COGNIZANT

4TH QUARTER 2022

THE EVOLUTION OF THE
PAYMENTS LANDSCAPE

APPLE AND GOOGLE – LEADING THE
NEXT GENERATION OF PAYMENTS

SOUTH AFRICA'S JOURNEY TOWARDS
DIGITAL FINANCIAL INCLUSION

OLDMUTUAL

WEALTH

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INTRODUCTION

JEAN MINNAAR, MD: OLD MUTUAL WEALTH TRUST COMPANY (PRIVATE CLIENT SECURITIES | TREASURY AND ADVISORY SERVICES | FIDUCIARY SERVICES)

The link between geopolitical events and market returns was undoubtedly one of the key themes of 2022. And while markets tend to initially react negatively to surprising geopolitical events, we know that over time, they tend to shrug them off and recover after their initial negative reaction.

This year was also characterised by skyrocketing energy prices, a strong US dollar and rising interest rates around the world. In South Africa, we also saw the long anticipated lifting of all COVID-19 restrictions. So as this eventful year draws to a close, it's always valuable to reflect and place things into perspective.

In 1849, French writer Jean-Baptiste Alphonse Karr wrote "plus ça change, plus c'est la même chose" – the more things change, the more they stay the same, meaning that many things tend to remain consistent even as change occurs.

When it comes to investing, maintaining exposure to quality businesses with solid operating models has yielded (and will continue to yield) superior results over time. Despite facing challenges on numerous fronts, companies with strong management teams and innovative technologies have proven themselves to be adaptable and continued to generate quality investment returns. This is because throughout time, the process of technological advancement and innovation has been one of the biggest drivers of economic growth and efficiencies.

On that note, I'm pleased to share our latest issue of Cognizant, where the Private Client Securities investment team delves into the evolution of the global payments system. Following the decades-long reign of physical currency in the form of coins and paper money, the widespread adoption of debit and credit cards in the 1950s marked a major milestone in the payments industry. The world has certainly come a long way since then and today we are seeing digital payments and digital wallets rapidly gaining momentum.

In our feature article, Bianca Lakha (Junior Research Analyst) and Victor Mupunga (Head of Research) unpack the evolution of the global payments landscape and outline how traditional methods of payment as well as the entire payments infrastructure are being reshaped, with new business models emerging.

Tasneem Samodien (Research Analyst) then explains how Apple and Google (holdings within the PCS Global Equity Model Portfolio) are perfectly positioned to benefit from the transition to mobile payments. She explores both companies' models and finds that while their strategies are quite different, both businesses will become increasingly important in the evolution of payments, presenting significant opportunities for future growth.

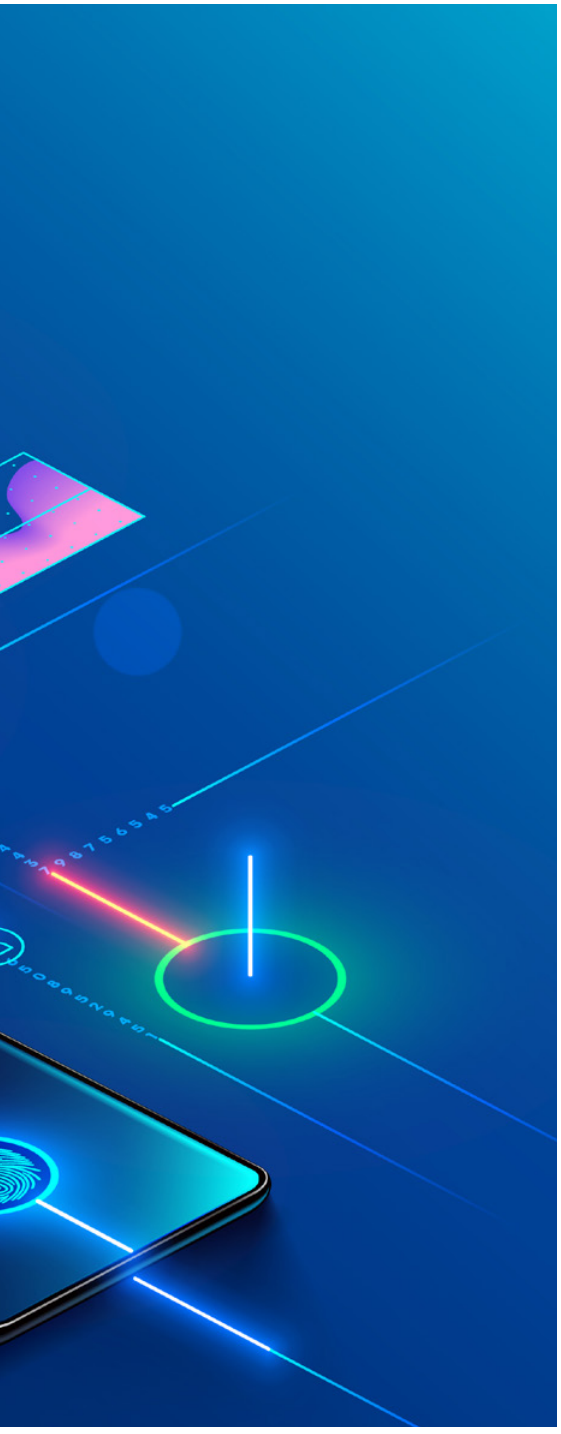
We then end this issue with an article by Sameer Singh (Research Analyst) on how the proliferation of digital financial services holds substantial promise as a driver of financial inclusion, economic participation, empowerment and growth within South Africa. Next year, the Reserve Bank is set to launch its long-anticipated Rapid Payments Programme, which aims to make cashless transactions the norm across the country. Sameer explains how this new platform will attract new entrants to the financial sector, including non-financial institutions, which will drive competition. But far from being left behind, local banks are driving innovation and growth in an increasingly digital world, with Capitec and First National Bank standing out as leaders among their peers. The article highlights that while the future will undoubtedly be more competitive, we believe these two banks – which are held within the PCS Core Equity Model Portfolio – will remain at the forefront, driving increased financial inclusion while reaping the rewards.

To conclude, I'd like to take this opportunity to wish you and your loved ones a safe and peaceful break from what has been a truly testing year. May you relish "switching off" and enjoy the rest that this period offers.

All the best,
Jean

THE EVOLUTION OF THE PAYMENTS LANDSCAPE

BIANCA LAKHA, JUNIOR RESEARCH ANALYST AT PRIVATE CLIENT SECURITIES |
VICTOR MUPUNGA, HEAD OF RESEARCH AT PRIVATE CLIENT SECURITIES



The human need to transact dates to the time of barter trade. And through time, the evolving need for ease and convenience has largely driven the evolution of payment systems as well as methods of payment. Furthermore, increased transactions across integrated global financial markets have resulted in accelerated and often complex fund transfers, which subsequently increased the importance of the underlying payment systems required to facilitate these transfers. Yet, to business owners and consumers, transacting has always been about convenience, reliability and safety. Despite technological advances over the centuries, these three tenets have largely driven trends across the payments industry and in our view, are unlikely to change.

THE BEGINNING OF THE END FOR CASH

After being the prevailing payment method for many centuries, the shift away from cash slowly began to brew in 1914 when Western Union launched “Metal Money”, the precursor to the consumer credit card. This was followed by the launch of the Charg-It card by banker John Biggins. In this system, customer purchases were forwarded to Biggins Bank and merchants were reimbursed later in what was known as a “closed-loop system”. The Diners Club Card debuted in 1950 when Frank McNamara forgot his wallet and couldn’t pay for a business dinner. He proposed the idea of a small cardboard card, which members could use like a charge card. Eight years later, American Express launched its first charge card in the US and Canada. In the 1960s, IBM engineer Forrest Parry invented the magnetic stripe used in credit cards. Over the ensuing years, credit and debit cards quickly grew in popularity and drove major innovation in the transaction space.

DIGITAL MONEY FOR THE DIGITAL AGE

In our view, we are currently witnessing the next evolution in payments following from debit and credit card-driven innovation to payment systems centred around mobile devices. For the most part, these trends have been playing out since the advent of smart devices, and are therefore not new. However, the combination of increasing safety needs and technology enhancements on new devices is seeing increased usage of digital money across the globe.

Perhaps rather ironically, the payments landscape has evolved faster in emerging markets than in developed markets, which are still warming up to the idea. In regions such as Africa, India and Latin America, the days of carrying cash are becoming distant memories, as payment details are now stored in a digital wallet. A digital wallet is an application that assists consumers with transactions by securely storing their payment information and passwords as well as allowing them to access cards and accounts on a wide range of devices. A mobile wallet is a specific category of digital wallet technology that is only accessible through a mobile app (whereas a digital wallet can be used on any device). Conventionally known as Apple Pay, Google Pay, WeChat Pay, AliPay and M-Pesa, among others, mobile wallets use a mobile device’s wireless capabilities like Bluetooth, WiFi, and magnetic signals to transmit payment data securely from a device to a point of sale designed to read the data and connect via these signals.

Led by emerging markets in 2019, mobile wallets overtook credit cards to become the most widely used payment method globally. At the end of 2020, there were over 2.8 billion mobile wallets in use around the world and this number is projected to increase by 74% over the next five years.

To boost financial and digital participation, regulators have been instrumental in supporting mobile wallet initiatives. Countries such as Kenya, Saudi Arabia, Japan and India have already made great strides by implementing mobile payment frameworks aimed at reducing cash usage. This shows that mobile payments are a major driver for the transition to a cashless society, especially where card usage is low. And the transition makes sense, with mobile payments meeting the three tenets of payment methods – convenience, reliability and safety.

A FRAGMENTED MARKET

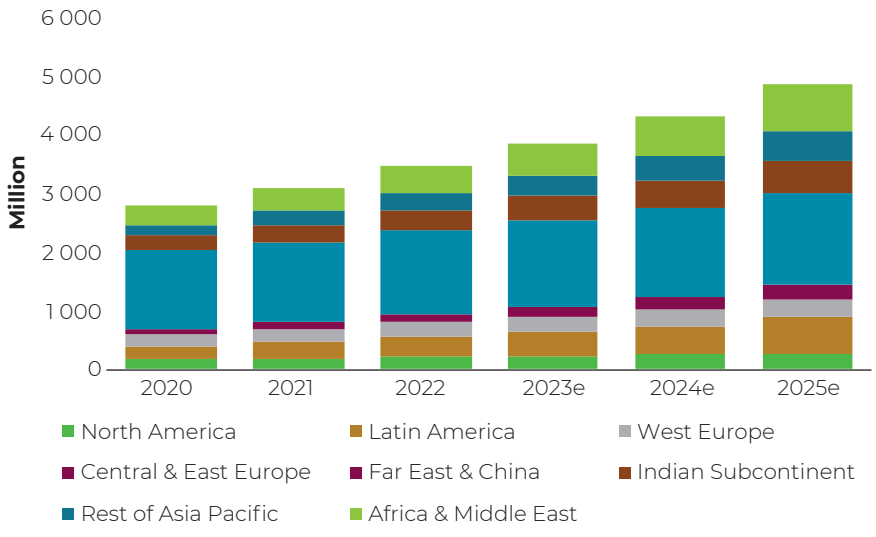
With over 50 digital wallet platforms globally, the market is very fragmented, with most players attempting to distinguish themselves based on convenience. For example, Google and Apple's digital wallets allow consumers to store bank cards and then pay merchants using their loaded debit/credit cards.

In China, there is a duopoly for mobile wallets, with most consumers using both AliPay (1.2bn users) and WeChat Pay (1bn users). This contrasts with the mobile wallet space in India, which is one of the more well-established in the world. With over 200 million wallet users in 2020, mobile payments have taken hold. India's demonetisation policies led to the rapid adoption of Paytm, with the wallet first reaching 10 million users in 2017. Graph 2 shows how market share is divided among the top players in China and India.

Differentiated offerings are also influenced by the region in which the product is offered. For example, with mobile wallets offering the benefit of not needing a bank account, unbanked and underbanked communities in Africa have access to financial services that they did not have before. In this way, mobile wallets offer the added benefit of broader financial inclusion. While a large share of the African population is unbanked (Graph 3), smartphone penetration has outpaced bank accounts, allowing more consumers to access digital financial services. As a result, smartphone penetration enables fintech companies to drive greater economic empowerment.

Vodacom's mobile payment system in Africa, M-Pesa, allows users to store and transfer money through their mobile phones. For example, an unbanked trader can deposit her earnings at an M-Pesa outlet, using a phone. The kiosk agent will access the trader's account with her registered phone number and credit the account for the value of her earnings. The trader then instantly receives an SMS confirming the amount deposited as well as her current account balance. She can also withdraw cash from her account by using the M-Pesa agent's number provided at the outlet and a personal PIN. In 2022, the M-Pesa platform processed US$324.6 billion worth of transactions.

Graph 1: Mobile wallets in use

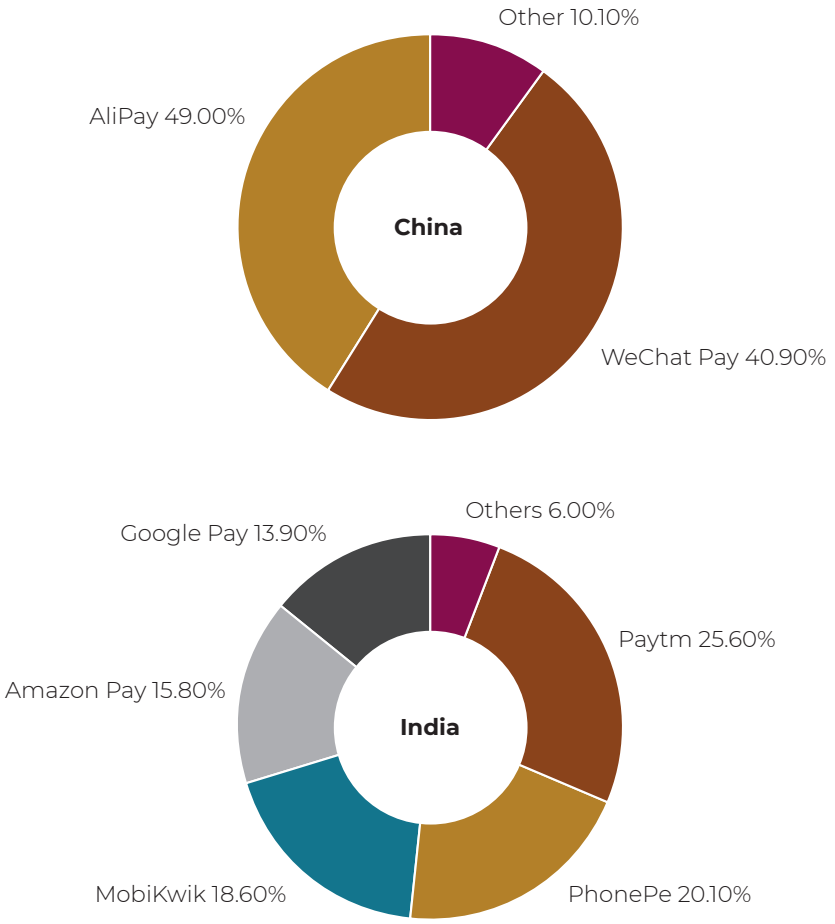


Sources: Boku Inc., Juniper Research

AT THE POINT OF SERVICE

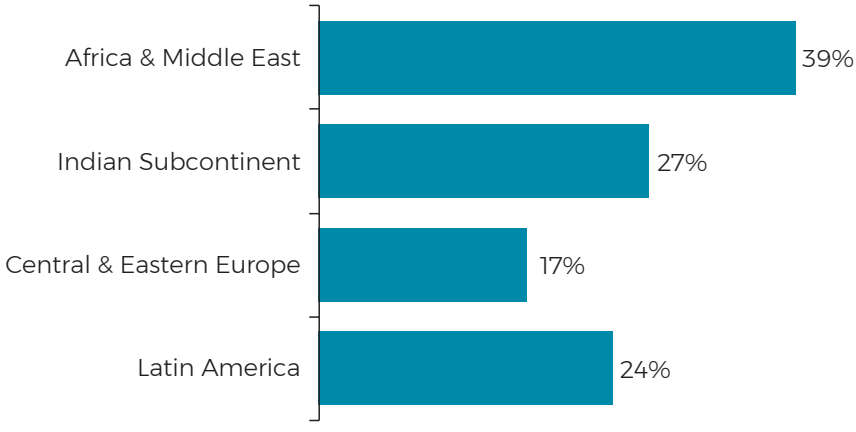
Thus far, we have set the scene purely from the perspective of the consumer. However, the payment landscape is supported by powerful back-end infrastructure that ultimately enables the evolving functionality available to consumers. Much like credit and debit cards transformed the payment experience for consumers,

Graph 2: Mobile wallet market share



Source: Juniper Research

Graph 3: Unbanked population in emerging markets



Source: Juniper Research

the proliferation of the Point-of-Sale (POS) system revolutionised the landscape for merchants. And so, what began as a device to record sales accurately has subsequently transformed into a fully-fledged retail management system with multiple capabilities.

As consumers adopted credit cards as their new preferred method of payment, the retail world saw the emergence of electronic cash registers, barcode scanners, PC-based POS systems and credit card devices. The evolution of the POS system shifted from merchant-driven to consumer-driven, aided by innovation in the fintech sector. In 1992, Martin Goodwin and Bob Henry created the first POS software. It was dubbed IT Retail and could run on the Microsoft Windows platform. As Silicon Valley gained popularity, Apple and Windows computer systems made it possible to run POS systems with higher functionality and improved user interfaces.

By the 2000s, consumers and merchants were transacting with relative ease compared to their counterparts just a few years earlier. The adoption and development within the mobile phone space aided innovation in the payments and transactions space, with bulky computers and registers being replaced with sleek tablets. Thanks to mobile POS solutions, merchants can take the checkout process to the customer anywhere in the store or at a pop-up store.

BUT WHAT LIES BENEATH?

While consumers are generally aware of the expanding and innovative payment options available to them, few consider

A BRIEF HISTORY LEADING TO **THE MODERN POS SYSTEM**

1300 BC – 1623 AD

It all started with calculators, from the abacus to the mechanical calculator.

1883

The "Incorruptible Cashier" by James Ritty was patented as the very POS/cash register

1884

The patent was sold to John Henry Patterson and he renames the company National Cash Register.

1900s

NCR's POS machine could be found in nearly every retail store across the country. Further product developments were made including tallying end-of-day reports, automatically adding sales tax, and more.

EARLY 1970s

IBM developed the very first POS system. The screens were only monitors but completely improved the checkout experience.

EARLY 1900s

National Cash Register created the first electric POS machine for a quicker and an easier average transaction.

Charles Kettering developed the POS machine to allow basic accounting practices, payments on credit, unique sales categories, and the first attempts at an electronic inventory management system.

1992

The first POS system to run on Windows was created and named IT Retail.

2005 AND BEYOND

The modern POS starts to develop, running on sophisticated software in vast networks and is continually advancing with new features and integration possibilities.

Today, it is so powerful that it can give advice on budgets, pricing and inventory. And with data on the cloud, it is much more secure and accessible.

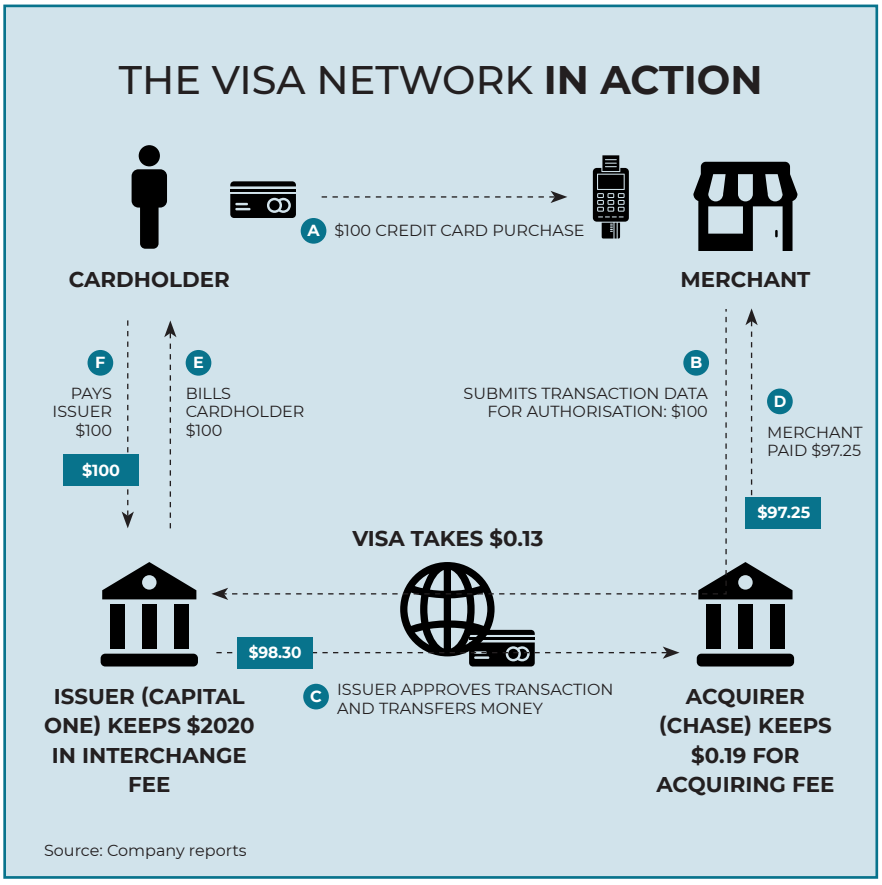
Source: Korona POS

what happens in the background when they tap their phone or swipe their card to effect a transaction. Indeed, many may be surprised to learn that despite the radical advances within the payments industry, the backend infrastructure remains largely the same as it was a few decades ago. In our view, this highlights one of the biggest beneficiaries within the payments sector – the networks that facilitate the transactions between consumers and merchants.

The world's dominant payment networks, Visa and Mastercard, facilitate around 30% of global consumer payments. Given that most payments (63%) are done via credit and debit cards issued by banks, Visa and Mastercard are often incorrectly perceived as financial services firms. Dee Ward Hock, Visa's founder and former CEO, once referred to the close association of Visa with credit cards as "nothing but an accident of time and circumstances, because we are in the business of exchanging monetary information". At their core, Visa and MasterCard are routing systems that connect consumers' banks with merchants' banks.

THE TRANSACTION CYCLE

The accompanying image outlines a typical transaction via the Visa network where a consumer presents a credit card to a merchant for payment. The transaction information is conveyed through the network to the merchant's bank (acquirer) and then to the consumer's bank (issuer) for authorisation. Once authorised, a clearing file containing the final transaction data is submitted to the acquirer and is processed for final settlement. All these stages (except for the settlement, which usually happens at the end of the day) occur in a matter of seconds. In exchange for the use of its network for authorising, settling and other value-added services, Visa earns a fee from the merchant.



While the amounts attributed to each party in the image are for illustrative purposes, they highlight two important considerations in the evolution of payment networks. The first is that most of the fee that is paid for accessing the network goes to the issuer (cardholder's bank) and the merchant's bank, with the network provider (Visa or Mastercard) receiving the least. This often ignored detail means that banks are most affected when merchants or regulators advocate for lower transaction fees for digital payments through network routing systems. Secondly, the image highlights how the network operators largely stand to benefit from innovation that targets consumer convenience. In the illustrated example, irrespective of whether consumers swipe their cards, tap their phones or watches or use mobile wallets linked to their bank cards, as long as the issuer and merchant banks are different, the network providers will benefit from the transaction.

This open-loop system, which is facilitated by Visa and Mastercard, enjoys a rare combination of moats. Apart from the clear network effect (where all banks and merchants want to be part of the ecosystem), there is also an economic incentive where issuing banks use the fees they receive from transactions to offer their customers rewards and cashback. When combined with scale, these are significant moats

for new technologies to overcome. In our view, this explains why most new entrants into the sector tend to partner with the incumbents, Visa and Mastercard, rather than circumvent them. In a recent interview, Mastercard pointed out that about 80% of fintech start-ups within the payments sector partner with the firm in some way, which points to how well positioned Visa and MasterCard remain. But how real is the threat from the remaining 20%?

BYPASSING THE SYSTEM

As with any industry that is dominated by a few players, high fees and regulations tend to be topical. In this respect, payment networks are not exempt. Historically, merchants have expressed their frustration at the high cost of digital payments through lawsuits directed at card networks. While there has been little change by way of Visa and MasterCard's dominance, innovation and regulatory changes – particularly in Europe – have led to the emergence of alternative payment schemes.

Among the alternatives that bypass Visa and MasterCard's network, open banking technology has often been touted as the most significant threat. At its core, open banking is a system that instructs banks to give third parties direct access to a client's bank account. Effectively, once customers initiate and authorise transactions from an app on their devices, retailers have direct access to their bank accounts through an open bank provider (third party) allowing for money to be transferred directly from the consumer to the merchant. This bypasses the current payment infrastructure where issuer and acquirer banks are required to interact over a network.

Given the lower merchant costs and an increasing number of fintech companies investing in various open banking solutions, we expect this alternative payment method to grow over time. However, it is worth noting that despite the growing interest in this technology, it is not new and has co-existed with traditional payment networks for years in countries such as the Netherlands (iDEAL), Germany (GiroPay) and the UK (GoCardless). Despite growing in select markets, overall adoption of open banking-enabled payments has been slower than expected.

Despite this, Visa and Mastercard are cognisant of the threat open banking poses to their business models and have been building or acquiring technologies that compete within this new segment. For example, Visa recently acquired Earthport and Tink, while Mastercard acquired Vocalinkt, a bank account-based payments system operator. Outside of payments, open banking technology presents other use cases, and therefore also represents an opportunity. One such opportunity is the insight and data analytics that a third party such as Tink or Vocalinkt will have across a customer's product suite.

THE CRYPTO AND BLOCKCHAIN ERA

Over the last few years, blockchain has also been touted as a credible alternative to traditional payment systems. The popularity of various cryptocurrencies on blockchain technology has led to growing

VISA NETWORK **VS** BITCOIN

Source: Alliance Bernstein

interest in this alternative. Ignoring the speculative aspect of cryptocurrencies, it is increasingly clear that the underlying technology (blockchain) has a role to play in processing payments.

At its core, blockchain is a digital database (ledger) that is distributed over a large global computer network. The decentralised nature of the network means that community members can validate transactions on the network, which is fundamentally different from traditional networks where data is largely controlled by a single entity, such as a bank. Each cryptocurrency has its encrypted ledger and the ownership of currency (e.g. Bitcoin or Ethereum) changes when two parties transact, i.e. from one wallet to another.

Blockchain proponents highlight the payment system's lack of intermediaries (e.g. banks), speed in cross-border peer-to-peer payments, and anonymity as some of the attractive features of the scheme. This has even resulted in a few countries (El Salvador, Paraguay and Venezuela) adopting cryptocurrencies as legal tender. But despite these advances, cryptocurrencies are yet to become a mainstream form of payment. To appreciate why this is the case, it is worth highlighting how this alternative scheme competes or interacts with traditional networks.

According to the research firm Alliance Bernstein, the average processing time of a Bitcoin payment is over seven minutes, significantly higher than the milliseconds it takes to effect payment on Visa or Mastercard's networks at a POS. The high transaction costs and significantly lower number of merchants who accept Bitcoin as a form of payment further serve as barriers to widespread adoption. Essentially, the absence of a network effect results in consumer inconvenience. In our view, convenience remains essential for any new payment technology to ultimately be successful.

While widely viewed as a threat, it is interesting to note that Visa and Mastercard have also been partnering with cryptocurrency wallets and exchanges to ensure that they benefit from the growth in alternative payments. Both Visa and Mastercard issue branded crypto debit cards which connect users to their crypto wallet. When users purchase a product using the card, the crypto in the user's account is converted into fiat currency at the prevailing currency price. Crypto credit cards are similar to fiat currency credit cards but offer rewards in cryptocurrency. Naturally, the value of the reward is volatile and tracks the base cryptocurrency. However, for traditional network operators, this "on-and-off ramping" (i.e. the conversation to and from crypto to fiat currency) means that cryptocurrency payments rely on traditional network schemes, as crypto is converted into fiat currency and vice versa.

CONCLUSION

The reduced use of cash in favour of digital payment alternatives remains a long-established trend we expect to persist. Consumers will likely continue to benefit from this evolution, as more convenient and reliable innovations are birthed. However, judging from the varied growth rates and acceptance in different geographies, it suggests that there is room for multiple payment systems to co-exist and the fragmentation we see in technologies such as mobile wallets is likely to continue.

For merchants, banks and network providers, the pace of innovation has been a lot slower than for consumer-facing technology. One reason for this is the rare combination of barriers to entry that incumbents enjoy. However, regulatory changes and competing technologies, such as open banking and blockchain, make the landscape less certain and an ever-evolving one.

APPLE AND GOOGLE – LEADING THE NEXT GENERATION OF PAYMENTS

TASNEEM SAMODIEN, RESEARCH ANALYST AT PRIVATE CLIENT SECURITIES

There's a passage in Ernest Hemingway's novel The Sun Also Rises in which a character named Mike is asked how he went bankrupt. "Two ways," he answers. "Gradually, then suddenly." Technological change happens much the same way. Small changes accumulate, and often, there is a catalyst shifting the gears from gradual to rapid. For mobile wallets, this catalyst was the COVID-19 global pandemic.

Mobile wallets are not new technology. Coca-Cola is credited with launching the first type of mobile wallet in 1997, which allowed customers to purchase soft drinks from a vending machine and pay via text messages from their cellphones. While not directly comparable to modern-day digital mobile wallets, it was an innovative concept at the time, as it introduced the idea of using a cellphone to make payments.

It would take more than a decade of technological advancement before the commercial launch of a mobile wallet. In 2011, Forbes proclaimed that Google had won the mobile payments race with the launch of the Google Wallet. However, Google did not enjoy an early mover advantage, as functionality was limited and Visa had not been onboarded, which effectively excluded millions of potential users. Furthermore, the wallet stored physical card details (including the card number and security code), and in response to questions about potential theft of your mobile device, Google's advice was "cancel your cards". While the initial Google Wallet ultimately failed, it led to the subsequent launches of Google, Apple and Samsung Pay.

LESS CONTACT, MORE BENEFITS

While the initial adoption of mobile wallets was slow, the onset of the COVID-19 pandemic in 2020 and the resultant social distancing protocols provided impetus for this payment method to gather momentum. A study conducted by Visa in 2020 found that nearly 48% of consumers refused to shop at stores that did not offer contactless payment options such as payment via a mobile wallet. By September 2020, more than half of Apple iPhone users had activated Apple Pay, while digital payments overall increased by 29%.

In short, the pandemic catapulted mobile wallets to the fourth most used payment method in the US after debit cards, credit cards and cash, overtaking store cards. And it's easy to see why. Mobile wallet payments are easy to use, convenient and safe. Once consumers load their payment details onto their wallets, they can transact by simply opening the respective app and scanning either their mobile or wearable (watch) devices. Furthermore, it is safe, as the device doesn't actually store bank card numbers, but rather random tokenised codes representing bank cards. This means that the risk of fraud is significantly reduced, as consumers' account and card information is never visible to merchants. Lastly and importantly, if a device is lost or stolen, cards do not have to be cancelled – the same can't be said of physical wallets.

SAME, SAME, BUT DIFFERENT

In terms of functionality, Apple and Google Pay are very similar, but Apple Pay only works on Apple devices, while Google Pay operates on any Android device. Despite this, Apple Pay dominates mobile wallet transactions and comprised 92% of all mobile wallet debit transactions in the US in 2020. This is particularly interesting given that Apple and Android have a near 50/50 split of the US market in terms of smartphone penetration. So what's behind the success of Apple Pay?

There are multiple factors including the superiority of Apple's iOS (Apple device operating system) relative to Alphabet's Android. However, when

asking consumers to part with their physical bank cards in favour of mobile wallets, one key factor influences their behaviour – trust. Apple has spent decades investing in the privacy and security of its operating system and has marketed its brand as such, whereas Android, by design, has less privacy controls and is perceived to be less secure.

Despite the initial slow adoption, Apple remained committed to its Apple Pay strategy and while it has taken eight years, just over 50% of Apple device users are now utilising the service. The journey for Google, on the other hand, has been more active. In response to sluggish uptake of the Google Wallet, Alphabet has rebranded and re-launched the application multiple times since its initial release in 2011. Subsequent to the launch of Apple and Samsung Pay in 2015, the Google Wallet was discontinued, and Android Pay was launched. Just three years later, in 2018, Alphabet rebranded the app to Google Pay. In 2022, in response to a customer survey, Alphabet re-launched the Google Wallet as a companion app to Google Pay. The confusion created by multiple name changes compounded the issue of trust, with the result that Google Pay has failed to gain scale within its userbase. However, in absolute terms, Google's 421 million users is not too far behind Apple's 507 million.

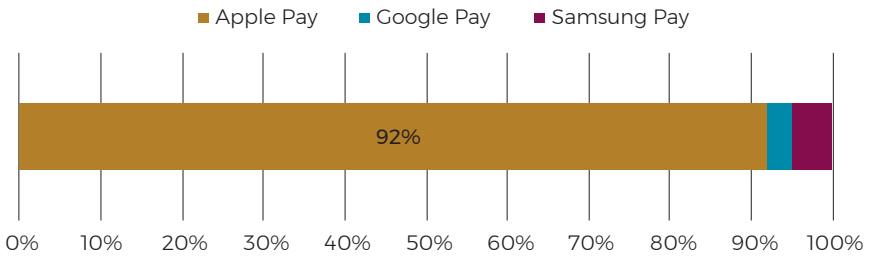
DIFFERENT WAYS OF BANKING ON PAYMENTS

According to CB Insights, the average consumer makes around 70 payment transactions per month. When concluded in cash, the transaction ends when the cash is exchanged. However, when concluded digitally via a mobile wallet, the execution of the payment and the data generated sustain multiple industries working in the background. This is what makes the digital payments industry so lucrative and attractive to Apple and Google.

Apple's strategy to transition from a device hardware retailer to a services provider has been well documented. Apple Pay is part of this strategy and allows the company to expand its ecosystem while enhancing the utility value of its devices. While Apple generates a miniscule percentage of each transaction executed via Apple Pay, it recognises that embedding itself within consumer payment behaviour is far more valuable. Leveraging the success of Apple Pay, Apple has launched the Apple Credit and Cash cards (in partnership with Goldman Sachs) and will soon be launching Apple Pay Later, leveraging its own balance sheet. In essence, Apple is building a financial services capability that will improve customer loyalty and strengthen the company's competitive moat.

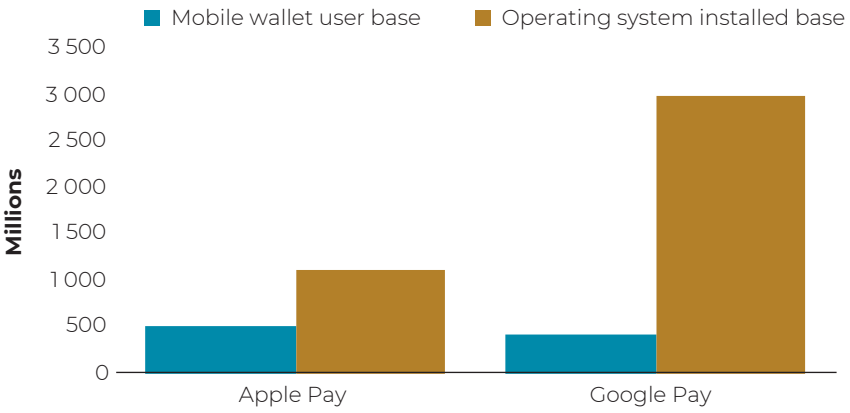
The latest iteration of the Google Wallet promises to replace users' physical wallets entirely by allowing them to upload their driver's licences, identity documents, tickets and other essential items. Instead of expanding into financial services, Google's strategy is to make the Google Wallet as essential to everyday life as the physical wallet. The data generated from the location, time and quantum of payment transactions, as well as the content stored in the digital wallet, is far more valuable to the company's search and advertising businesses than the commission earned on Google Pay. And unlike Apple, Google does have access to Google Pay's transaction details and history. Ultimately, Google is a data business and consumers' wallets are a treasure trove.

Graph 1: US mobile wallet debit transactions by operator



Source: Stripe

Graph 2: Google and Apple mobile wallet userbase relative to installed devices



Source: Business of Apps

LEADING INTO THE NEXT GENERATION OF PAYMENTS

Given that consumers have been tapping to pay for nearly two years, it is safe to say that the behaviour has been entrenched and the impact on younger generations has been significant. Recent payments research has found that nearly 70% of Generation Z consumers only shop at retailers that accept their mobile wallets as a payment option. Gen Z, together with Millennials, who are increasingly favouring mobile payments as well, will make up 72% of the world's workforce by 2029. This combined purchasing power and influence is driving the transition to digital, mobile payments.

While we do not expect financial services to become a material revenue stream for either Apple or Google, at least not in the short term, both companies are perfectly positioned to benefit from the switch to mobile payments. Services such as Apple Pay and Apple Pay Later enhance loyalty and increase the utility of Apple devices, which is important to the company's strategy of expanding the Apple ecosystem. Google Pay and the Google Wallet are essential applications required on the Android operating system in order to remain relevant and competitive in the mobile device market, as well as to support and protect advertising and search revenue streams. So while these two companies are following different strategies, we believe both Apple and Google will become increasingly important in the evolution of payments, and this presents significant opportunities for future growth.

SOUTH AFRICA'S JOURNEY TOWARDS DIGITAL FINANCIAL INCLUSION

SAMEER SINGH, RESEARCH ANAYLYST AT PRIVATE CLIENT SECURITIES

In South Africa, the proliferation of digital financial services holds substantial promise as a driver of financial inclusion, economic participation, empowerment and growth. These developmental goals are not new, especially for an emerging market such as South Africa. However, the current innovation in and disruption from financial technology (fintech) is rapidly overcoming historic barriers and changing the landscape for incumbents, new entrants, and importantly, for regulators as the ultimate rule setters.

In 2023, the South African Reserve Bank (SARB) will launch its long-anticipated Rapid Payments Programme, which aims to make cashless transactions the norm across the country. Importantly, it is an entirely new platform, offering new use cases that will attract entirely new entrants to the financial sector, including non-financial institutions. We believe that this will both drive competition for share of customer wallets and provide opportunities to serve SA's large underbanked market.

One would be forgiven for assuming that this imminent change could be viewed as a threat to SA's long-standing banks. However, far from being left behind, local banks have been and are driving innovation and growth in this disruptive space. It might surprise some that Capitec was named the world's best bank for two years running in 2016 and 2017 by the Lafferty Group's Global Bank Quality survey. This same survey in 2017 noted that local banks as a collective (the top five) had the highest average rating of any country for that year. While no longer filling the top spots, SA banks are still recognised for being among the best managed companies, not only in the country but on the continent. We expect this trend to continue.

In an increasingly digital world, Capitec and First National Bank (FNB) stand out as leaders among their peers. And while the future will undoubtedly be more competitive, we believe these two banks will remain at the forefront, driving increased financial inclusion while reaping the rewards.

WORKING TOWARDS GREATER FINANCIAL INCLUSION

Financial inclusion is a key goal in both the SARB's Vision 2025 strategy and Government's National Development Plan 2030. It is also listed as an enabler of many of the United Nations Sustainable Development Goals.

Research shows that access to a broad range of financial services such as payments, savings accounts and credit is a building block of financial independence and economic empowerment. Maintaining a financial services account (whether with a bank or a regulated institution such as a credit union, microfinance institution or a mobile money service provider) allows people to safely and affordably store, send and receive funds for everyday needs, plan for emergencies, and make productive investments for the future. People without an account, by contrast, are left to manage their finances using informal mechanisms, which are often less safe, less reliable, and more expensive than formal methods.

FINTECH AS A CHANGE AGENT

Fintech plays a critical role in removing the major barriers to financial inclusion, most notably the high cost of account ownership, distance to the nearest financial institution and a lack of documentation. Africa serves as an ideal example, as a large percentage of the population are still subject to the major hurdles against financial inclusion. Yet, over the past decade, account ownership has more than doubled in some countries. Data from the World Bank's Global Findex 2021 survey shows account ownership in Sub-Saharan Africa grew from 23% in 2011 to 55% in 2021. More interesting is that account ownership with a financial institution is only 40% compared to the 55% general account ownership with other institutions. This gap of 15% can be attributed to the penetration of mobile money and other fintech account offerings.

In fact, Sub-Saharan Africa is home to all 11 of the world's economies where mobile money account ownership rates are higher than financial institution account rates. This is intuitive when considering that in most cases, digital financial offerings are far more convenient and user-friendly than traditional financial offerings. For example, in the African context, digital financial services carry less stringent regulations, which negates onerous documentation requirements. Furthermore, there is no need for a physical branch network as everything is done digitally, and providers offer simplified, tailored products with lower costs (sometimes there are no costs) and basic functionality requiring only a mobile phone and basic financial and/or technological skills.

THE SOUTH AFRICAN LANDSCAPE

Figure 1: Major developments in the South African banking market

- **1981 –** First debit orders are cleared through the Automated Clearing Bureau (ACB)
- **1985 –** Saswitch system goes live
- **1992 –** First electronic POS services launched
- **1993 –** BankservAfrica is founded by the largest banks to provide interoperability and clearing
- **1995 –** SARB National Payment System Strategy published
  Payment Association of South Africa (PASA) is established
- **1996 –** Internet banking launched
- **2003 –** Europay, Mastercard and VISA (EMV) compliant POS terminals go live
- **2004 –** Discovery enters credit card market with Discovery Card
- **2006 –** Real-time clearing system launched
  Early debit order payments system goes live
- **2007 –** Bidvest launches Bidvest Bank
- **2008 –** Banking Enquiry publishes key recommendations
- **2013 –** All ATMs and POS terminals become EMV compliant
- **2014 –** ABSA and Nedbank announce digitalisation strategies
- **2015 –** Old Mutual partners with Bidvest Bank to launch Old Mutual Money Market Account
  FNB launches mobile virtual network operator services on Cell C's network
- **2016 –** FNB launches first mobile banking unit in SA to cater to unbanked rural areas
  SARB grants provisional banking licences to Discovery, Tyme and PostBank
  PEP Stores launches PEPplus debit card
  Standard Bank acquires majority stake in SnapScan
- **2017 –** Capitec launches their credit card nationwide
- **2018 –** DebiCheck system goes live
  National Payment System Department publishes Vision 2025
- **2021 –** SARB commences study into retail central bank digital currency to complement cash
  FNB, followed by other banks, launches virtual cards
- **2022 –** SA banks introduce Google and Apple Pay compatibility
  Proliferation of lending products tailored to SMEs from both banks and non-banks
- **2023 –** Rapid Payments Programme launched
  Capitec business banking launched

Sources: consultancy.co.za, PwC Strategy & Analysis, PCS Research

The SA banking landscape, on the other hand, is fairly mature and has been shaped by a mutually beneficial partnership approach between regulators and commercial interests. From the progression to democracy in 1994, there has been a concerted effort to open up previously constrained economic sectors, with the financial services sector highlighted as a significant change agent in driving economic participation and growth. The 1990s were marked by the formalisation of various financial sector governing bodies and accompanying strategies. These included the launch of BankservAfrica (South Africa's national payments clearing house), the Payments Association of South Africa, and the SARB's National Payment Strategy. Following these foundational developments, financial services providers, primarily banks, were encouraged to introduce various types of low-cost bank accounts to cater to the majority of the SA population. Most notably, the Mzansi account, a low-cost bank account targeting the unbanked, was introduced by all major banks in the country, including the Postbank, gaining wide take-up, particularly in previously unbanked communities.

While the Mzansi account was an initial success with more than six million account openings, history shows that many of these accounts subsequently became dormant (42% of all accounts were unused after five years). There are a few reasons for this, but the major setback was pricing. Banks had initially developed the account as a gateway product that would lead to the use of other banking services such as personal loans and credit cards. When this failed to materialise, banks were forced

to increase the cost of the Mzansi account, which then removed the incentive for take-up and usage.

Subsequent low-cost products have performed well in terms of growing account ownership. The impact of this positions SA as an anomaly within Sub-Saharan Africa. Findings from the World Bank Group's Global Findex 2021[1] report show that local bank account ownership rates grew from 54% in 2011 to 84% in 2021. And while this may seem like a success, digging deeper into the details presents a different view: only 59% of South Africans have a debit card, 57% use savings accounts and only 10% own a credit card.

This shows that rather than being unbanked, SA is actually underbanked. The financial inclusion gap is still large and represents a huge opportunity to grow the total addressable market for financial services.

RAPID PAYMENTS ARE HERE (ALMOST)

The SARB is widely recognised as a stable, leading and progressive sovereign financial institution. In addition to working on projects that include a local central bank digital currency, it is also working towards achieving its Vision 2025 strategy, which sets out a roadmap to building a world-class National Payment System (NPS) that is capable of meeting the evolving financial needs of South Africans. The SARB expects consumers to have increased trust in and familiarity with digital payment systems by 2025 and is encouraging industry stakeholders to collaborate to ensure the safety, efficiency, integrity, transparency and accessibility of the NPS.

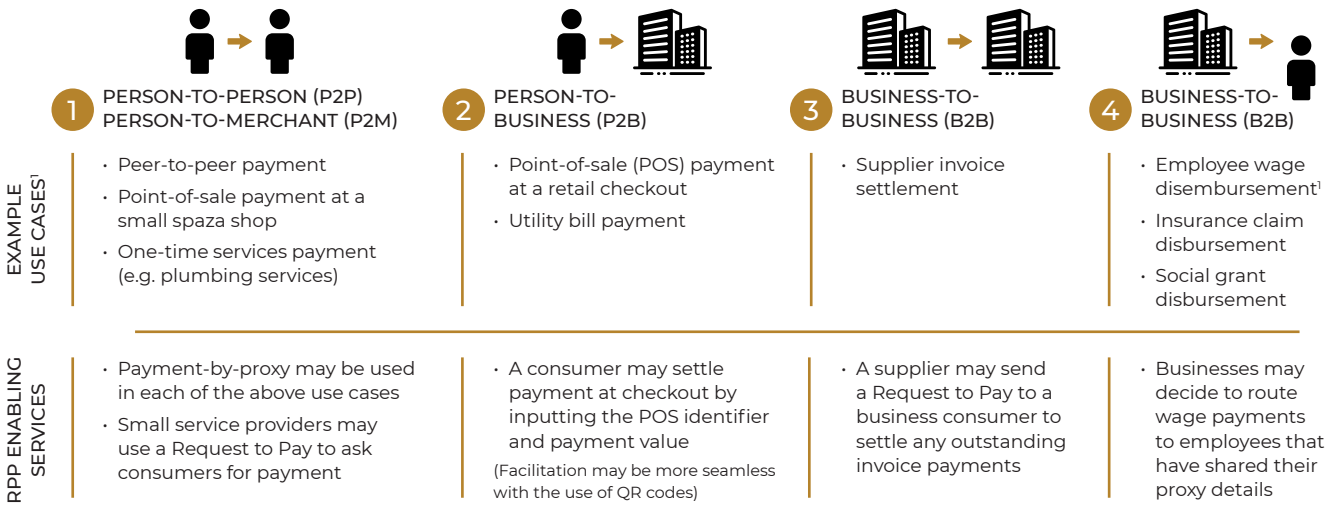
To this end, the Rapid Payments Programme (RPP), due to be launched in 2023 under the brand Payshap, is an industry-led initiative under the leadership of BankservAfrica and the Payments Association of South Africa. The service will initially be centred on three key features: 1) Instant payments (immediate notifications and allocation of funds that are final and irrevocable); 2) Proxy (enables payments without the need for bank account details through public and private identifiers, such as a mobile number); and 3) Request to Pay (enables users to request payment from other users digitally). All of this functionality will be secure and managed on a trustworthy platform.

The three core customer segments for the RPP are the underbanked, banked and small merchants. Essentially, the underbanked will receive access to mainstream financial services; the banked will enjoy increased interoperability between payment rails/service providers at lower costs; and merchants will be able to receive funds and pay on an instant and a cashless basis at more affordable rates.

The figure below outlines additional use cases in greater detail.

Sitting atop the enabling RPP platform, industry participants (both banks and non-banks) will be able to develop their own innovative products and services that together will drive a deepening of digitisation of the local financial system.

Figure 2: Rapid Payments-enabled use cases



Source: Rapid Payments Programme

[1]The Global Findex report is a global survey released every four years that looks to qualitatively and quantitatively measure financial inclusion rates around the world.
Note: [1]Dependent on the risk value thresholds to be determined for Rapid Payments

SA BANKS LEADING THE CHARGE

For the majority of the formally employed who are clients of the big SA banks, many of the features being introduced by the RPP are nothing new. Not only have our banks been innovating for years, but they have also formed part of the working groups responsible for driving the SARB's Vision 2025 strategy and RPP by extension.

FNB pioneered the local banking industry's digital foray with the launch of the eBucks ecommerce and loyalty platform at the start of the century. While internet banking was already a feature within the local financial services landscape, it was still a niche offering at that time. The more meaningful shift was spurred by the introduction of smart phones. Over a period of two to three years, all of the major banks introduced mobile applications looking to harness the advances in technology and software to provide clients with a "mobile banking branch" experience.

For banks, having a predominantly digital client base makes sense. When executed well and holistically, a mobile banking application introduces convenience and builds enhanced brand equity and loyalty. It also serves as a shop window and distribution channel for cross- and up-selling at far lower client acquisition costs. This leads to a more entrenched and profitable client base. Lastly and importantly, mobile banking applications provide front-row access to client behaviour via data collection and analysis. This is an increasingly important source of client insights that can be used to develop new digital products, services and revenue streams.

But mobile applications alone are not a silver bullet for growth. Banks are acutely aware of this and over time, have bolstered their offerings via integrated loyalty/ rewards programmes, partnerships with both non-banking financial institutions (e.g. insurers, home loan providers) and non-financial institutions (e.g. telecoms providers), and acquisitions of start-ups (e.g. Standard Bank acquiring SnapScan). Additionally, the user experience needs to be effortless and flawless, a point which goes some way to explain the growing drive from banks to incorporate information technology and cloud skills into their workforce.

The market is getting more competitive and digitisation, while a tailwind for growth, will also introduce new threats. Even before the roll-out of RPP, incumbent banks have seen many new entrants into their markets, critically from non-financial players. Although a little dated, Figure 3 highlights some of the potential and current non-financial entrants into the market:

In a competitive market environment, it is usually the consumer that reaps the greatest rewards. In a competitive financial services environment, we also believe that market share and growth will be awarded to those businesses that are most mature and furthest along on their digitalisation journeys.

Since the launch of the SITEisfaction Best Internet Banking Awards 10 years ago, and its successor, Best Digital Bank Awards, FNB and Capitec have led their peers and jostled for the top spot every year. While both banks have received praise for maintaining trustworthy platforms, Capitec's has consistently been viewed as easier to use while FNB's has been more innovative. Additionally, FNB was recognised for having the best digital banking application at the recent World's Best Consumer Digital Bank Awards in Africa event. While it is unreasonable to predict that Capitec and FNB will remain the most loved digital banks into perpetuity, we are confident and comforted that digital and financial inclusion are core elements of each bank's long-term growth strategies and that their long-standing innovative cultures are firmly entrenched. As such, we believe they will remain at the forefront of digital financial services in South Africa for years to come.

WINNERS SHARE ALL

South African bank exposures in our Core Model Portfolio are consistent with our thesis that the drive for greater financial inclusion in South Africa and the continent will grow the total addressable market for financial services. Looking ahead, the market will get more competitive. However, it will also provide many opportunities for growth, particularly for partnership models across bank and non-bank players and increasingly outside of our borders. Yes, the Africa growth promise is well known and littered with cautionary tales. Nevertheless, we see the combination of quality businesses with scale and experience, operating via partnership models to serve globally driven and locally relevant developmental goals, as a sound investment for the digital age.

Figure 3: Potential new entrants into the financial services market

Type	Industry	Potential banking services providers	Current capabilities	Potential financial services solutions
Retail	Retail companies	Grocery retailers (e.g. Shoprite, Pick n Pay) Clothing retailers (e.g. Edgars, Jet, Ackermans)	**Basic financial services:** Cash withdrawals and deposits via tills, coupled with remittances, retail accounts. **Customer base:** 9.8m and 3.6m customers with a preference to shop at Shoprite and Pick n Pay respectively.	Transactional banking Personal loans Credit cards
	Large employers	Parastatals (e.g. Eskom, Transnet) Mining companies (e.g. Anglo American, Glencore) Retailers (e.g. Shoprite, Pick n Pay)	**Customer base:** Captive base of employees (e.g. Anglo American and Shoprite employ 150 000 and +- 140 000 respectively) with direct access to payroll deductions (provided that employee consent has been received.)	In-house personal loan products
Commercial	Automotive	Taxi associations (e.g. South African National Taxi Association)	**Customer base:** Direct access and service to taxi owners of 200 000 minibus vehicles that are on average nine years old.	Vehicle and asset finance
	Agriculture	Agricultural co-operatives (e.g. AFGRI, SENWES)	**Credit financing:** Currently, SENWES undertakes crop financing via a mix of instruments from Nedbank and ABSA, but it as well as other co-operatives could obtain a licence to reduce their reliance on existing commercial banks. **Industry intellectual property:** Partnerships across agriculture value chain, knowledge of best practices and access to markets.	Specialist agri-business banking Retail banking for farmworkers and owners
	Property	Large commercial property developers (e.g. Growthpoint)	**Industry intellectual property:** Partnerships across property value chain and knowledge of best practices.	Property finance

Source: PwC Strategy & Analysis

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Bianca holds an Honours degree in Economic Science and is currently completing her Masters in Economic Science at the University of the Witwatersrand. Bianca's Masters dissertation focuses on how institutions facilitate the relationship between corruption and FDI in Sub-Sharan Africa. While studying towards both her Honours and Master's degrees, she completed a number of internships with Genesis Analytics – an economics consultancy firm. Bianca gained valuable experience in fields relating to competition and regulation as well as financial services and the digital economy.

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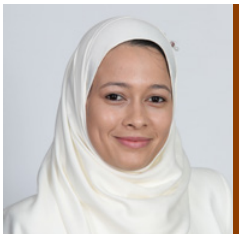

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