DIGITAL PAYMENTS ROADMAP: TOWARDS INCLUSIVE, ACCESSIBLE, EFFECTIVE AND SUSTAINABLE DIGITAL PAYMENTS IN SOUTH AFRICA

© South African Reserve Bank

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without fully acknowledging the *Digital Payments Roadmap: Towards inclusive, accessible, effective and sustainable digital payments in South Africa* of the South African Reserve Bank as the source. The contents of this publication are intended for general information only and are not intended to serve as financial or other advice. While every precaution is taken to ensure the accuracy of information, the South African Reserve Bank shall not be liable to any person for inaccurate information or opinions contained in this publication. Unless indicated otherwise, data were supplied by the South African Reserve Bank.

Comments and enquiries relating to this publication are welcomed and should be addressed to:

Head: National Payment System Department
South African Reserve Bank
P O Box 427
Pretoria 0001
Tel. +27 12 313 3424
Email: npsdirectives@resbank.co.za

http://www.resbank.co.za

Produced by the South African Reserve Bank

Contents

1. Introduction 2
2. Purpose, objectives and scope 4
3. Digital payments landscape in South Africa 6
4. Obstacles and challenges to achieving inclusive, accessible, effective and sustainable digital payments in South Africa 12
5. Towards inclusive, accessible, effective and sustainable digital payments 22
6. The enabling and catalysing regulator and the innovative payment industry 35
7. Conclusion 38

Abbreviations 39

Annexure A: Benefits of digital payments 40

Annexure B: Summary of actions 43

1 INTRODUCTION

Innovation and technological advancements are rapidly accelerating the transformation, modernisation and digitisation of world economies. According to a report by PricewaterhouseCoopers titled 'Payments 2025 and beyond', global cashless payment volumes are set to increase by more than 80% from 2020 to 2025, from about 1 trillion transactions to almost 1.9 trillion, and to almost triple by 2030.[1]

Africa is embracing this transformation as demonstrated through the African Union's Digital Transformation Strategy for Africa (2020–2030), which states the following as its vision: "An integrated and inclusive digital society and economy in Africa that improves the quality of life of Africa's citizens, strengthens the existing economic sector, enable[s] its diversification and development, and ensures continental ownership with Africa as a producer and not only a consumer in the global economy."[2] Digital payments are central to this digital economic transformation, spurring economic activity, driving digital trade and unlocking new opportunities for the broader society.

South Africa (SA) has made great strides in embracing this digital societal and economic transformation. Digital payments are widely accessible to the broader society and across all living standards measure (LSM) market segments. More than 94% of South African adults are financially included, and approximately 82% of this adult population has access to at least one bank account. The phasing out of cheques in January 2021 , the launch of the new faster payments system (PayShap) in March 2023, and the introduction and use of contactless payments and quick response (QR) codes, among other things, demonstrate SA's major commitment and accomplishments in digitising payments and expanding the broader SA digital economy.

Despite these accomplishments, the pace of adoption of emerging digital payments and the utilisation of existing digital payments in SA across all the LSM market segments have been sluggish. Cash remains king in SA, with individuals and businesses – particularly those in the underserved communities and in the lower and middle LSMs (1–7) market segments

1 The PricewaterhouseCoopers report is available at https://www.pwc.co.za/en/press-room/payments-2025-and-beyond.html

2 See the African Union's vision for the Digital Transformation Strategy for Africa (2020–2030), available at https://au.int/sites/default/files/documents/38507-doc-dts-english.pdf

– being overly reliant on cash for daily payments. This over-reliance on cash – coupled with high costs to consumers and micro, small and medium enterprises (MSMEs); a lack of interoperability; financial exclusion of the underserved or disadvantaged communities; a lack of financial and digital literacy; a lack of or slow modernisation of legacy systems; a lack of access to infrastructure, including Internet/Wi-Fi; and lack of trust in using digital payments – creates barriers or obstacles to, and lowers the appetite for, an increased adoption of new innovative digital payment methods and the frequent use of existing digital payments.

As a result, a focused roadmap is required to identify and break down the barriers, remove the obstacles, increase accessibility and usability, and unlock the potential of digital payments to spur economic activity and trade, enhance economic growth and uplift the lives of ordinary South Africans (see Annexure A: Benefits of digital payments).

This *Digital Payments Roadmap (Roadmap),* known as Project Stimela, aims to accelerate the pace of adoption and use of digital payments in SA through high-level action plans (see Annexure B: Summary of the actions), and includes the following:

- the expansion of the accessibility of the national payment system (NPS) to financial technologies (fintechs) and non-banks;
- the provision of fast, low-cost innovative payment products and services such as faster payments, e-money and mobile money, including increasing digital payments literacy and awareness in women, the youth, MSMEs, government, government social grant recipients, schools, and so forth; and
- the modernisation of the payment infrastructure, including the extension of the reach of safe and affordable Internet and data networks as well as access points to the underserved lower and middle LSMs market segments.

The *Roadmap* further underscores the importance of embracing and leveraging new and emerging payment methods, technologies and platforms such as mobile money, e-money, central bank digital currencies (CBDCs), application programming interfaces (APIs), artificial intelligence, regulatory technology (regtech) and supervisory technology (suptech) to promote more inclusive, efficient, effective, safer and sustainable digital payments in SA.

The *Roadmap* is designed to realise the overarching goals and strategies of the *National Payment System Framework and Strategy: Vision 2025 (Vision 2025).*[3] These include, among other things, the promotion of competition and innovation, cost-effectiveness, interoperability and financial inclusion. These policy goals are to be achieved through leveraging technological developments to extend the availability of digital payments to all sectors of society. The *Roadmap* further seeks to support National Treasury's draft policy paper titled 'An inclusive financial sector for all'[4] in enhancing and deepening financial inclusion in the SA financial sector.

The successful delivery of the *Roadmap* is centred and dependent on public-public, public-private and private-private partnerships and collaborations, and on harnessing the capabilities and resources of the multiple stakeholders within and beyond the payment system ecosystem.

The *Roadmap* consists of the following sections:

- Section 2: Purpose, objectives and scope
- Section 3: Digital payments landscape in SA
- Section 4: Obstacles and challenges to achieving inclusive, accessible, effective and sustainable digital payments in SA
- Section 5: Towards inclusive, accessible, effective and sustainable digital payments
- Section 6: The enabling and catalysing regulator and the innovative payment industry
- Section 7: Conclusion

3 https://www.resbank.co.za/content/dam/sarb/what-we-do/payments-and-settlements/Vision%202025.pdf

4 http://www.treasury.gov.za/comm_media/press/2020/Financial%20Inclusion%20Policy%20-%20An%20Inclusive%20Financial%20Sector%20For%20All.pdf

2

PURPOSE, OBJECTIVES AND SCOPE

Purpose

The purpose of this *Roadmap* is to identify obstacles, barriers and challenges to the adoption of an increased and effective usage of digital payments, and to develop a multi-disciplinary and stakeholder action plan to unlock the inclusivity, effectiveness and sustainability of digital payments in SA.

Objectives

The objectives of the *Roadmap* are to promote and enable the offering and adoption of alternative inclusive, cost-effective, sustainable and innovative digital payments, and to increase the usage of traditional and emerging digital payments to support the socio-economic needs of all South Africans.

Scope

This *Roadmap* focuses on the SA payment ecosystem and does not extend to cross-border payments.

3

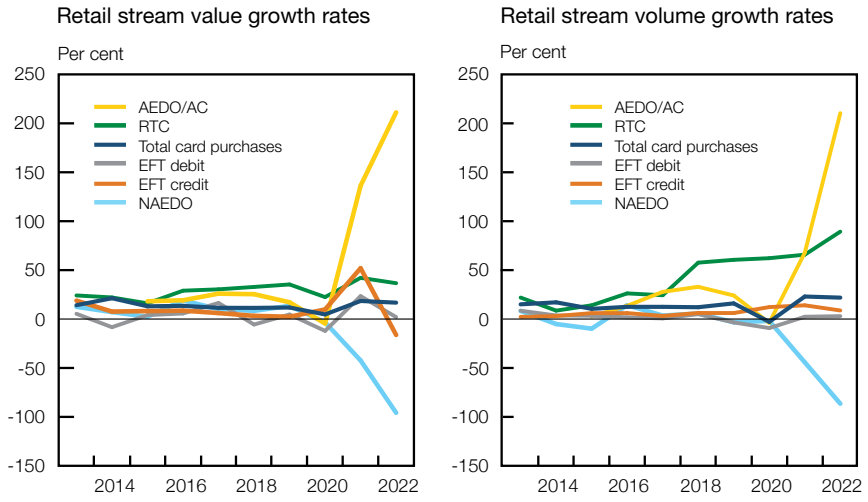
DIGITAL PAYMENTS LANDSCAPE IN SOUTH AFRICA

SA has an advanced banking and financial services industry, with a society in digital transition. Digital payments are widely accessible in SA, and financial inclusion is high by the standards of developing economies. The South African Reserve Bank (SARB), in collaboration with the government (in particular National Treasury) and the payment industry, has made great strides in enabling and enhancing the provision of safer, seamless, convenient, affordable and faster digital payment offerings. This section profiles the SA digital payments landscape to highlight opportunities that were leveraged to speed up beneficial change.

Retail payments

The SA retail payment services landscape has developed significantly over the past few years. The various retail payment methods currently in use in SA include cards (debit, credit and fleet), electronic funds transfer (EFT) (credit and debit), authenticated collections (DebiCheck), real-time clearing, PayShap (faster payments system) and automated teller machines (ATMs). The growth in retail payments is illustrated in Figure 1 below.

Figure 1: Retail payment growth



AEDO: authenticated early debit order
AC: authenticated collections
RTC: real-time clearing
EFT: electronic funds transfer
NAEDO: non-authenticated early debit order

The retail figures include on-us and off-us transactions. They are therefore different from the South African Multiple Option Settlement (SAMOS) figures. The total value of retail payments (excluding cash withdrawals) decreased from R52 trillion in 2021 to R45 trillion in 2022. The total volume of retail payments (excluding cash withdrawals) increased from 5.4 billion in 2021 to 6.4 billion in 2022. In 2022, EFT credits made up a significant portion of total retail values, contributing 90%, while card purchases contributed 65% of total retail volumes.[5] Cheques were officially phased out on 31 December 2020. The growth in retail payment transactions (volumes) indicates increased leveraging of the benefits of digital payment options by consumers and businesses.

Contribution to gross domestic product and economic growth

The International Monetary Fund found that digital financial inclusion was positively associated with growth in gross domestic product (GDP) per capita from 2011 to 2018, suggesting that digital financial inclusion can accelerate economic growth.[6] The wider adoption and usage of other forms of digital payments in the economy could therefore significantly and positively contribute to economic growth.

Financial inclusion

SA has a high level of financial inclusion, supported by the well-developed financial services sector, particularly the banking sector. According to FinMark Trust's FinScope South Africa Consumer Survey 2022 (FinScope),[7] the formally served or included in SA increased from 91% in 2021 to 96% in 2022, measured in terms of access to broader financial services, including insurance, payments, savings and credit. The banked adult population increased from 81% in 2021 to 82% in 2022, indicating increased access of the adult population to tools and instruments that enable digital payments in SA.

5 Payment Information Return (PAYIR) system – The National Payment System Department's data collection system.

6 International Monetary Fund, 'Is digital financial inclusion unlocking growth?', *Working Paper No. 2021/167*, June 2021. https://www.imf.org/en/Publications/WP/Issues/2021/06/11/Is-Digital-Financial-Inclusion-Unlocking-Growth-460738

7 The FinScope surveys are provided to the SARB as the SARB is one of the funders of the surveys.

PayShap (faster payments)

In March 2023, SA successfully launched a faster payments service named PayShap.[8] PayShap is a low-value, real-time retail payment platform/scheme aimed at deepening the financial inclusion of consumers and small businesses by making digital payments more convenient, thus reducing the reliance on cash in the economy. Key features launched include instant payments by enabling the immediate payment of funds from one bank account to another and using a proxy such as a mobile number to transfer funds to a recipient. The request-to-pay feature is still in development and will be launched in 2024. PayShap supports the *Vision 2025* goals of financial inclusion, innovation and competition, and cost-effectiveness.

Nine banks – First National Bank, Absa, Nedbank, Standard Bank, Discovery Bank, Capitec Bank, Tyme Bank, Investec and Sasfin Bank – participate in PayShap, with other banks envisioned to join PayShap in 2024. Although the transaction volumes are fairly low and the pricing by some banks is higher than expected for a financial inclusion product, the full implementation of PayShap's request-to-pay feature, participation by other small to medium banks and non-banks, and increased consumer awareness are expected to enhance competition in PayShap, drive down costs and increase the PayShap uptake for the benefit of all South Africans.

ISO 20022 implementation

In September 2022, the payment industry adopted the International Organization for Standardization (ISO) 20022 standard and embedded this standard in all new retail payment system implementations, including PayShap and authenticated collections (known as DebiCheck), and in the domestic wholesale real-time gross settlement (RTGS) system. ISO 20022 is a rich, structured and extensible messaging standard that provides richer and higher-quality payment data in the payment message for possible use in customer and transaction verification and screening.

The ISO 20022 standard presents more opportunities for greater interoperability and integration between payment systems and also improves operational resilience while reducing market fragmentation and the avoidance of single points of failure. This standard facilitates automation and straight-through processing to reduce costs, processing time and risks associated with financial transactions, and enables the transmission of rich data to enhance the handling of financial crime compliance processes. Many global open-banking projects use ISO 20022 data components to assure a high level of reuse throughout the financial services ecosystem.[9]

8 https://www.payshap.co.za/#/home

9 World Economic Forum, 'Defining and measuring payment interoperability', White Paper, April 2022. https://www3.weforum.org/docs/WEF_Defining_and %20Measuring_Interoperability_2022.pdf

Contactless payments

The use of contactless payments in SA through a tap-and-go payment method enabled by near-field communication technology enables consumers to tap their debit or credit cards, or virtual cards loaded on a mobile device, over a point-of-sale (POS) terminal, thereby fully digitising card payments. Contactless payments are prominent in the physical payment environment and increased sharply during the height of the coronavirus disease 2019 (COVID-19) pandemic. According to a Mastercard global consumer study, 75% of SA respondents expressed that they use contactless payments due to its safety as well as for hygiene reasons, which was heightened during the COVID-19 period.[10] Contactless payment instruments have enhanced the speed and use of digital payments, and the overall consumer experience.

Government payments

The SA social security grant system programme assists more than 11 million people and benefits more than 40% of SA households. Currently, all social grant recipients receive these benefits through bank accounts, and the majority of these are held at Postbank.[11] As at the end of December 2021, 63% (7 285 934) of the 11 550 605 South African Social Security Agency (SASSA) beneficiaries were paid though the South African Post Office and the remaining 37% (about 4 264 671) were paid through their personal bank accounts with other commercial banks.[12]

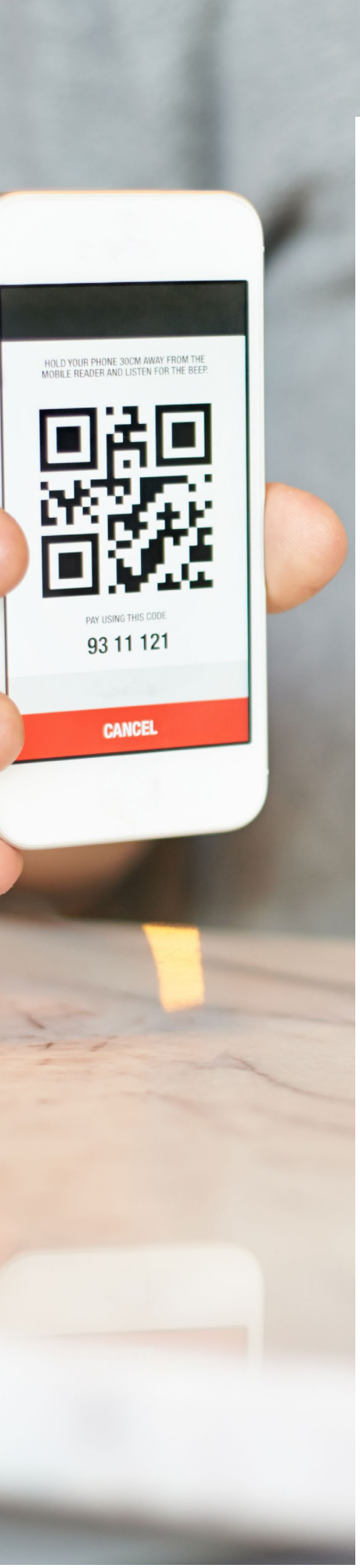
Phasing out of cheques

In November 2020, the SARB, in collaboration with the Financial Sector Conduct Authority (FSCA), Payments Association of South Africa (PASA) and the Banking Association South Africa (BASA), phased out cheques as a payment instrument, effective from 31 December 2020. The phasing out was driven by the challenges associated with the use of cheques, particularly lengthy processing periods, fraud, cheques being an expensive payment instrument, the restricted acceptance of cheques, and declining cheque usage. The main objective was to promote faster, cheaper and convenient digital payments in SA.

10 https://www.mastercard.com/news/eemea/en/newsroom/press-releases/press-releases/en/2020/april/mastercard-study-shows-south-african-consumers-make-the-move-to-contactless-payments-for-everyday-purchases/

11 https://www.treasury.gov.za/comm_media/press/2020/Financial%20Inclusion%20Policy%20-%20An%20Inclusive%20Financial%20Sector%20For%20All.pdf

12 SASSA Annual Performance Plan, 2022-2023; amended figures provided by SASSA. https://static.pmg.org.za/SASSA_2022-23_Annual_Performance_Plan.pdf



Quick response codes

QR codes or scan-to-pay offerings are slowly gaining popularity as a payment method in SA, although the use of QR codes is substantially low relative to contactless payments. According to FinScope, only 0.2% of consumers used QR code payments in 2022. Although QR codes are readable by modern mobile devices, there are multiple QR providers that provide different QR codes to initiate a payment, resulting in multiple displays of QR codes by merchants.

The gradual increase in the number of QR codes prompted the SA payment industry to develop an interoperable QR code standard. The standard establishes a single, recognisable QR code useable on any application, with the ability to process through a number of payment rails which should be cost-effective, safe to use, and interoperable between networks to pay any business or person while promoting a consistent user experience. Defining an SA standard for QR code usage in the payment environment reduces market fragmentation and allows practical and secure usage by all players. It also guides consumer and business application developers in implementing the acceptance of payee/payer credentials via QR codes. More research and analysis are required to determine the root cause of the low usage of QR codes.

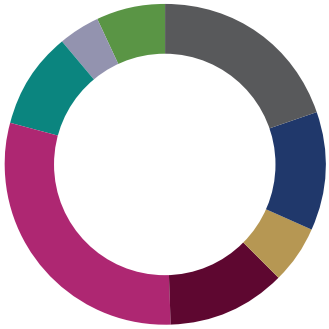
Fintech, the Intergovernmental Fintech Working Group and the Innovation Hub

The Intergovernmental Fintech Working Group (IFWG), established in 2016, is a collaborative initiative of the IFWG stakeholders which includes National Treasury, the SARB, the Prudential Authority, the Financial Intelligence Centre, the FSCA, the National Credit Regulator, the South African Revenue Service and the Competition Commission. The IFWG was established as a collaborative structure to gain a better understanding of the growing role of fintech companies and innovation in the SA financial sector as well as to explore how regulators may more proactively assess emerging risks and opportunities in the market. The IFWG established the following structures to facilitate an enabling regulatory environment for fintech:

- Regulatory Guidance Unit, which assists innovators to resolve specific questions regarding the policy landscape and regulatory requirements.
- Regulatory Sandbox, which provides innovators in the financial sector with an opportunity to test new products and services that push the boundaries of existing legislation and regulation responsibly, under the supervision of relevant regulators (in a controlled environment).
- Innovation Accelerator, with the objective of providing a collaborative, exploratory environment for financial sector regulators to learn from and work with each other (i.e. the broader financial sector ecosystem) on emerging innovations in the industry.

Fintechs are increasingly exploring and bringing digital products and services to South Africans. Figure 2 below on the segmentation of fintechs in South Africa in 2019[13] shows that almost a third (30%) of fintech offerings are in the payments segment. Most of the fintech products and service offerings include mobile money, e-money, remittances, crypto-assets and open banking. However, more data is required to measure the size of the fintech landscape and assess its scope of impact on the adoption and use of digital payments in SA.

Figure 2: Segmentation of fintechs in South Africa (2019 count)



Payments	30%
Business-to-business tech support	20%
Lending	12%
Investments	10%
Insuretech	9%
Financial planning and advisory	7%
Savings and deposits	6%
Capital raising	4%

The SARB took a decision to test selected payment-related fintech products and services in the regulatory sandbox to enhance its understanding of the business models, as well as potential benefits and risks, to inform the most appropriate regulatory response to the various payment use cases. Thus far, six products have been tested successfully in the regulatory sandbox and the first payment use case is currently under consideration by all the affected/relevant regulatory authorities.

Proof of concepts and prototypes

The SARB continues to collaborate with industry, other central banks and standard-setting bodies to explore emerging forms of digital payments and associated technologies. This provides significant opportunities for learning, and the development and formulation of appropriate policies to enable innovation. The proof of concepts and prototypes currently explored include the following:

- Project Dunbar: The SARB participated in Project Dunbar with the Bank for International Settlements Innovation Hub, the Reserve Bank of Australia, Bank Negara Malaysia and the Monetary Authority of Singapore. The project, which was successfully completed in March 2022, was a prototype of a common platform that could be established to enable cross-border payment settlement using multiple CBDCs (mCBDCs). Project Dunbar proved that financial institutions could use CBDCs issued by participating central banks to transact directly with each other digitally on a shared platform, to reduce cost and increase the speed of processing of cross-border transactions.

- Project Khokha 1: In 2018 the SARB completed Project Khokha 1, which was a proof-of-concept project designed to simulate a 'real world' trial of a distributed ledger technology (DLT)-based wholesale payment system. The project focused on providing participants with practical experience on aspects of using DLT in a realistic test environment where different deployment models were utilised. The findings indicated that the typical daily volume of the SA payment settlement system could be processed and settled in less than two hours with full confidentiality of transactions and settlement finality.

- Project Khokha 2: Project Khokha 2 was undertaken in 2022, with the objective of unpacking the use of DLT and tokenisation in the financial markets through a different use case, that is, the issuance of a SARB debenture on DLT. Innovative technologies such as DLT allow securities to be issued in tokenised form (i.e. as a digital representation value recorded on a single shared ledger, reducing inefficiencies stemming from the current market design built around several centralised infrastructures). The payment for the trading of these securities would also be effected using tokenised money.

- Project Khokha 2x: The SARB is currently embarking on Project Khokha 2x, which will focus on wholesale CBDCs and stablecoins. The wholesale CBDCs could be used for settlements and collateral. The stablecoin use case will focus on commercial bank-issued stablecoins for transferring value within the African region.

13 Genesis Analytics, 'Fintech scoping in South Africa', October 2019. http://www.treasury.gov.za/comm_media/press/2020/WB081_Fintech%20Scoping%20in%20SA_20191127_final%20(002).pdf

4

OBSTACLES AND CHALLENGES TO ACHIEVING INCLUSIVE, ACCESSIBLE, EFFECTIVE AND SUSTAINABLE DIGITAL PAYMENTS IN SOUTH AFRICA

Despite the prevalence of various digital retail payments and high levels of financial inclusion in SA, a significant majority of the population still lives and works largely on a cash basis, in a country where inequality is among the highest in the world. Key challenges and obstacles to achieving inclusive, accessible, effective and sustainable digital payments in SA are as follows:

Low bank account usage

As previously stated, SA has a high level of inclusion, with 96% of the adult population formally included. The financial sector, particularly the banking sector, is well developed, with 82% of the adult population having access to a bank account. However, the frequent use of bank accounts in SA is low, with over 70% of the banked population only using their bank account at least once a month, according to FinScope, and only 19% using their bank account weekly. Cash-use preference (28%) and not having enough money (50%) are the main reasons for not using bank accounts, while 6% of the banked stated that using their account/card is too expensive, 6% said they avoid debit/stop orders, 2% said they do not trust their banks, and only 0.1% said the places they shop do not accept card payments.

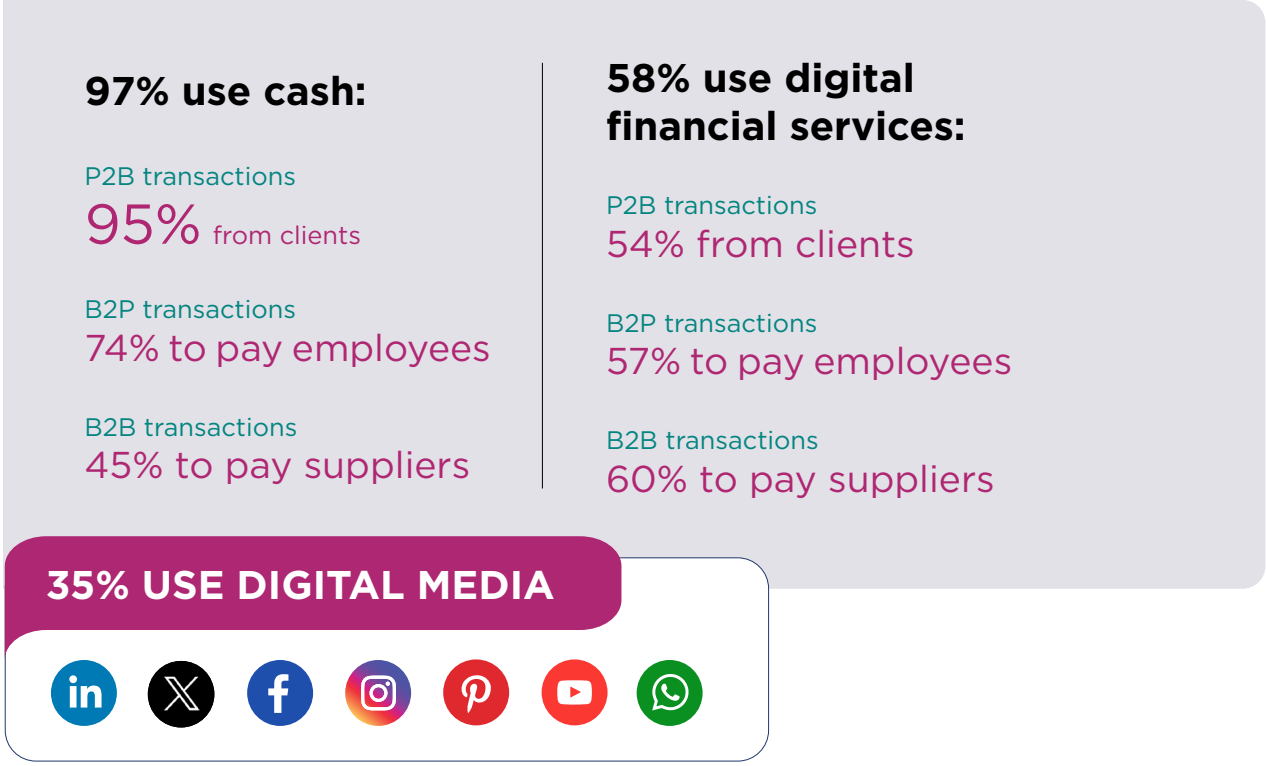
Almost half (48%) of the adult population in SA withdraw all their money as soon as it is deposited into their bank account. Reasons for immediate cash withdrawal include cash usage preference (38%), the immediate need for all the money received (50%), the account/card being expensive (7%), a lack of trust in banks (5%), and a lack of card/account acceptance by merchants (2%). Of the total banked adult population, 34% are mailbox users (i.e. use their bank accounts mainly for the immediate withdrawal of their money), of which 39% fall within the LSM 5-6 market segments. This indicates that broader socio-economic and societal challenges are driving the low usage of bank accounts, which in turn is decreasing the use of digital payments in SA.

.

High cash usage

Despite the accessibility and availability of digital retail payments, cash usage by lower and medium LSM market segment consumers as well as businesses, particularly MSMEs, remains relatively high. According to the results of the FinMark Trust Community Digitalisation research conducted in 2022,[14] cash usage in SA is high, even by those who receive their incomes electronically, as they immediately withdraw their cash to use in spaza shops and at merchants/vendors that do not accept digital payments. Most township businesses are informal, unbanked and cash-based, with only 35% of township enterprises having formal registration in 2020. MSMEs still effect payments using cash and are also paid in cash (especially in the remittances space). The 2.6 million MSMEs in SA, with an estimated turnover of R3.1 trillion per annum, employ almost 13 million employees, of which 74% of the full-time employees in the MSME sector are paid in cash, while 95% of the MSME customers pay using cash and only 35% use digital media, as indicated in Figure 3 below.

Figure 3: MSMEs: use of cash, digital payments and digital usage



Source: FinScope MSME South Africa Survey 2020

14 https://finmark.org.za/Publications/Community_Digitalisation_Pocket_Guide.pdf

According to FinScope, a total of 98% of adults in SA spend money on food and groceries; only 34% of adults pay for food and groceries using bank cards, 2% with banking applications (apps) and 0.2% with QR codes. Of the 29% of adults that have sent money to someone who does not reside with them within SA borders, 3% have used an ATM, 4% have used Internet banking EFT transfers, and 5% have used e-money such as e-wallet, cash send or send-imali. A total of 88% of adults use cash to buy food and groceries, despite the higher level of access to bank accounts. Many of the current remittance products involve cash-in and cash-out elements, with 4.2 million adults in SA having sent money in the past year using Shoprite Money Market, which includes a cash-in and cash-out facility.

Experiences from the global payment community indicate that high cash usage is associated with simplicity, reliability, convenience, widespread accessibility, low cost, and trust and privacy (due to anonymity). Cash users perceive digital payments as lacking the unique characteristics of cash, thereby falling short of being the ideal substitutes for cash. These include cash as an enabler of minor transactions in lower LSM market segments, better financial control and management, continuous availability (no technical failures) of cash, minimal costs for users (no hidden costs), and no access to the Internet (data or Wi-Fi) required for cash. As a result, the adoption and usage of digital payments remain lower than that of cash.

Costs

Transactional fees: Digital payments attract transactional fees and many consumers perceive these costs to be high, sporadic, unjustified and lacking transparency. These include, among other things, monthly account maintenance or service fees, credit transfer fees, ATM fees, debit order fees, fees related to payment to another party, statement fees, and unstructured supplementary service data (USSD) fees. Some of these costs are perceived to be hidden and too high, leading to mistrust in digital payments and deterring consumers – particularly low-income earners (those in the lower LSM market segments) and social grant recipients – from using digital payment methods, including bank accounts.

Merchant service fees: High merchant service fees contribute to the low adoption and use of digital payments by merchants. Merchant service fees, costs of digital payments (e.g. credit and debit cards) and payment acceptance devices (e.g. POS devices) significantly reduce merchants' usage of digital payments. Interchange fees form part of the merchant service fee that acquirers impose on merchants for accepting card payments. In SA, card interchange fees range between 0.36% and 2.45%, depending on the type of transaction and the type of card used, with merchant card processing fees ranging between 1.5% and 3.5%.[15] High interchange and merchant card processing fees deter smaller merchants from accepting digital payments, as these fees negatively impact profitability.

15 https://www.resbank.co.za/content/dam/sarb/what-we-do/payments-and-settlements/regulation-oversight-and-supervision/ATM%20and%20Card%20Interchange%20rates%20as%20at%2012%20June%202021.pdf

Internet/network/data connectivity costs: Most digital payments cannot be facilitated without affordable Internet connectivity through mobile data or Wi-Fi. According to the Competition Commission's Data Services Market Inquiry final report (published on 2 December 2019), SA ranks among the more expensive countries for prepaid data prices, with a monthly data service provided to the poor being inexplicably more expensive per megabyte than to the wealthy.[16] In 2022, South Africans paid up to R85 (US$5) per gigabyte of data compared to US$1.53 per gigabyte in North Africa and US$2.24 in Western Europe.

High data/Wi-Fi services costs disincentivise the frequent and effective use of digital payments. This is more pronounced within low-income groups or disadvantaged communities (lower LSM segments). In some instances, free banking apps are not necessarily free as updates to the latest security features or functionalities require regular updates, and data/Wi-Fi availability is not always affordable. Digital transacting may also not be possible without using the latest version of the app.

Regulatory compliance costs: There are growing concerns that the cost of stringent Know Your Customer (KYC) regulations and ongoing customer due diligence checks – including broader anti-money laundering, countering the financing of terrorism and countering proliferation regulations - increase transactional and compliance costs. Higher compliance costs create barriers to entry for new entrants in the NPS, overburden the existing payment institutions, and limit the provision of new innovative digital payment solutions and competition in the NPS.

Infrastructure

Internet (data and Wi-Fi) access and usage in SA

Limited access to, and usage of, technology in SA can also be a barrier to the adoption and usage of digital payments. Areas with poor Internet connectivity or limited access to smartphones and computers may not be able to fully utilise digital payment methods. According to FinScope, 66% of households in SA have access to the Internet at home, up from 55% in 2021.

Data analysed by the Independent Communications Authority of South Africa (ICASA) indicates a wider digital divide, showing that access to Internet at home for South Africans in the big metros is around 17% of households, while in the rural areas it is 1%.[17] The digital divide was attributed to a lack of affordability and a lack of or poor infrastructure (including wireless network infrastructure) for broadband Internet connectivity in the rural areas.

ICASA also highlighted the usage gap where individuals who are covered by a signal (2G, 3G or 4G) do not use mobile or Internet access due to a lack of affordability, a lack of necessary skills or a lack of relevant or useful content. In addition, the gender divide also indicates that women are less likely to have access to, or make use of, mobile or Internet services. According to FinScope, of the households with Internet access, 75% claim to connect via a mobile phone while only 8% connect through a computer (2%) or laptop/tablet (6%).

16 https://www.compcom.co.za/wp-content/uploads/2019/12/DSMI-Non-Confidential-Report-002.pdf

17 ICASA, 'A step closer to achieving a connected South Africa where no one is left behind', 2023. https://www.icasa.org.za/news/2023/a-step-closer-to-achieving-a-connected-south-africa-where-no-one-is-left-behind

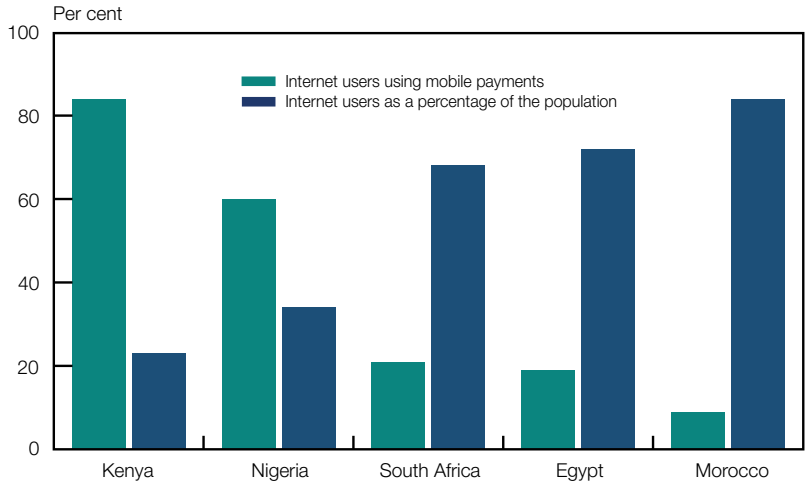
Another major challenge facing digital payments relates to the under-usage of the Internet for payment purposes by those with Internet access. According to FinScope, only 11% of adult South Africans with access to the Internet use the Internet for financial services, including using Internet banking, a banking app or insurance app, and only 6% use the Internet for online shopping. Although 57% of the adult population use WhatsApp, 20% indicated that although they are aware of WhatsApp payments, only 4% have used the WhatsApp payments option. Without the necessary Internet and mobile infrastructure, affordable Internet costs as well as access and usage in the underserved and urbanised communities will result in the adoption and usage of digital financial services, particularly digital payments requiring digital connectivity, remaining low.

Mobile access and mobile payments

FinScope[18] indicates that 98% of SA households have at least one mobile phone. Smartphone usage among adults increased from 59% in 2021 to 66% in 2022, feature phone usage decreased from 4% to 3%, and basic phone usage decreased from 30% to 28%. According to the 2021 Statista Global Consumer Survey,[19] access to the Internet by 68% of South Africans provides a favourable opportunity to increase the digitisation of payments through mobile payments.

However, the use of mobile payments remains relatively low at 21% when compared with other African countries such as Kenya (84%) and Nigeria (60%) – see Figure 4 below. Interestingly, countries with low levels of Internet users show high levels of mobile payments usage. The high mobile payments adoption in Kenya and Nigeria is in tandem with the prevalence of mobile money in those countries, with mobile money account ownership reported at just over 90% and 22% of the adult population in Kenya and Nigeria respectively[20]

Figure 4: Internet and mobile money usage in selected African countries



Sources: Statista Global Consumer Survey and World Bank

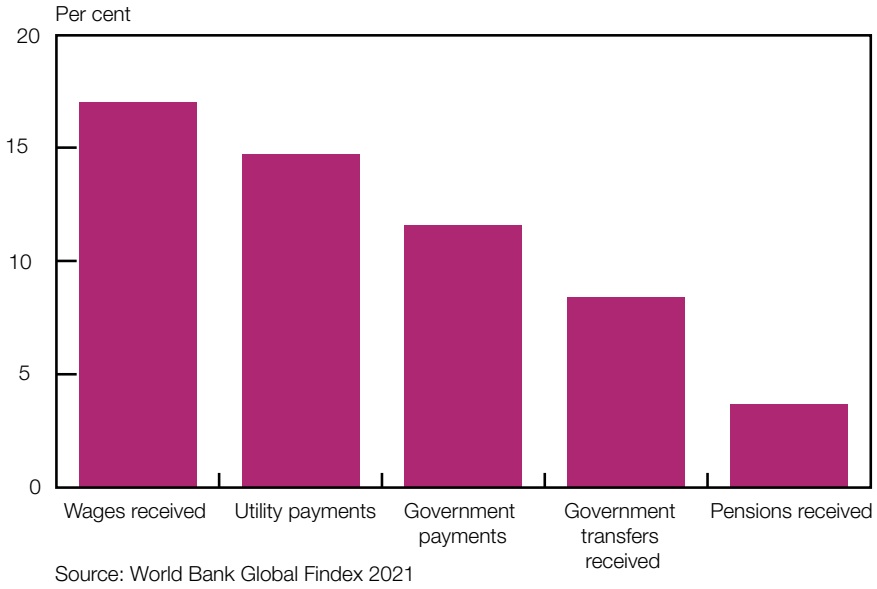
18 A total of 5 604 adults were surveyed.

19 https://www.statista.com/chart/27017/mobile-payment-in-africa/.

20 Global System for Mobile Communications Association, 'State of the Industry Report on Mobile Money', 2023. https://www.gsma.com/mobilefordevelopment/resources/state-of-the0-industry-report-on-mobile-money-2023-2/

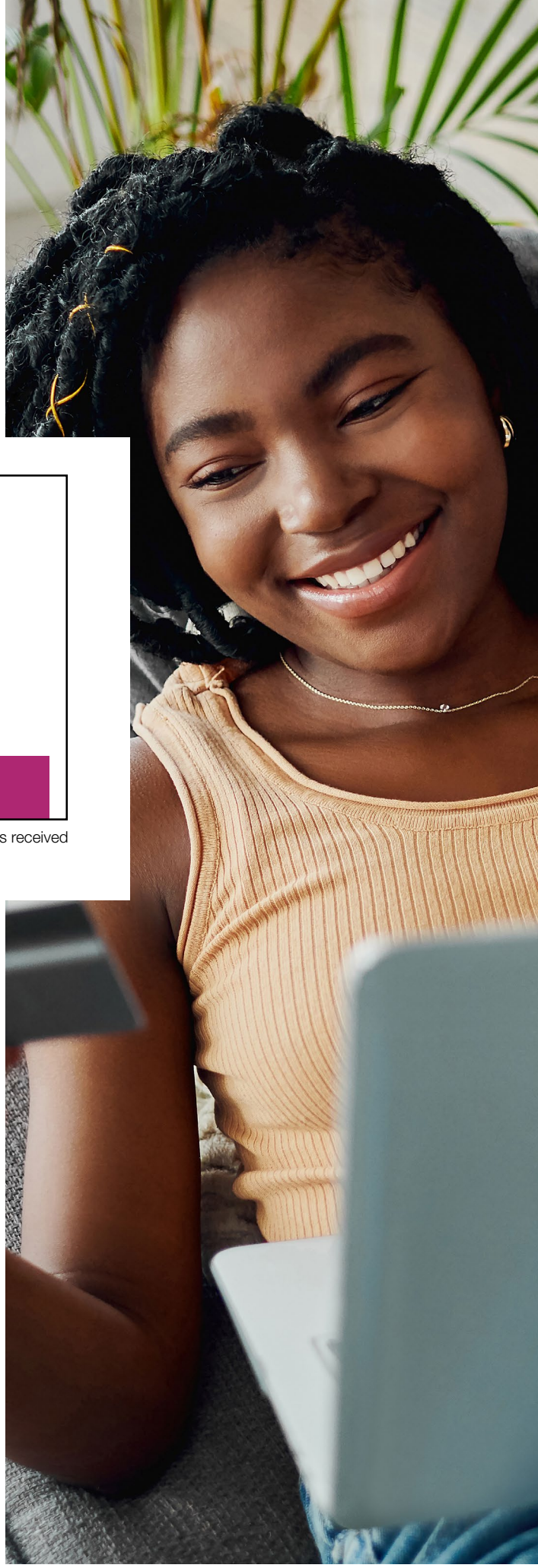
According to the 2021 World Bank Global Findex,[21] 17% of respondents in SA indicated that they have received wages through mobile payments. This was probably driven by the widespread adoption and usage of electronic wallets offered by banks in SA. These electronic wallets allow instant availability of funds through mobile phones and cash withdrawals at ATMs. Other payments made using mobile phones include utility payments (15%), government payments (12%), receiving government transfers (8%) and public sector pensions (4%).

Figure 5: Mobile payment use cases in South Africa



Source: World Bank Global Findex 2021

Although most South Africans have access to smartphones, the low prevalence of mobile money, coupled with high Internet costs and poor Internet connectivity, have a significant impact on the growth of mobile payments usage in SA, thereby limiting the adoption and use of digital payments in SA.

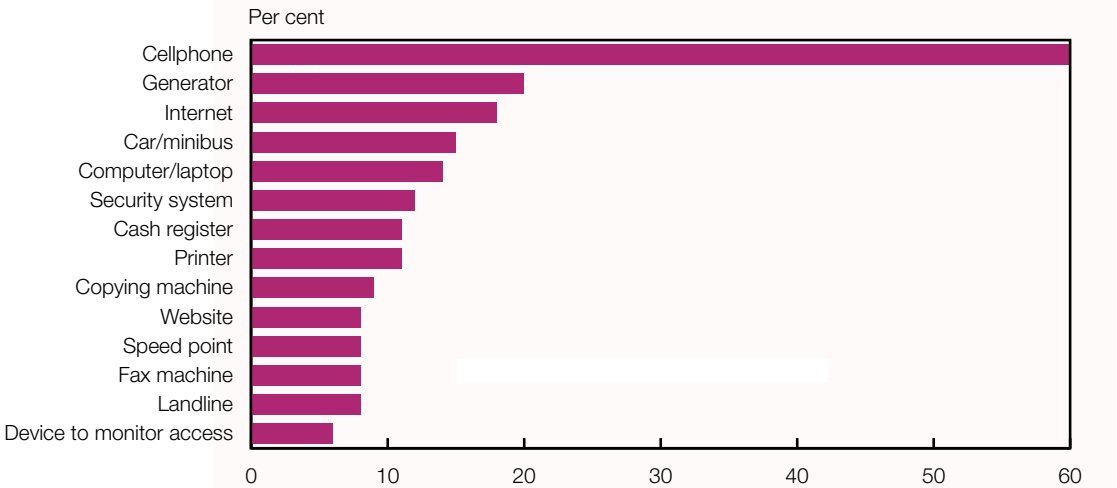


21 https://www.worldbank.org/en/publication/globalfindex

Acquiring infrastructure

The lack or inconsistent availability of acquiring infrastructure (e.g. POS, QR codes or alternatives) contributes to the slow adoption and use of digital payments. As depicted in Figure 6, only 8% of MSMEs use speed point (POS) devices, which limits consumer usage of digital payments (e.g. cards), as over 90% of merchants do not use POS devices. This is typically experienced when consumers wish to pay for food, electricity, airtime/data and transport at informal merchants (e.g. spaza shops, street vendors, taxis and other businesses) in townships, informal settlements and rural areas.

Figure 6: Facilities utilised by businesses



Source: FinScope South Africa MSME Survey 2020

Persistent electricity cuts

SA has been experiencing persistent electricity supply cuts, which affect Internet access and the stability of telecommunications network coverage in certain areas. These frequent power outages disrupt the continued and seamless provision and processing of digital payments in the NPS, particularly where backup systems may not be functional or are unavailable. This means that consumer and business payments could be severely impacted.

In the SARB's *Financial Stability Review*, second edition of 2023, the SARB signalled that rolling power cuts may pose a threat to the country's financial stability, stating that "[i]nsufficient and unreliable electricity supply is likely to threaten the viability of some corporates, especially small and medium-sized enterprises, for the foreseeable future, with losses potentially spilling over into the financial sector". Continuous power cuts will lead to challenges in recharging batteries for ATMs and Telco network towers, both of which are critical to the financial system.

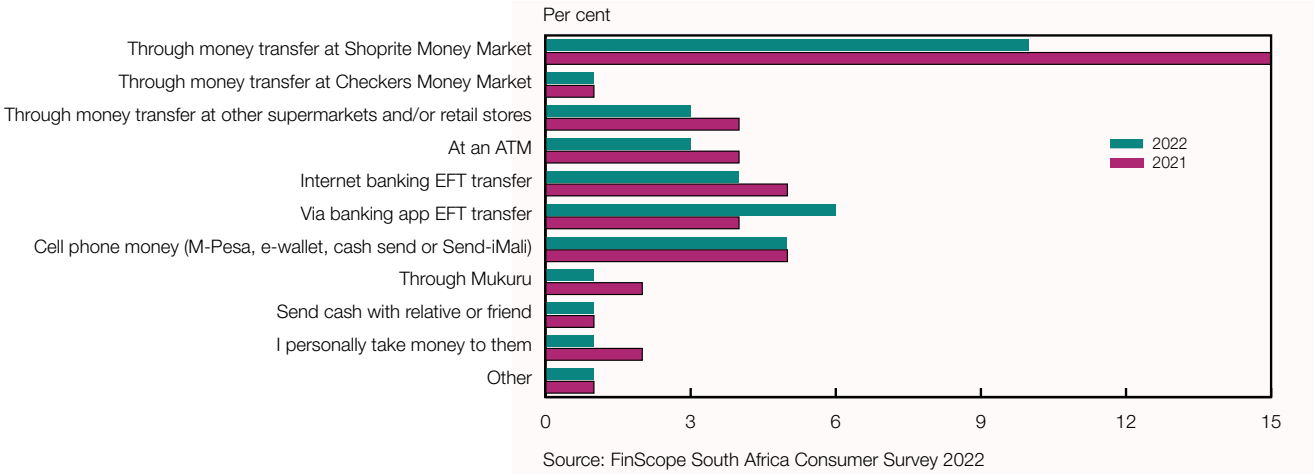
Legacy systems

Some incumbents, including government departments and banks, are still operating legacy systems to effect payments or provide digital payment services, and therefore transitioning to more modernised payment systems may pose complexities and high cost-related challenges. As a result, these incumbents may be reluctant or lack the capacity to innovate, resulting in less than desirable adoptions when using digital payments to meet consumer or beneficiary needs.

Lack of interoperability

Traditional and new payment service providers (PSPs) also offer innovative closed-loop digital payments which are not interoperable. A typical example is the provision of digital/electronic wallets and remittance products. Non-interoperable closed-loop systems lead to a fragmented payment ecosystem, limit customer choice, and hinder the effective adoption and use of digital payments. Consumers in the closed loop may only transact (make or receive payments) using a specific PSP's instruments, infrastructure, premises or agents, thereby limiting the use and ubiquity of innovative digital payment products. Figure 7 depicts the available remittance channels that are not interoperable.

Figure 7: Channels of sending money



Limited access points

Access points are crucial in extending the reach of digital payments to consumers and businesses. There are limited access points, including agency models (e.g. where a bank or large retailer partners with a small merchant to provide remittance services), for digital payments in the underserved communities. The recent closure of bank branches and a decrease in the number of POS terminals from about 425 000 in 2020 to approximately 423 000 in 2021 has also contributed to fewer access points being available to consumers. Although spaza shops and street vendors are prevalent in the underserved communities and could potentially be used as access points for digital payments, most of these merchants do not have access to digital payment devices/methods, and some cannot afford to use digital payment devices/methods.

Financial and digital illiteracy

The 2019 Deloitte Africa research, which included interviews with 34 payment experts from 22 different institutions within SA, cited low levels of financial literacy as one of the key inhibitors to digitising the informal economy.[22] The use of digital payment tools and platforms is associated with higher digital literacy. The rapid technological advancements, increasing complexity and opaqueness of digital payments, a lack of bespoke digital payments literacy programmes – particularly targeted at women, the youth and MSMEs – and high cash usage significantly contribute to the lack of awareness and the lack of or poor understanding of the prevalence, opportunities, benefits and risks of digital payments as well as the low usage of digital payments.

For example, most consumers are not aware that ATMs and banking apps may be used to make bill payments, and if utilised, would result in them not having to pay for transportation/travelling costs and stand in queues to make in-store cash payments. Further, those who are less acquainted with digital infrastructure and technologies are less likely to adopt and use digital payments, even where digital infrastructure exists and is accessible.

Government payments

Most SASSA recipients, including those who receive their grants via SASSA or bank accounts, immediately withdraw all the money from their account from either the Post Office, ATMs or retailers. The one-off use of these accounts, mainly for the immediate withdrawal of the money, indicates the use of the accounts as 'mailboxes' and deters the use of these accounts for digital payments.

A poor or weak government payment infrastructure, technical glitches, cyber-risks and fraud - such as those experienced by SASSA in 2022 that led to the suspension of the withdrawal of funds at ATMs using Postbank-issued SASSA gold cards as well as the temporary use of retailers, and prevented SASSA recipients from accessing their grant payments - lower recipients' confidence and trust in digital payments. The recent panic caused by the expiry of SASSA gold cards further exacerbated the negative sentiments over digital payments.

22 https://www.deloitte.com/content/dam/Deloitte/za/Documents/risk/za-The-future-of-payments-in-South-Africa%20.pdf

Security concerns

Individuals are hesitant to use digital payments due to a fear of fraud, identity theft and loss of money. Cyber-risks and data privacy issues deter the adoption and use of digital payments.

Regulatory framework

The current regulatory framework restricts the provision of payment systems/services involving the pooling of funds such as mobile money, e-money and remittances to banks. Non-banks that wish to provide these payment systems/services are required to partner with banks in terms of the Banks Act 94 of 1990 and must be designated for participation in clearing and bank-sponsored in settlement in accordance with the National Payment System Act 78 of 1998 (NPS Act). As a result, competition in the NPS remains low due to the bank model dominating the NPS; offering alternative digital payments by non-banks is disincentivised; consumers and businesses have limited choice; and the costs of digital payments remain restrictively high.

5

TOWARDS INCLUSIVE, ACCESSIBLE, EFFECTIVE AND SUSTAINABLE DIGITAL PAYMENTS

The financially and digitally literate, educated and skilled user of payments

Financial and digital payments literacy and awareness are important to address digital and financial illiteracy, boost the adoption and use of digital payments, deepen financial inclusion and reduce inequality in SA. Consumers, government entities and businesses must have the knowledge and competence to use or facilitate digital payments and leverage infrastructure such as the Internet, mobile phones and applications, as well as have the skills and understanding of the operations of digital payments and the associated benefits, opportunities and risks.

Digital payments education, training and awareness programmes should be developed by the public and private sector. The strategy and programmes should be demographically inclusive of women, the disabled, rural communities, the poor, the youth and urbanised workers, and include spaza shops, stokvels, community centres, libraries, schools, hospitals, SASSA beneficiaries and cash-intensive economic sectors, such as transport and agriculture, through mediums such as face-to-face workshops, television, radio, websites and social media platforms.

A payments training institute should also be considered to build payment skills and capacity. The training and educational programmes should align with the National Consumer Financial Education Strategy[23] and be coordinated through the National Consumer Financial Education Committee.[24] The table on the next page depicts the actions that were identified in this regard.

23 https://www.fscamymoney.co.za/Legislation%20Strategy%20and%20Policy/National%20consumer%20financial%20education%20strategy%20(23%20Aug%2020.pdf An updated strategy is being developed; this process is led by National Treasury.

24 The National Consumer Financial Education Committee was established to secure active involvement, collaboration and coordination of various stakeholders in consumer financial education and is chaired by National Treasury. https://www.treasury.gov.za/comm_media/press/2022/2022081901%20MEDIA%20RELEASE%20-%20MSWSA%20LAUNCH.pdf

Action 1	Timeline	Stakeholders
a. Develop and implement digital payments literacy or an educational and awareness strategy and programmes targeted at consumers (including the youth, women and SASSA grant beneficiaries), government and businesses (including MSMEs) and disabled persons.	6 months	• SARB, in collaboration with National Treasury and the FSCA
b. Conduct provincial roadshows to educate the selected groups on digital payments and engage in activities led by the National Consumer Financial Education Committee.	6 months and ongoing	• SARB
c. Enhance digital infrastructure awareness/skills.	6 months and ongoing	• Communications authorities • Internet (data and Wi-Fi) providers • Mobile network operators (MNOs)
d. Integrate and include digital payments in the school curriculum and curriculum for institutions of higher learning.	2 years	• Department of Education • Universities and colleges • Public and private schools
e. Facilitate the establishment of the payments training institute.	2 years	• SARB • PASA • Payment industry

The accessible, reliable, cost-effective, resilient and modernised infrastructure

Internet and mobile network/infrastructure

Fast, safe, secure, affordable, stable, reliable and expanded network coverage, and free or affordable Internet (data and Wi-Fi) is necessary to boost the availability, ubiquity, accessibility, affordability, resilience and usability of digital payments. Mobile phones, computers, and mobile and Internet broadband coverage should be extended to the rural areas and other underserved communities to expand the accessibility of digital connectivity. Public-private partnerships should be established to lower the costs of Internet access, including financing options, promotions or government subsidies to make Internet access more affordable for different user segments.

Mobile broadband/Internet coverage should be provided by MNOs at a low cost to the underserved communities, government premises, community centres, libraries, schools, hospitals, SASSA pay points and cash-intensive economic centres, to support access and usage of digital payments, and to address digital inequality/the digital divide. Low-cost digital payment services should also be provided to increase the usage of the Internet and mobiles for digital payments. Currently, WhatsApp and Facebook are the top use cases for Internet in SA.

Digital payment applications/platforms and websites should also be discounted or be accessible free of charge, and the Internet should be freely accessible at payment services providers' business premises. This will benefit MSMEs that use QR codes to effect digital payments.

National, provincial and local government, digital payment providers, and network and Internet mobile data providers must all contribute to the provision of free Internet/Wi-Fi to needy community segments, to create an enabling environment for the adoption and use of digital payments. Digital payments literacy and skills should complement an accessible and affordable digital payments infrastructure.

Action 2	Timeline	Stakeholders
a. Provide stable, reliable Internet and mobile network coverage to the rural areas, underserved communities, MSMEs (including spaza shops), townships, churches, schools, hospitals, SASSA pay points and cash-intensive sectors, particularly the agricultural (farms) and transport sectors.	1–2 years	• National (Minister of Communications and Digital Technologies), provincial (Gauteng Provincial Government) and local government • Department of Social Development • National Treasury • SASSA • ICASA • School governing bodies • MNOs • MSMEs • PSPs and participants
b. Provide affordable (low-cost) or free Internet (data or Wi-Fi) access to the underserved and/or disadvantaged communities (including rural areas), MSMEs, the youth, schools, townships, churches, hospitals, SASSA pay points and cash-intensive sectors, particularly the agricultural and transport sectors.	1 year	
c. Provide free Internet in the business premises of the payment services providers or MSMEs and/or zero-rated payment applications (apps) and websites.	6 months	

Load-shedding/electricity outages

Uninterrupted electricity supply is critical for the smooth functioning of digital payment systems and infrastructure, and for the delivery of digital payments. Government should implement sustainable measures to address the electricity supply crisis in SA. For digital payments to flourish, certain selected areas and business premises should be exempted from load-shedding or enjoy shorter load-shedding schedules. Further, alternative sources of energy and off-grid solutions such as solar, generators, battery-operated payment devices and energy-efficient technologies should be considered to expand access to electricity and ensure the continued use of digital payments during outages.

Action 3	Timeline	Stakeholders
a. Leverage alternative sources of energy such as solar, generators, uninterruptible power supplies (UPSs), invertors and power banks.	1 year	• Government • Payment industry • Businesses (including MSMEs)
b. Provide/obtain battery-operated payment devices for MSMEs, particularly in the rural areas and townships.		• Government • MSMEs • PSPs
c. Provide funding and access to credit to MSMEs to procure alternative sources of energy.		• Government, including the Department of Small Business Development • Credit providers

Offline payments

An offline digital payment is a transaction that does not require Internet or telecommunications network connectivity. The Reserve Bank of India (RBI) recently released a framework to enable offline payments. The RBI's framework applies to small payments made face-to-face using payment instruments such as cards, e-wallets and mobile devices. Offline payments should be enabled by implementing a reasonable limit for contactless and QR code transactions. Enabling digital payments for low-value payments in an offline mode, with an appropriate risk management framework and practices, can significantly boost digital payments, particularly in rural areas and during telecommunications network or electricity outages.

Action 4	Timeline	Stakeholders
a. Enable offline payments functionality for low-value payments.	1 year	• SARB • PASA • PSPs/participants and acquirers

Access points, distribution channels and networks

Access points, distribution channels and networks are crucial for the accessibility of digital payments in SA and should be extended to the disabled, undeserved and disadvantaged communities. While bank branches and ATMs are still utilised to access cash by the communities that are digitally excluded and cash-reliant, digital payment offerings should be enabled and expanded within branches and at ATMs. Affordable merchant acceptance devices (e.g. POS devices) should also be extended to MSMEs, particularly spaza shops and smaller merchants. Furthermore, the expansion of the digital payment services distribution network (e.g. remittances, mobile money and e-money) through agency models utilising merchants, retailers and services offered by fintechs will further enhance the reach to as many consumers as possible.

Action 5	Timeline	Stakeholders
a. A payment services distribution network (agency model) should be enabled and expanded.	1 year	• Minister of Finance • PSPs and participants • MNOs • Retailers, fintechs and other merchants • Department of Women, Youth and Persons with Disabilities
b. Digital mobile branches (bank on wheels), ATMs and fintech innovations should be maintained and/or extended to underserved areas and communities.		
c. Disabled persons should be accommodated to access standalone access points independently and safely. Thus, devices/access points such as ATMs and POS devices must have an option for disability features which includes headsets and fingerprint authentication, and biometric card authentication.		

Interoperability and digitisation of remittances, mobile money and e-money

Existing non-interoperable remittance products and services, mobile money and e-money should transition to interoperable offerings to reduce the fragmentation of payment systems, provide customer choice and promote the speed, ubiquity and cost-effectiveness of digital payments. A customer of one remittance provider, e-money provider or mobile money provider should be able to transact with customers of other providers, using the services and products that integrate with those of other providers.

Non-banks (including fintech companies) should be allowed to provide remittances, mobile money and e-money services without the requirement to partner with banks. These services should be digitised (first, middle and last mile) to limit cash-in and cash-out services. An enabling regulatory framework that allows non-banks to provide payment services directly and independently, and which is interoperable, is necessary to promote competition and financial inclusion, and should drive the adoption and use of digital payments.

Action 6	Timeline	Stakeholders
a. Enable and facilitate the interoperability between the current closed-loop store of value/wallets, mobile money/ e-money and remittances (i.e. retailer, mobile and bank wallet services and remittances) and the interoperability of wallets with bank accounts.	1–2 years	• SARB • MNOs • E-money and mobile money providers • PSPs and participants • Payment clearing house system operators

Alternative merchant payment options

The SA card market is dominated by international card schemes such as Visa and Mastercard. There is a need to enable competition in this area to meet the needs and demands of the SA market. Alternative offerings to Mastercard and Visa or that which would serve as alternatives to current card offerings should be explored and promoted to address the evolving needs of the SA market. These services should offer affordable, integrated and interoperable solutions that PSPs and the government could leverage to serve consumers for various services, such as transportation payment options, cost-effective micro-payments, and public utilities purchases such as electricity.

Action 7	Timeline	Stakeholders
a. Engage stakeholders on the exploration of alternative merchant payment options (e.g. PayShap).	2 years	• SARB • Minister of Finance/National Treasury • Department of Social Development • The Presidency • SASSA • PSPs • Payment clearing house system operators and participants

Secure, identified and authenticated digital payments

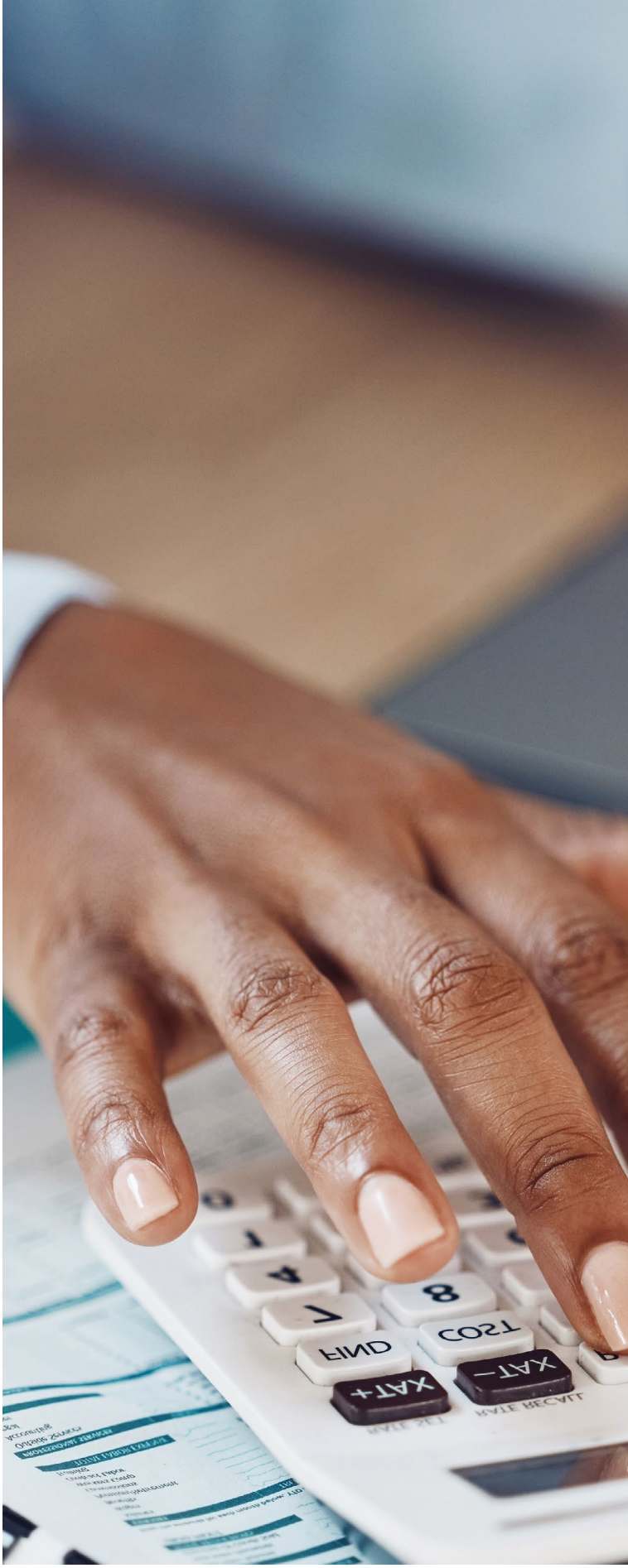
Digital identity

Digital identity refers to a set of electronically captured and stored attributes (e.g. biometrics) and/or credentials that uniquely identify a person or an entity. The benefits of digital identity to the NPS include increased access, financial inclusion, payment security (fraud reduction), remote onboarding, and the reduction of manual errors and compliance costs. Digital identity has cross-sectoral use cases, and its development and implementation is dependent on multiple stakeholders, including government, regulators, the private sector and consumers. Digital identity facilitates the consumption of digitised payment services and may be useful to safely and efficiently identify and authenticate parties in a digital payment transaction, thereby lowering compliance costs for PSPs and, in turn, enhancing the adoption and use of digital payments.

Although not the leading authority in relation to identification in SA, the SARB, as a catalyst in the NPS, is facilitating the assessment of the feasibility and desirability of establishing a digital financial identity system to promote the security and efficiency of digital payments. A consultation paper has been developed to engage stakeholders on the drivers of digital identity, policy objectives, possible use cases of digital identification in the NPS, the governance structure/framework, the benefits and risks, and the stakeholders involved. The success of a sustainable digital financial identity system would depend on the collective effort and support of government, policymakers, industry and other relevant stakeholders.

Authentication

As payments become increasingly digitised, a two-factor authentication for digital payments, similar to the one adopted in the Netherlands,[25] should be considered and possibly adopted to maintain the integrity and security of digital payments. A two-factor authentication requires (i) something you know (e.g. password/personal identification number (PIN); (ii) something you have (e.g. cryptographic identification device or token); or (iii) something you are (e.g. biometrics). However, a two-factor authentication requirement may not apply to low-risk small transactions (e.g. transactions less than R500) or recurring/debit order payments. The SARB is therefore considering the development of a security framework that also addresses multi-factor authentication, to increase the integrity and security of digital payments. Secure digital payments will increase trust and confidence in digital payments, thereby enhancing the adoption and use of digital payments.



25 https://www.dnb.nl/en/sector-news/2021/the-introduction-of-two-factor-authentication-for-home-shopping-credit-card-purchases-was-completed-this-spring/

Electronic Know Your Customer

A centralised Electronic Know Your Customer (E-KYC) registry has gained prominence in identifying and verifying parties at onboarding. PSPs may use open APIs to develop automated KYC, reducing personnel costs to shift onboarding from a manual intervention to the automated monitoring of workflows. Compliance failure and errors can be reduced as API technology improves reporting and record keeping, and eradicates manual paperwork. E-KYC will promote the standardisation of information requests, improve customer convenience and reduce compliance costs, thus making digital payments more attractive.

Cybersecurity and consumer protection

Cybersecurity and cyber-resilience measures should be imposed on participants/PSPs to ensure early detection and a response to cyber-threats, and to protect against phishing schemes, ransomware attacks, fraud, identity theft, data breaches and financial losses. The legal and regulatory consumer protection framework for consumers in the NPS should be implemented and compliance with the Protection of Personal Information Act 4 of 2013 should be enhanced. These will promote the safety and integrity of digital payments and increase consumer trust and confidence in digital payments, thereby enhancing the adoption and use of digital payments.

Action 8	Timeline	Stakeholders
a. Facilitate public-private sector collaboration to develop and deliver digital financial identify solutions in SA.	2 years	• SARB • Private sector • Government
b. Mandate multi-factor authentication for digital payments.	1 year	• SARB • Payment industry • Government
c. Facilitate the establishment of an E-KYC registry.	2 years	• SARB • Private sector • Government
d. Implement cybersecurity and cyber-resilience measures to protect digital payment systems and consumer data.	2 years	• SARB • Payment industry
e. Implement consumer protection measures (Treating Customers Fairly Principles and Conduct of Financial Institutions Bill).	6 months	• FSCA • Payment industry

Promotion of digitised payments in cash-intensive economic sectors

MSMEs (spaza shops and cooperatives)

As already stated, businesses, particularly MSMEs, are still heavily cash-reliant or cash-dominated; lack or do not use digital infrastructure, including digital payment acceptance devices; and pay their respective employees and suppliers in cash. Digitisation programmes should be adopted by MSMEs, including the digitisation of internal operations, upskilling and raising workforce awareness of digital methods, and leveraging fintechs and the introduction of new technologies. Further, alternative and affordable acceptance devices and digital payments such as e-money, mobile money and the request-to-pay feature should be availed to smaller merchants to counter processing fees. Government and/or public-private partnerships and support as well as access to finance are required to accelerate the digitisation of MSMEs. Increased digital proficiency of MSMEs will accelerate the adoption and use of digital payments by MSMEs.

Action 9	Timeline	Stakeholders
a. Provide public-private partnerships and support (including financial support) and digital and financial literacy to accelerate access to technology and the digitisation of MSMEs.	6 months	• Participant acquirers • Provincial government
b. Provide alternative affordable digital payment methods to card payments (e.g. mobile money, e-money) and acceptance devices to MSMEs.	1 year and ongoing	• PSPs • Acquirers • Fintechs

Agricultural sector

There are approximately 32 000 commercial farmers in SA, of which between 5 000 and 7 000 produce approximately 80% of the country's agricultural output.[26] Agricultural sector payments, which are mainly cash-based, include farm workers' salaries, payments for the transportation and selling of produce, and the purchasing of seeds, fertiliser and other related supplies. Payments in the agricultural sector should be digitised throughout the entire agricultural value chain to make them efficient and cost-effective and to minimise risks. Payments could be effected through PayShap's faster payments proxy and request-to-pay feature, or through mobile money and e-money.

Action 10	Timeline	Stakeholders
a. Facilitate the digitisation of payments such as farm workers' salaries, payments for the transportation and selling of produce, and the purchasing of seeds, fertiliser and other related supplies in the agricultural sector.	2 years	• Government • Farmers • PSPs

Transport

The taxi industry is a major provider of the mode of transportation in townships, rural areas and other disadvantaged communities. The taxi industry is a cash-intensive business, which lacks adequate formal accounting, record keeping, audits and taxation.[27] Although some taxi commuters may have access to digital payments, they are unable to transact digitally due to the lack of a digital payments acquiring infrastructure deployed by the taxi industry.

The digitisation of taxi industry payments would bring efficiencies for the commuters and enhance the use of digital payments such as tap and go (contactless cards), QR codes or mobile payments in taxis. In addition, taxi owners would have enhanced tracking and management of the financial aspects of their business. Financial inclusion would also be supported, as payments will be effected via digital payment methods. Taxis undertaking long distance trips could be prioritised for digitisation as payments are processed upfront for a one-off trip to a specific destination. Short distance trips could leverage the tap-and-go options for taxi operators who are keen on digitising taxi fare payments.

Action 11	Timeline	Stakeholders
a. Facilitate the digitisation of short and long distance taxi payments, such as the use of QR codes, contactless card payments, pay by proxy and request-to-pay.	1 year	• Government (National Treasury, Minister of Transport) • Taxi associations and PSPs

26 https://www.trade.gov/country-commercial-guides/south-africa-agricultural-sector
27 https://irr.org.za/reports/occasional-reports/files/web-irr-south-africas-minibus-taxi-industry-report.pdf

Education

Some schools only accept cash payments, and even when schools offer digital paymentoptions, some parents prefer to pay school fees and other school-related expenses in cash. Most parents give their children lunch money in cash, and most school tuckshops are still cash-based.

The digitisation of school tuckshops would increase access to digital payments for pupils, and this could provide opportunities for customised digital payments innovation such as digital wallets or using fingerprints to authenticate transactions instead of a PIN, and further increase digital financial literacy in schools. Safe, fast and convenient digital payments should be enabled/availed in schools to promote the adoption of digital payments and reduce cash usage.

Furthermore, to enhance digital payments skills and training, digital payments literacy should be included in the school curriculum.

Action 12	Timeline	Stakeholders
a. Digitise school service payments, including payments at tuckshops. b. Develop innovative offerings and apps to enable parents to pay school fees and send money to pupils (e.g. lunch money).	2 years	• Department of Education • School governing bodies • Fintechs • PSPs

Youth

Almost half (49%) of SA's population comprises the youth (18 to 35 years of age), and of this, 57% are unemployed. SA's youth is tech savvy and contributes significantly to the population of mobile phone ownership.[28] While payments by the youth are still mostly cash-based, the youth are rapidly exploring, experimenting with and embracing digital payments. However, the youth still face challenges relating to a lack of access to smart phones, the Internet, awareness of digital payments and digital skills.

To meet the needs of the youth and to entrench the adoption and use of digital payments by the youth, youth voices should be integrated in digital payments policymaking, youth-friendly digital payment methods must be promoted and supported,[29] and digital and financial literacy and capability must be promoted. The youth seem to be drawn to solutions for digital micro-payments and peer-to-peer payments. Mobile platforms and mobile money provide opportunities to extend digital payments to the youth, particularly those without a bank account.

Action 13	Timeline	Stakeholders
a. Provide youth-friendly innovative digital payment methods and services to enable digital micro-payments and peer-to-peer payments.	Ongoing	• PSPs • Schools/ universities • Government
b. Integrate youth voices in digital payments policymaking.	6 months	• National Treasury • SARB

28 By the end of 2020, 495 million people subscribed to mobile services in sub-Saharan Africa, representing 46% of the region's population – an increase of almost 20 million since 2019. With more than 40% of the region's population under the age of 15, young consumers owning a mobile phone for the first time will remain the primary source of growth for the foreseeable future. Global System for Mobile Communications Association, 'The mobile economy: sub-Saharan Africa'. 2021. https://www.gsma.com/mobileeconomy/wp-content/uploads/2021/09/GSMA_ME_SSA_2021_English_Web_Singles.pdf

29 OECD, Advancing the Digital Financial Inclusion of Youth, 2020.

Women

According to FinScope, 52% of SA's total population is female, of which 86% are banked. Increased access of women to bank accounts will assist in building women's economic power, thereby contributing to gender equality. However, compared to their male counterparts, women still face challenges as most of them lack the knowledge or understanding of available digital payment products, are being offered digital payments that do not meet their needs, have to travel long distances to payment institutions/PSPs, lack access to the Internet or mobile phones, and are digitally illiterate. In addition, 42% use their bank account as a mailbox, while 25% use their bank account less than three times a month. Further, of the 26% of the adult population in SA that are classified as the rural poor, 61% are female, and despite the higher number of women who are banked, 63% of unemployed adults are female.[30]

Action 14	Timeline	Stakeholders
a. Develop and target digital payments literacy programmes for women, particularly rural poor women.	6 months to 1 year	• SARB • Payment industry
b. Offer digital payments that are suitable, convenient and affordable for women (e.g. mobile money, remittances).	Ongoing	• Payment industry

Digitised government payments

Digitising payments for government services provides benefits to governments, consumers, businesses and the broader economy. Some of these benefits include providing an efficient, convenient and transparent revenue collection system, thereby supporting governments to provide services more efficiently. Although governments still accept cash for the payment of goods and services, there are initiatives to promote digital payments (e.g. the Department of Transport only accepts card payments in vehicle licensing stations). These interventions could be adopted by other government departments and municipalities.

To ensure that government-to-person payments are effective and efficient, government databases need to become integrated/interoperable and have adequate verification mechanisms to ensure the accurate identification and validation of payments to qualifying beneficiaries when using their preferred digital method of payment. For instance, the payment of social grants or emergency relief grants to incorrect beneficiaries may occur due to the lack of verification and validation measures. This may lead to major financial losses and reputational damage to the government. Criminals usually exploit these weaknesses in the system knowing that the government cannot effectively verify the identity of the recipients. Furthermore, grant recipients should be offered alternative payment methods that will discourage the withdrawal of grants to make payments.

30 Global Partnership for Financial Inclusion (GPFI), '*Advancing Women's Digital Financial Inclusion*', July 2020.

Action 15	Timeline	Stakeholders
a. Digitise person-to-government and government-to-person payments end to end (first and last mile).	1 year	• Government (National Treasury; Department of Social Development; local governments, including cities of Johannesburg and/or Tshwane and/or Ekurhuleni)
b. Government-to-person payments must be streamlined across government departments to ensure that government-to-person payments adhere to specific standards and government departments' databases leverage off each other.	1 year	• National Treasury • Government departments and municipalities

Digitised money

Central bank money/public money

In May 2021, the SARB embarked on a study to investigate the feasibility, desirability and appropriateness of a CBDC[31] as electronic legal tender, for general-purpose retail use, complementary to cash. The objective of the feasibility study is to consider how the issuance of a general purpose CBDC will feed into the SARB's policy position and mandate.

The study is focused on the issuance of a domestic CBDC that can be used by consumers in SA for general retail purposes. The SARB is continually exploring possible use cases, including whether a retail CBDC can address gaps that current traditional digital payments do not adequately fulfil, such as cost-effectiveness and real-time online and offline peer-to-peer digital payment use cases. At the conclusion of the study, the following action was identified:

Action 16	Timeline	Stakeholders
a. The SARB should further explore the feasibility of digitising money/cash through the issuance of retail CBDCs and use cases for a wholesale CBDC.	2 years	• SARB

31 The Committee on Payments and Market Infrastructures (CPMI) defines CBDCs as a digital form of central bank money different from balances in traditional reserve or settlement accounts.

Crypto-assets

Crypto-assets are emerging as alternative digital payment methods/assets. Crypto-assets are based on DLT and smart contracts, with the potential to promote seamless, fast and cost-efficient digital payments. The SARB has cautioned consumers about the risks of using crypto-assets for payments, and is continually assessing the risk to financial stability, monetary policy, the payment system and to consumers. It has further reiterated that crypto-assets are not legal tender in SA. Although not legal tender, SA has not taken a position to ban the use of crypto-assets for payment purposes. Some merchants and consumers have embraced crypto-assets, with the likes of Pick n Pay (a retail business in the fast-moving consumer goods industry) having publicly proclaimed its acceptance of crypto-asset Bitcoin for the payment of goods in some of its stores. The SARB is exploring the feasibility of leveraging DLT technology to enhance the settlement system/ infrastructure.

From a policy and regulatory perspective, the SARB is developing its approach to crypto-assets and leveraging best practices from the Group of Twenty (G20), Financial Stability Board and Committee on Payments and Market Infrastructures (CPMI) on appropriate regulatory approaches to crypto-assets regulation. The SARB is aware that the FSCA has declared crypto-assets used for payment as financial products under the Financial Advisory and Intermediary Services Act 37 of 2002 (FAIS Act), and that providers of crypto-assets will be licensed and regulated under the FAIS Act. The SARB is collaborating with the FSCA to ensure that the regulation of crypto-assets is appropriate, taking into account the potential risks and unintended consequences.

In the interim, the SARB is open to allowing eligible stablecoins used for domestic payments to be tested in the regulatory sandbox. The sandbox approach would provide the SARB with an opportunity to understand and assess payment use cases in the short term as well as their potential for enhancing the adoption and use of digital payments, which process may assist in developing a regulatory, supervisory and oversight framework for crypto-based payments. In this regard, the following action was identified:

Action 17	Timeline	Stakeholders
a. Accelerate the selection and testing of stablecoins use cases in the regulatory sandbox.	2 years	• SARB

6

THE ENABLING AND CATALYSING REGULATOR AND THE INNOVATIVE PAYMENT INDUSTRY

The increased adoption and use of digital payments require an enabling regulatory framework that will promote innovation, deepen financial inclusion, and broaden access and competition in the NPS. The SARB should, in its catalyst role, nudge all the stakeholders to ensure delivery of the above-mentioned actions to unlock the potential of digital payments and create opportunities that would benefit South Africans. Payment industry stakeholders are expected to explore, innovate and offer safe, affordable, convenient and suitable digital payment services that leverage technology to promote the adoption and use of digital payments across all market segments. The following are some of the key initiatives or technologies that the SARB is implementing or exploring to enhance the adoption and use of digital payments:

An enabling regulatory framework, including a review of the NPS Act

National Treasury and the SARB are currently reviewing the NPS Act and proposing amendments to provide an enabling regulatory framework that will, among other things, enhance the safety, efficiency, innovation, competition and financial inclusion in the NPS. The proposed amendments will further broaden access to non-banks for the NPS service provision, and enable the issuance of digital payment instruments by banks and non-banks, including retailers, fintechs and MNOs. Qualifying non-banks will be allowed to offer a full suite of digital payments independently without the requirement to partner with banks. Further, the revised NPS Act will, through activity-based regulation, expand the scope of the NPS Act to include emerging digital payment services.

The SARB is also developing a regulatory framework to promote the interoperability of digital payment methods, instruments and systems to enhance the ubiquity, convenience and reach of digital payments. Regulatory frameworks for mobile money, e-money, remittances (including agency models) and third-party payment providers are also being developed. The SARB will also embark on roadshows to raise awareness on digital payments across all the LSM market segments and coordinate collaborative efforts by all stakeholders involved.

Regtechs, suptechs and artificial intelligence

Since the 2008 global financial crisis, regulatory requirements have been strengthened, and authorities and regulated institutions alike are dealing with increased complexity around regulation. This encourages the establishment and adoption of digitised regulatory compliance and supervisory tools. Further, advances in technology have propelled increased cost-efficiency and data processing capability as well as greater computing power.[32] Data analytics tools and artificial intelligence are becoming the most important technologies in the payment landscape and the skills in these areas are developing steadily.

The SARB is considering and monitoring the developments and applications of suptech and regtech tools and methods to streamline and support regulatory processes and lower compliance costs. These important outcomes will potentially bring new entrants in the NPS, increase competition and enhance the offering, adoption and use of digital payments.

API standards and open banking

Opening banking entails allowing access by regulated third-party providers to customer data (i.e. transactional account information) with the customer's informed consent. Open banking then enables these parties to offer customers alternative and innovative digital payment mechanisms and enhance other digital payment offerings that may improve customer experience. Opening access to consumer data may also benefit banks by enhancing innovation and customer experience, and improving both the competitive and the collaborative relationships between banks and fintech companies.

APIs are being used to share customers' financial information to support the provision of innovative digital payment solutions, increase customer reach and improve customer experience. The payment industry is encouraged to bilaterally explore partnership arrangements that would enhance open payments in SA. The SARB is developing a regulatory framework for open banking to ensure that open-banking services are provided in a controlled environment with the informed consent of the consumer and under common API standards. It is envisaged that this will enhance and support the adoption and use of digital payments by consumers.

32 https://www.fsb.org/wp-content/uploads/P091020.pdf

Big data and big techs

Although there is no universal definition of big data, a simplified definition is that it refers to new technological tools that are used to collect, manage, process and analyse large and complex data sets. In the fast evolving digital payments landscape, big data could play a major role by generating analytics to assess changing consumer behaviour, thus allowing PSPs to offer services that meet customer needs. Big data relevant for financial services may be obtained directly from big tech platforms that include: (i) transactions (sales volumes and average selling prices); (ii) reputation-related information (claims ratio, handling time, reviews and complaints); and (iii) industry-specific characteristics (sales seasonality, demand trend and macroeconomic sensitivity). This may also be enriched by using non-traditional data obtained via social media and other channels.[33] The SARB is developing a policy position on big data which will outline the SARB's understanding of big data and its role (including benefits and risks) in the NPS.

Big tech companies refer to large technology companies with large and extensive customer networks, such as Alibaba, Amazon, Google and Tencent. The use of technology by big tech companies has increased the efficiency with which they provide payments. This has also led to the proliferation of payment services that are cheaper, more convenient and tailored to users' needs, thereby offering opportunities to improve consumer welfare. The growing role of big tech firms presents opportunities to provide payment services to previously underserved segments of the population. For example, mobile payment platforms offered by big tech companies may result in the rapid uptake by many consumers that were previously excluded in the conventional regulated financial system. However, these companies may grow too big and may be anti-competitive, resulting in barriers to entry for small firms. The SARB is developing a policy position on big tech which will outline the SARB's understanding of big tech companies and their role (including benefits and risks) in the NPS, and the appropriate policy and regulatory response.

Digital platforms: super app

A super app may be described as a platform that integrates various digital solutions such as social, financial and entertainment platforms in one app. Super apps gather rich data about consumers and use this data to offer financial services that improve customer experience. Super apps may facilitate cashless and contactless payments as well as mobile payments. The rise in super apps has been spurred by the growth in financial data sharing between banks and non-banks, also known as open banking, which is enabling super apps to facilitate payment products and services that improve customer experience. The social media app WeChat is a good example of a super app that offers messaging, social networking, shopping, payments and other services for free in China. A policy position and regulatory framework is required on how digital platforms, including digital wallets, can advance the adoption and use of digital payments, and how they must be regulated.

Tokenisation

According to the Financial Stability Board,[34] tokenisation refers to the creation of a digital representation of traditional assets on a programmable platform. In payments, tokenisation has the potential to increase speed and transparency and lower costs, especially for cross-border payments.[35] The Bank for International Settlements further states that the tokenisation of money on a common programmable platform allows money to be transferred directly without messaging an intermediary first (e.g. clearing houses or correspondent banks), or letting transactions be executed through smart contracts, which allows for automation and composability.

The tokenisation of card payment transactions is a good example, which involves the conversion of confidential information belonging to a cardholder or the user of a payment instrument into unique symbols or tokens to protect it from any data breaches and invasion. Apple Pay, Samsung Pay and Google Pay are some of the examples of tokenised card payments.

Despite the potential benefits stated above, tokenisation faces significant legal challenges, just like the challenges faced by other innovative technologies. Existing regulations may not be specific or enabling for tokenised use cases, which may result in unregulated or the underregulation of payment activities that introduce risks in the payment ecosystem. Therefore, regulatory frameworks need to be enabling, harmonised and coordinated to prevent unintended consequences such as regulatory arbitrage, loss of funds and shadow activities. The SARB is monitoring the growth, use and innovation of tokenisation as secure payments are crucial to entrench the trust and integrity of digital payments.

33 Bank for International Settlements, 'Big tech in finance: opportunities and risks', 2019 is available at https://www.bis.org/publ/arpdf/ar2019e3.pdf
34 https://www.fsb.org/wp-content/uploads/P160223.pdf
35 https://www.bis.org/publ/bisbull72.pdf

7

CONCLUSION

Vision 2025 states that a collaborative approach among industry stakeholders is one of the key success factors that will act as the foundation for the development and maintenance of safe and efficient payment systems. Thus, collaboration is key to achieving inclusive, effective and sustainable digital payments in a shift towards a digitised economy that benefits all South Africans.

The execution of this *Roadmap* will be broadly facilitated by the National Payment System Department of the SARB and supported by coordination mechanisms to bring together actions by various stakeholders identified in this *Roadmap*.

Abbreviations

API	application programming interface
app	application
ATM	automated teller machine
B2B	business to business
B2P	business to person
CBDC	central bank digital currency
COVID-19	coronavirus disease 2019
DLT	distributed ledger technology
EFT	electronic funds transfer
e-money	electronic-money
fintech	financial technology
FSCA	Financial Sector Conduct Authority
ICASA	Independent Communications Authority of South Africa
IFWG	Intergovernmental Fintech Working Group
ISO	International Organization for Standardization
KYC	Know Your Customer
LSM	living standards measure
MNO	mobile network operator
MSME	micro, small and medium enterprise
NPS	national payment system
NPS Act	National Payment System Act 78 of 1998
P2B	person to business
PIN	personal identification number
PASA	Payments Association of South Africa
POS	point of sale
PSP	payment service provider
QR	quick response
regtech	regulatory technology
Roadmap	*Digital Payments Roadmap*
SA	South Africa(n)
SARB	South African Reserve Bank
SASSA	South African Social Security Agency
suptech	supervisory technology
Vision 2025	National Payment System Framework and Strategy: Vision 2025

Annexure A: Benefits of digital payments

Benefit	Details
Safety	**a. Eliminate the risks associated with using cash:** Digital payments address the risks of using, keeping, moving or managing cash that is susceptible to loss, theft, robbery and cash heists for businesses, merchants, individuals and government. **b. Payment reaches its intended recipient in full:** Digital payments address the challenges and risks of sending cash to family members using informal and unregulated channels such as third parties (e.g. taxi drivers) to send money to another province. Cash payments carry the risk that the money will not reach the recipient or that the amount will not be received in full.
Convenience	**a. Improved audit trail and financial management:** Digital payments provide an easier audit trail of transactions for the management of funds. This includes quick access by consumers to their transactional history – a trail of who was paid, when and how much – and provides a view of the available funds in the account, thus enabling better budgeting and the tracking of spending patterns. It also provides better monitoring of the business to determine if a profit or loss was made and areas for improvement. Digital payments improve records management, resulting in precise figures, traceability and transparency, which assists with the compilation of better quality financial statements. **b. Immediate access to products/services:** Digital payments provide immediate access to products and services (e.g. buying digital books which can be downloaded immediately after making payment), meaning that consumers do not have to wait several days for delivery. **c. Flexibility of making payments:** Digital payments can be made any day, anytime and anywhere in the world by using digital payment options. **d. Avoiding the inconvenience of making in-person purchases or payments:** Digital payments limit the inconvenience of restrictive trading hours, standing in queues as well as travelling time and costs. **e. Option to choose a preferred payment method:** Consumers have a choice to effect digital payments via different devices (e.g. cellphone, laptop, tablet) and using various methods of payment (e.g. electronic funds transfer (EFT) and card). The provision of a variety of digital payments presents an opportunity for new market entrants to offer payment solutions that will improve customer experience and convenience. **f. Faster payments:** Unlike sending money to another province using a third party, which may take several hours to several days, digital payments will reach the recipient quickly. This is important when the consumer needs to make an emergency payment. The government can speedily and effectively distribute emergency disaster relief payments using digital payments, thus benefiting the government and the grant recipients.

Cost-effectiveness	**a. Cheaper payments:** Digital payments are cheaper as the consumer does not incur travelling costs to access a bank or ATM to withdraw cash or make payments at a store. Cash withdrawal fees may be incurred to withdraw money, especially if the consumer is using another participant's ATM or has exceeded the free number of ATM transactions or value for the month. **b. Challenges of ATM proximity to consumers:** These challenges include consumers spending money to travel to ATMs as well as standing in long queues and worrying about getting mugged after withdrawing their cash. Digital payments are expected to address these risks. **c. Reduced cash management costs:** Deposit-taking institutions, retailers and businesses have the potential to save costs that relate to cash management, including distribution, safekeeping and logistics. Digital payments may reduce the cost of filling ATMs with cash at month end and during holiday seasons.
Women empowerment	**a. Better control of finances:** Generally, women are recipients of child social grants, and digital payments can empower women by allowing them to have better control of their finances as they can have privacy with regard to the management of their finances. Hence, they will be enabled to make informed financial decisions for themselves, their children and the rest of their family. Through digital payments they may also access other financial products such as savings and investments.
Business opportunities	**a. New products:** Digital payments allow incumbents to introduce new offerings and enhance their current service offerings which may reach new markets and retain customers. **b. Partnerships:** Digital payments allow incumbents to create new partnerships such as agency arrangements with retailers and fintechs. **c. New players:** Digital payments allow consumers to benefit from competitive products and pricing as new players compete with incumbents. **d. New incentives:** Digital payments allow for the easy introduction of loyalty programmes, discounts and value-added services to attract and retain customers. **e. Cross-selling:** Digital payments provide an opportunity to sell other products to the consumer such as savings, loans and investments.

Transparency	a. **Better circulation of money**: With digital payments, the circulation of money is visible to the SARB and regulators to implement better policies and regulations as well as to have better oversight to improve financial stability and the safety, efficiency and integrity of the NPS. Regulatory authorities can monitor compliance relating to money laundering, terror financing and proliferation financing as well as tax and the conduct of payment services providers. b. **Eliminate payment anonymity:** The sender and receiver of digital payments are known. This is beneficial as the sender is certain that the money will reach the intended recipient. The recipient is also certain of who sent them the money, thus creating trust and confidence in using digital payments. This can assist in monitoring fraudulent payments and bribes as the sender and the receiver of payments are known. c. **Monitor the achievement of policy objectives:** Digital payments can assist in monitoring objectives such as efficiency, competition and financial inclusion.

Annexure B: Summary of actions

Action 1	Timeline	Stakeholders
a. Develop and implement digital payment literacy or an educational and awareness strategy and programmes targeted at consumers (including the youth, women and SASSA grant beneficiaries), government and businesses (including MSMEs) and disabled persons.	6 months	• SARB, in collaboration with National Treasury and the FSCA
b. Conduct provincial roadshows to educate the selected groups on digital payments and engage in activities led by the National Consumer Financial Education Committee.	6 months and ongoing	• SARB
c. Enhance digital infrastructure awareness/skills.	6 months and ongoing	• Communications authorities • Internet (data and Wi-Fi) providers • Mobile network operators (MNOs)
d. Integrate and include digital payments in the school curriculum and curriculum for institutions of higher learning.	2 years	• Department of Education • Universities and colleges • Public and private schools
e. Facilitate the establishment of the payments training institute.	2 years	• SARB • PASA • Payment industry

Action 2	Timeline	Stakeholders
a. Provide stable, reliable Internet and mobile network coverage to the rural areas, underserved communities, MSMEs (including spaza shops), townships, churches, schools, hospitals, SASSA pay points and cash-intensive sectors,particularly the agricultural (farms) and transport sectors.	1–2 years	• National (Minister of Communications and Digital Technologies), provincial (Gauteng Provincial Government) and local government • Department of Social Development • National Treasury • SASSA • ICASA • School governing bodies • MNOs • MSMEs • PSPs and participants
b. Provide affordable (low-cost) or free Internet (data or Wi-Fi) access to the underserved and/or disadvantaged communities (including rural areas), MSMEs, the youth, schools, townships, churches, hospitals, SASSA pay points and cash-intensive sectors, particularly the agricultural and transport sectors.	1 year	
c. Provide free Internet in the business premises of the payment services providers or MSMEs and/ or zero-rated payment applications (apps) and websites.	6 months	

Action 3	Timeline	Stakeholders
a. Leverage alternative sources of energy such as solar, generators, uninterruptible power supplies (UPSs), invertors and power banks.	1 year	• Government • Payment industry • Businesses (including MSMEs)
b. Provide/obtain battery-operated payment devices for MSMEs, particularly in the rural areas and townships.		• Government • MSMEs • PSPs
c. Provide funding and access to credit to MSMEs to procure alternative sources of energy.		• Government, including the Department of Small Business Development • Credit providers

Action 4	Timeline	Stakeholders
a. Enable offline payments functionality for low-value payments.	1 year	• SARB • PASA • PSPs/participants and acquirers

Action 5	Timeline	Stakeholders
a. A payment services distribution network (agency model) should be enabled and expanded.	1 year	• Minister of Finance • PSPs and participants • MNOs • Retailers, fintechs and other merchants • Department of Women, Youth and Persons with Disabilities
b. Digital mobile branches (bank on wheels), ATMs and fintech innovations should be maintained and/or extended to underserved areas and communities.		
c. Disabled persons should be accommodated to access stand-alone access points independently and safely. Thus, devices/ access points such as ATMs and POS devices must have an option for disability features which includes headsets and fingerprint authentication, and biometric card authentication.		

Action 6	Timeline	Stakeholders
a. Enable and facilitate the interoperability between the current closed-loop store of value/wallets, mobile money/e-money and remittances (i.e. retailer, mobile and bank wallet services and remittances) and the interoperability of wallets with bank accounts.	1–2 years	• SARB • MNOs • E-money and mobile money providers • PSPs and participants • Payment clearing house system operators

Action 7	Timeline	Stakeholders
a. Engage stakeholders on the exploration of alternative merchant payment options (e.g. PayShap).	2 years	• SARB • Minister of Finance/National Treasury • Department of Social Development • The Presidency • SASSA • PSPs • Payment clearing house system operators and participants

Action 8	Timeline	Stakeholders
a. Facilitate public-private sector collaboration to develop and deliver digital financial identify solutions in SA.	2 years	• SARB • Private sector • Government
b. Mandate multi-factor authentication for digital payments.	1 year	• SARB • Payment industry • Government
c. Facilitate the establishment of an E-KYC registry.	2 years	• SARB • Private sector • Government
d. Implement cybersecurity and cyber-resilience measures to protect digital payment systems and consumer data.	2 years	• SARB • Payment industry
e. Implement consumer protection measures (Treating Customers Fairly Principles and Conduct of Financial Institutions Bill).	6 months	• FSCA • Payment industry

Action 9	Timeline	Stakeholders
a. Provide public-private partnerships and support (including financial support) and digital and financial literacy to accelerate access to technology and the digitisation of MSMEs.	6 months	• Participant acquirers • Provincial government
b. Provide alternative affordable digital payment methods to card payments (e.g. mobile money, e-money) and acceptance devices to MSMEs.	1 year and ongoing	• PSPs • Acquirers • Fintechs

Action 10	Timeline	Stakeholders
a. Facilitate the digitisation of payments such as farm workers' salaries, payments for the transportation and selling of produce, and the purchasing of seeds, ertiliser and other related supplies in the agricultural sector.	2 years	• Government • Farmers • PSPs

Action 11	Timeline	Stakeholders
a. Facilitate the digitisation of short and long distance taxi payments, such as the use of QR codes, contactless card payments, pay by proxy and request-to-pay.	1 year	• Government (National Treasury, Minister of Transport) • Taxi associations and PSPs

Action 12	Timeline	Stakeholders
a. Digitise school service payments, including payments at tuckshops. b. Develop innovative offerings and apps to enable parents to pay school fees and send money to pupils (e.g. lunch money).	2 years	• Department of Education • School governing bodies • Fintechs • PSPs

Action 13	Timeline	Stakeholders
a. Provide youth-friendly innovative digital payment methods and services to enable digital micro-payments and peer-to-peer payments.	Ongoing	• PSPs • Schools/universities • Government
b. Integrate youth voices in digital payments policymaking.	6 months	• National Treasury • SARB

Action 14	Timeline	Stakeholders
a. Develop and target digital payments literacy programmes for women, particularly rural poor women.	6 months to 1 year	• SARB • Payment industry
b. Offer digital payments that are suitable, convenient and affordable for women (e.g. mobile money, remittances).	Ongoing	• Payment industry

Action 15	Timeline	Stakeholders
a. Digitise person-to-government and government-to-person payments end to end (first and last mile).	1 year	• Government (National Treasury; Department of Social Development; local governments, including cities of Johannesburg and/or Tshwane and/or Ekurhuleni)
b. Government-to-person payments must be streamlined across government departments to ensure that government-to-person payments adhere to specific standards and government departments' databases leverage off each other.	1 year	• National Treasury • Government departments and municipalities

Action 16	Timeline	Stakeholders
a. The SARB should further explore the feasibility of digitising money/cash through the issuance of retail CBDCs and use cases for a wholesale CBDC.	2 years	• SARB

Action 17	Timeline	Stakeholders
a. Accelerate the selection and testing of stablecoins use cases in the regulatory sandbox.	2 years	• SARB

www.resbank.co.za