offer the mobile phone as just another channel to access a traditional credit product are not included.</p>

	<p>The service must be available on basic mobile devices. (GSMA – That State of the Industry 2014 – Mobile Financial Services for the Unbanked).</p>
Mobile Insurance	<p>Mobile insurance uses the mobile phone to provide micro-insurance services to the underserved (GSMA).</p> <p>The MMU team tracks mobile insurance services which meet the following criteria:</p> <p>The service must allow subscribers to manage risks by providing a guarantee of compensation for specified loss, damage, illness, or death.</p> <p>The service must allow underserved people to access insurance services easily using a mobile device. Services which offer the mobile phone as just another channel for the clients of an insurance company to access a traditional insurance product are not included.</p> <p>The service must be available on basic mobile devices. (GSMA – That State of the Industry 2014 – Mobile Financial Services for the Unbanked).</p>
Mobile Money	<p>A service in which the mobile phone is used to access financial services (GSMA)</p> <p>Mobile money uses the mobile phone to transfer money and make payments to the underserved. The MMU team tracks mobile money services which meet the following criteria:</p> <p>The service must offer at least one of the following products: domestic or international transfer, mobile payments including bill payment, bulk disbursement, and merchant payment.</p> <p>The service must rely heavily on a network of transactional points outside bank branches and ATMs that make the service accessible to unbanked and underbanked people.</p> <p>Customers must be able to use the service without having been previously banked.</p>

	<p>Mobile banking services that offer the mobile phone as just another channel to access a traditional banking product, and payment services linked to a current bank account or credit card, such as Apple Pay and Google Wallet, are not included.</p> <p>The service must offer an interface for initiating transactions for agents and/or customers that is available on basic mobile devices. (GSMA – That State of the Industry 2014 – Mobile Financial Services for the Unbanked).</p>
Mobile money account	<p>An e-money account that is primarily accessed using a mobile phone and that is held with the e-money issuer. In some jurisdictions, e-money accounts may resemble conventional bank accounts, but are treated differently under the regulatory framework because they are used for different purposes (for example, as a surrogate for cash or a stored value that is used to facilitate transactional services). An active mobile money account is a mobile money account that has been used to conduct at least one transaction during a certain period of time (usually 90 days or 30 days). (State of the Industry 2014 – Mobile Financial Services for the Unbanked).</p>
Mobile Savings	<p>Mobile savings uses the mobile phone to provide savings services to the underserved (GSMA).</p> <p>The MMU team tracks mobile savings services which meet the following criteria:</p> <p>The service allows subscribers to save money in an account that provides principal security, and, in some cases, an interest rate.</p> <p>The service must allow underserved people to save money using a mobile device. Services which offer the mobile phone as just another channel to access a traditional savings account are not included.</p> <p>The service must be available on basic mobile devices. (GSMA – That State of the Industry 2014 – Mobile Financial Services for the Unbanked).</p>
Over the Counter (OTC)	<p>Some mobile money services are being offered primarily over-the-counter (OTC). In such cases, a mobile money agent performs the transactions on behalf of the customer, who does</p>

	not need to have a mobile money account to use the service (GSMA - That State of the Industry 2014 - Mobile Financial Services for the Unbanked).
Unbanked	Customers who do not have a bank account or a transaction account at a formal financial Institution (State of the Industry 2014 - Mobile Financial Services for the Unbanked).
Underbanked	Customers who may have access to a basic transaction account offered by a formal financial institution, but still have financial needs that are unmet or not appropriately met (State of the Industry 2014 - Mobile Financial Services for the Unbanked).
Underserved	Used to describe the above two segments as one Bottom of the Pyramid grouping to emphasize for example the point that while traditional banking in the sense of bank branches and the ability to deposit, lend and pay is not necessarily lacking, it is the ready access to basic facilities for the paying of bills and for sending and receiving value that is lacking. (Legal and Regulatory Aspects of Mobile Financial Services by Leon Joseph Perlman, Doctor of Laws at Unisa, November 2012, p23).

## 8.2 Regulations

<p>Anti-money laundering/combating the financing of terrorism (AML/CFT)</p>	<p>A set of rules, typically issued by central banks, that attempt to prevent and detect the use of financial services for money laundering or to finance terrorism. The global standard-setter for AML/CFT rules is the Financial Action Task Force (FATF). (State of the Industry 2014 – Mobile Financial Services for the Unbanked).</p>
<p>Enabling regulatory approach</p>	<p>(de Castri, 2013) postulates that an ‘enabling regulatory approach’ implies that the rules established by the regulator:</p> <ul style="list-style-type: none"> <li>• Permit non-banks to issue electronic money (or equivalent) by allowing them to:</li> <li>• be licensed directly, OR</li> <li>• set up a subsidiary for this business, OR</li> <li>• apply for a payments bank (or equivalent) license, OR</li> <li>• provide the mobile money service under a letter of no-objection to the non-bank or its partner bank, pending the approval of a specific regulation</li> <li>• AND impose initial and ongoing capital requirements that are proportional to the risks of the e-money business,</li> <li>• AND permit them to use agents for cash-in and cash-out operations,</li> <li>• AND do not prescribe the implementation of specific interoperability models without allowing for a market-led approach.</li> </ul>
<p>Financial Intelligence Centre</p>	<p>The Financial Intelligence Centre (FIC) is a separate unit of the National Treasury and it is responsible for anti-money laundering regulation. It operates according to the Financial Intelligence Centre Act (2001).</p>
<p>Know Your Customer (KYC) – Identity Verification</p>	<p>Financial institutions and regulated financial services providers are obligated by regulation to perform due diligence in order to identify their customers. The term is also used to refer to the regulation which governs these activities. The FATF (Financial Action Task Force) recommends a risk-based approach to due diligence for AML/CFT (anti-money laundering and counter-financing of terrorism) controls. Due to the lack of formal identity documents in some markets, solutions such as tiered KYC and adjusting acceptable KYC documentation can help mobile money</p>

	<p>providers facilitate customer adoption and increase financial inclusion, especially in rural areas (State of the Industry 2014 - Mobile Financial Services for the Unbanked).</p> <p>Regulations under the South African Bank Act require banks to appoint compliance officers with senior executive status in the bank and to maintain an independent and adequately resourced compliance function. This is required in the enforcement of AML/KYC/CDD rules and regulations.</p>
Financial Intelligence Centre Act (FICA)	The Financial Intelligence Centre Act 38 of 2001 (FICA) criminalise money laundering and terrorist financing while FICA requires financial service providers and certain professionals to maintain specific AML/CFT controls.
The National Payment System Act (NPSA)	The NPSA encompasses all payment-related activities, processes, mechanisms, infrastructure, institutions and users in a country.
Payments Association of South Africa (PASA)	PASA is the payment system management body recognised by the South African Reserve Bank (SARB), in terms of the National Payment System Act of 1998, to organise, manage and regulate the participation of its members in the payment system.
Regulator	In the context of mobile money, this typically refers to the regulator who has supervisory authority over financial institutions within a particular country—usually the central bank or other financial authority (State of the Industry 2014 - Mobile Financial Services for the Unbanked).
Regulation of Interception of Communications and Provision of Communication-Related Information Act (RICA)	<p>Regulation of Interception of Communications and Provision of Communication-Related Information Amendment Act 48 of 2008, also known colloquially in South Africa simply as 'RICA'.</p> <p>RICA is a law that makes it compulsory for everyone in South Africa to register their cell phone number.</p>

**8.3 Questionnaires - attached separately to the report titled Appendix B - D**

**8.4 Findings from the primary research: Money transfer & payment services (DRAFT) - Appendix E**

## 8.5 Summary table of top loyalty programs in South Africa – Appendix F

	Advertised Return	Partners	Members	Value of rewards given to customers	Annual Fee
Pick n Pay Smart Shopper (Pick n Pay, 2016, Pick n Pay, 2017)	Earn between 1 and 3 points for every R2 spent; personalised discounts based on most purchased products; possibility to switch points to rand value for purchasing at Pick n Pay and partners, or charitable donation of choice	Absa rewards, Avios, Europcar, Galaxy&Co., Intercape, Momentum Multiply, NetFlorist, Planet Fitness, Ratanga Junction, Ster Kinekor, Primi Piatti, SafariNow, ShowMax, Uber,	9 million (March 2015) Estimated 10.7 million (April 2017)	Not available	Free
Clicks Club Card Invalid source specified. Invalid source specified.	Cashback (for every R5 spent, 10c cashback) redeemable at partner stores; Special offers	Body Shop (\$ spent at BS = points), Claire's, GNC Concept Store	6.2 million (2016)	R309 million cash-back paid to Club Card members (in 2016)	Free
Woolworths WRewards Invalid source specified.	Between 10 and 20% off on selected items, special offers, savings vouchers (only mid and top tier), donations to charity of choice	Myschool Myvillage Myplanet, Discovery	3.1 million (2015)	Not available	Free

	(free to customer), Vitality points,				
Edgars Thank U Invalid source specified.	Cash back to spend in stores after collecting 10 000 points	Edgars, Edgars Active, Jet, Jetmart, Red Square, CNA, Boardmans	Not available	Not available	Free
MTN 1-4-1 Invalid source specified.	Points earned can be redeemed as airtime, SMS bundles, Data bundles, donations to MTN outreach programme, access to competition.	Not available	15 million members (2012)	Over R76 million worth of points since 2009-2012	Free
<b>Banks</b>					
Standard Bank uCount (Standardbank.com, 2017)	Up to 10% back on your grocery shopping and up to 1.5% back on other purchases. Caltex returns R1 per litre of petrol purchased	Caltex, Clicks, Fresh Stop, Incredible Connection, KFC, Makro, Musica, NetFlorist, OneDayOnly, Showmax, The Body Shop, Tiger Wheel & Tyre, Zando	Almost 700,000 clients (2016)	Not available	R 240
FNB eBucks Invalid source specified.	Up to 2.5% back on your purchases. Up to 15% back on fuel and airtime	Makro, Dis-chem, supa-quick, Arthur Kaplan, Shoprite holdings (inc. Checkers & Shoprite shops), Incredible Connection, Le	Not available	Not available	None (R 200 to link credit account )

		Creuset, Cellini, Hifi Corporation, Cape Union Mart, Tread+Miller, Old Khaki, Poetry, Keedo, Vision Works, Hamleys, Zando, Takealot, Yuppiechef, Superbalist, Uber, Action Gear, NetFlorist, NetJewel			
Nedbank Greenbacks Invalid source specified.	1 Greenback for every R5 eligible spend	Avis, Faithful to Nature, HealthSpas, NetFlorist, South African Airways, Tsogo Sun, Wine of the Month Club	Not available	Not available	R 179
Absa Cash Rewards Invalid source specified.	Up to 1% back on your qualifying spend. 5% back on purchases at Sasol Service Stations	Dis-chem, Anat, Hunter, Happy Tails, Clever Little Monkey, The Kid Zone, Hirsch's, Cashbuild, Ca-Cell, Carrol Boyes, Samsung.	Not available	Not available	R 252