South Africa
Future state, demands and pressures

September 2017

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Introduction

Future state, demands and pressures

This report is the second part of a three-part series on low-value payment system infrastructure (LVPI) modernisation. It aims to provide a substantiated view of the future consumer and user demands on South Africa's LVPI, including anticipated demographic changes and pressures in South Africa, the impact of these changes on consumer and user needs, and the technological, and societal pressures that contribute to them. Over 40 in-depth industry interviews have also provided deep insight into how these changes are perceived by the industry and its customers, and the requirements of a modernisation programme.

Report objectives

Describe and discuss current and future concerns of South African stakeholders, both in the public and private sectors, related to:

- Consumer and user demands and pressures
- Technology demands and pressures

Provide an analysis of the impact of demographic and socio-political changes on consumer demand on the LVPI. This analysis also includes a review of the economic situation, projections for future economic growth and the impact on the LVPI.

Provide an analysis of the impact of financial inclusivity requirements on the LVPI.

Report outline

This report is structured into three parts following the introductory section:

1. The first part details the South Africa context within which modernisation of the LVPI needs to occur and determines the implications for the design that is required to serve all South Africans.
2. The second part examines proposed modernisation goals expressed by South Africa interviewees. These goals relate to future user and consumer demands, regulatory and technology pressures that are the impetus for modernisation. Feedback from interviews is then compared to modernisation goals from other markets as examined in report 1A, Modernising payment systems: International comparison.
3. Lastly, the report derives an approach to the process of modernisation from the suggestions made by interviewees.

Methodology

A broad range of methods were used to gain insight

Research methodology summary

Data collection

Primary research
In-depth discussions with 45 industry stakeholders from a range of stakeholders in the payments industry, including banks, system operators, users, and associations. Also commissioned economic scenarios to judge the impact of growth on payments.

Secondary research
Review of existing literature and public sources, including the World Bank, StatsSA, SARB, the UN, and the WEF (a complete list of sources are provided in the appendix of this section)

Analysis

All interviews were transcribed and the transcripts were reviewed to create thematic codes. **Thematic coding** is a form of qualitative **analysis** which involves recording or identifying passages of text or images that are linked by a common theme or idea allowing you to index the text into categories and therefore establish a framework of thematic ideas.

Project timeline

Report contributors

Lipis Advisors is an international company based in Berlin, focused solely on the payment system industry. Leo Lipis is the founder of Lipis Advisors, and has nearly 20 years of experience in payment systems management, consulting and research throughout Europe and the Americas.

IQbusiness is a South African independent management consulting company with 18 years experience in payments related change projects across 17 countries in Africa, with extensive work in the financial services sector. Natalie Matthews leads the Card and Payments team at IQbusiness.

Acknowledgements

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Organisations

Banking
- Absa
- Bidvest Bank
- Capitec Bank
- Discovery Bank
- FNB
- Investec
- Mercantile Bank
- Nedbank
- Standard Bank
- SARB
- Ubank

System Operators
- ATM Solutions
- BankservAfrica
- Direct Transact
- MasterCard
- Pay Corp
- Real Pay

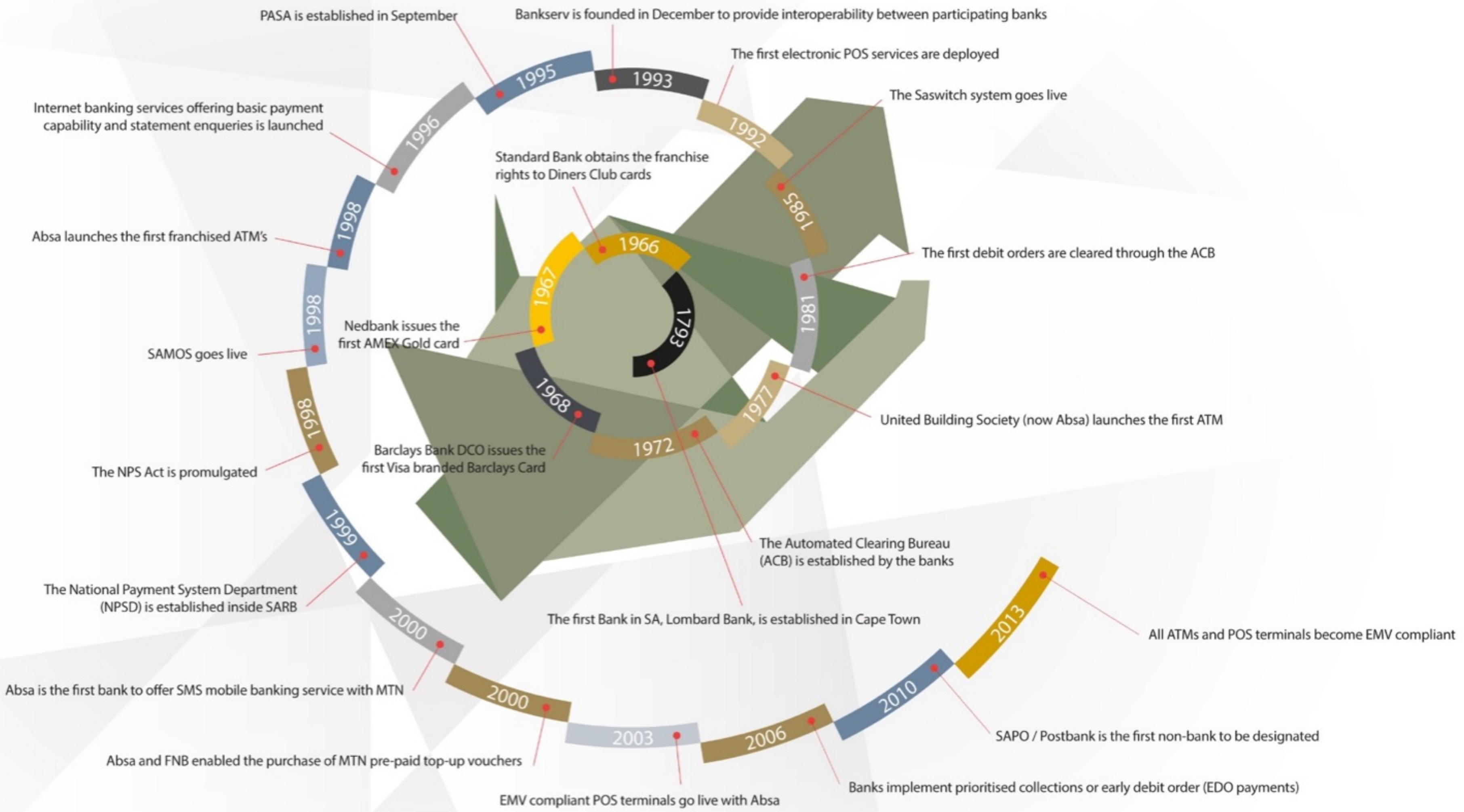
- **Associations**
- ASISA
- CIBA
- PASA
- SADC Banking Association

Other
- Old Mutual
- CENFRI
- Shoprite
- APIS
- Gates Foundation

Individuals

1. Kotie Coetzee – U Bank
2. Ghita Erling – Discovery Bank
3. Mark Elliott - MasterCard
4. Rudi Botha - Direct Transact
5. Hennie Dreyer - Direct Transact
6. Anthony de Gery-Birch - Direct Transact
7. Jan Moganwa - Absa
8. Jill Murtagh – Bidvest Bank
9. Neil Capazorio – Bidvest Bank
10. Elan Sean Krug – Bidvest Bank
11. Matthew Coaker – Mercantile Bank
12. John Elliott - Investec
13. Rufaida Ismail - Investec
14. Richard Williams – Investec
15. Tremaine Hechter – Shoprite
16. Andre Du Plessis – Capitec Bank
17. Andre Bouwer – Capitec Bank
18. Michael Swart – Capitec Bank
19. Johann van Tonder – ASISA
20. Chris Van Wyk – Old Mutual
21. Paul Mauritz – Old Mutual
22. Leizl Lubbe – Old Mutual
23. Lumke Dlukulu – Old Mutual
24. Arthur Schenck – Old Mutual
25. Wayne Poolman – Old Mutual
26. Barry Cooper – CENFRI
27. Ravi Shunmugam - FNB
28. Hendrik Pelser – Absa
29. Gavin Reubenson – ATM Solutions
30. Pieter Swanepoel – Real Pay / CIBA
31. Edward Leach- SARB
32. Annah Manganyi – SARB
33. Shaun Rayfield - SARB
34. Arif Ismail - SARB
35. Tim Masela - SARB
36. Sydney Gericke - Nedbank
37. Graeme Holmes - Nedbank
38. Ian Carter - Nedbank
39. Richard Southey – Absa
40. Ingrid Goodspeed – PASA Board
41. Steven Kark – Pay Corp
42. Nic Smalle – APIS
43. John Anderson – Standard Bank
44. Arthur Cousins – SADC Banking Association
45. Elizabeth McQuerry – Glenbrook / Gates Foundation
46. Chris Hamilton – BankservAfrica
47. Martin Grunewald – BankservAfrica
48. Emile Burger – BankservAfrica
49. Ruhling Herbst – BankservAfrica
50. Dale Morris – BankservAfrica
51. Walter Volker – PASA
52. Maurits Pretorius – PASA
53. Gail Clarke - BankservAfrica

A brief history 50 years of payments in SA



The existing South African LVPI

According to PASA, the National Payment System (NPS) encompasses the entire payment process from payer to beneficiary and includes settlement between banks. The process includes all the tools, systems, mechanisms, institutions, agreements, procedures, rules or laws related to payments. The NPS facilitates the circulation of money, that is, it enables transacting parties to exchange value. The Low Value Payments Infrastructure (LVPI) supports payments which fall below R5 million. Various payment streams exist for low value payments, as summarised below.

The Existing LVPI

Cash

- SA is a predominantly cash-based society.
- Cash usage continues to grow with more than 50% of the value of consumer transactions being completed with notes and coins according to a recent study.
- Cash is particularly vital to lower LSMs. Some South Africans who have bank accounts continue to transact exclusively in cash.
- Trust, convenience, and lack of fees combine to make cash attractive.

EFT

- EFT includes all varieties of electronic credit and debit instruments and this system has served the country well for many years.
- EFT Credits made up 79% of retail payments by value in 2016, up from 70% in 2010.
- EFTs are popular as they are a trusted payment method. A 2015 study by IPSOS indicated that 22% of South African internet users made purchases using EFT Credit as their preferred method.
- South Africa was early to launch real-time, low-value payments. Uptake has been low due to high cost and inconsistent service levels.

Card

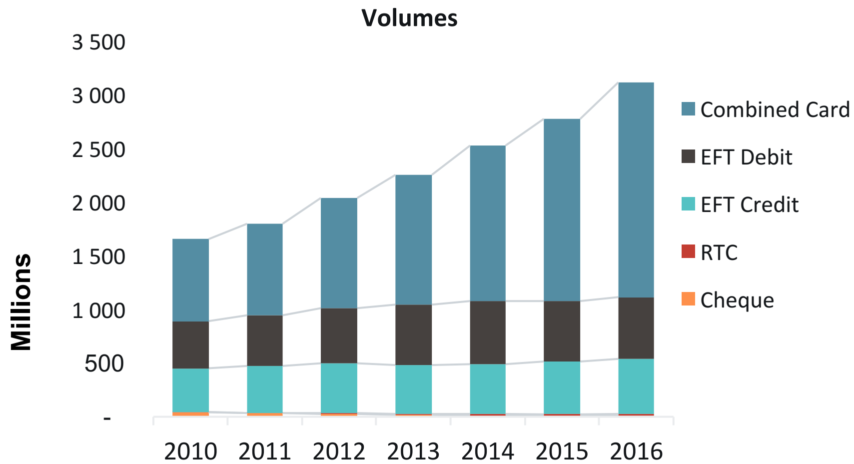
- Cards make up more than half of all non-cash transaction volumes but only 7% of the value of retail payments in 2016. Card usage has increased from 45% to 56% of retail volumes since 2010.
- High transaction costs affect the affordability of card for certain segments of the market.
- Lack of access to infrastructure such as ATMs and POS for rural South Africans plays a part in the limited use of cards in these areas.

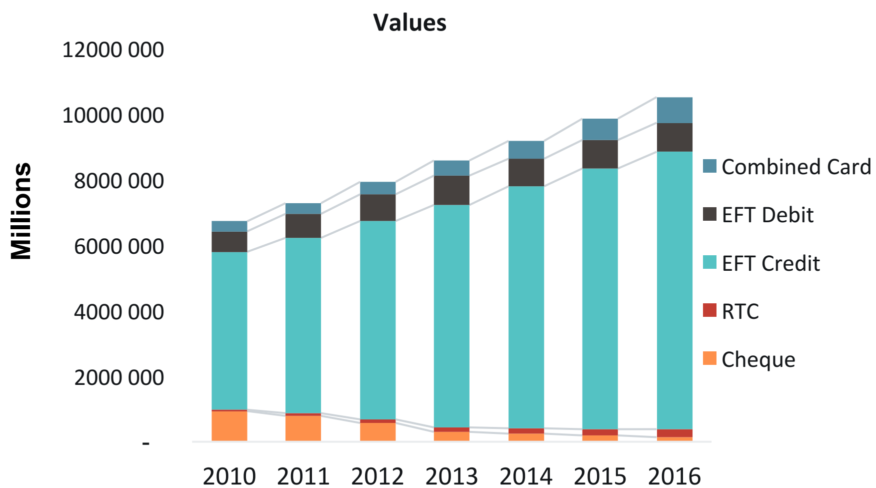
Cheques

- Cheques have seen a massive reduction over the last ten years and are not accepted by most merchants.
- Cheques make up just 1% of the value of retail payments in SA, but only 0.2% of the volumes.
- SARB has declared the intention to phase out paper cheques.

Payment trends in SA

Retail transactions by type per year





Source: PASA 2016

The use of electronic payments is on the rise in SA as demonstrated by the increase in EFT and card values and volumes over the past decade. However, cash usage also continues to grow.

The use of electronic payments

- The volumes and values of electronic payments have steadily increased since 2010.
- EFT credit transactions make up the bulk of retail transaction values and have increased from 70% to 79% since 2010.
- RTC has increased in terms of values and volumes over the period, however only made up 3% of the retail transactions in 2016.
- EFT debit and AEDO values and volumes have increased. NAEDO volumes have decreased by 1% in the last year (although values have increased by 6%).
- Card values have remained constant at 7% of the value of retail transactions between 2010 and 2016, however they made up 56% of the volumes in 2016 (versus 45% in 2010). Card values have also been increasing and are up 19% in the last year.
- ATM volumes and values are also increasing steadily with a 9% increase recorded in values in 2016.

Cash usage in SA

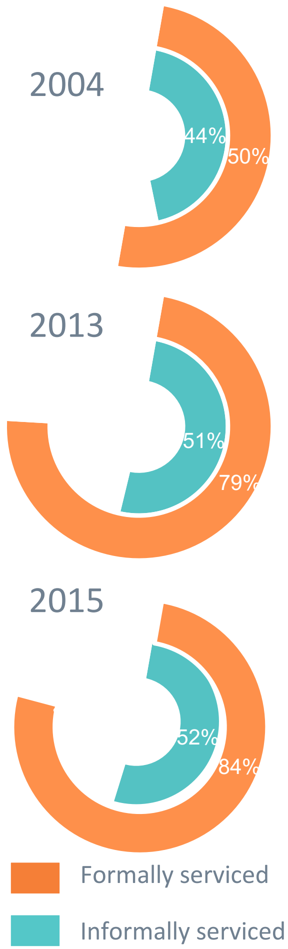
Cash payments have also steadily increased over the period.

- Cash figures are difficult to obtain however cash makes up at least 50% of retail transactions in SA.
- Cash usage is reported to be increasing by 13% annually in SA.

The financial services landscape continues to evolve

While the use of electronic payments and formal financial services has been increasing, the use of informal financial services has also been rising.

Portion of adult population served by formal and informal financial services



Source: FinScope South Africa, 2015

Formal financial services: SA has a very high banking concentration as the largest banks hold the majority of assets. Since 2001, Capitec has transformed the "big four" into the "big five". The largest banks typically service the banked (middle and upper) market. However, in the near future, further competitive pressure will come from new entrants such as Discovery Bank and Tyme. The government also has plans for a retail offering of its own through the Post Bank. The three are expected to launch by late 2018. According to PASA, 34 banks are members of PASA, and there are 171 TPPPs and 87 SOs in operation. Remittance services are also used extensively in SA although these may be serviced through formal and informal channels. Retailers commonly offer access to remittance services and closed-loop financial services, bridging the gap between formal and informal financial services.

Informal financial services: Informal financial services refer to all forms of credit and savings options such as money-lenders, taking goods on credit at spaza shops or even pawn shops. An example of an innovative informal solution is SaveAct. Over the past few years this local NGO has been pioneering savings in poor rural communities in South Africa. The model that they have used has enabled around 15 000 members of savings groups to reduce debt and improve their economic resilience. According to the Finmark Trust survey, over six million members in Africa are actively working their way out of poverty by building up savings, and lending to each other, without formal structures or rules. While fulfilling the needs of the underserviced, informal finance can be unreliable, expensive, and risky.

Informal business / market: According to Statistics South Africa, approximately 1.5m people run informal businesses in South Africa. They point out that more than half of these businesses have a monthly turnover of less than R1500, with only 14.6% showing sales of more than R6000. As small business development is a critical driver of South Africa's economy, with **half of the country's GDP stemming from small and medium enterprises**, the informal business community is an important focus area. While traditionally a cash economy, financial services continue to evolve even here. An example is the collaboration between iKhokha and Mastercard to increase access to cashless payment technology for KwaMashu's informal traders. The solution enables debit or credit card payments via iKhokha's mobile point-of-sale device, as well as mobile payments via Mastercard's MasterPass, minimising the amount of cash a trader is required to keep on hand. Of the trial base, 80% had never accepted cards or any digital payments before. Stokvels are collective savings groups which provide for mutual financial assistance as well as social and entertainment needs. There are over 800,000 stokvel groups in SA and these are estimated to be worth R49bn according to the National Stokvel Association of SA (NASASA). While traditionally informal, banks have started offering formal savings products for stokvels.
Financing in this sector is a major stumbling block to its growth and the future financial landscape will need to provide appropriate solutions.

Recent modernisation efforts in SA

The research undertaken to develop this report is complementary to the ongoing modernisation efforts in South Africa.

Modernisation of the LVPI was initiated in 2009 as the ISO 20022 initiative by the PASA EPC (Electronic, Paper and Cheque) Strategy Forum. Two work groups were established: Business and Technical. By 2013, most efforts were focused on mapping the existing 180-byte standard to the relevant ISO 20022 pacs message structures. In addition, the business principles and requirements were defined and clarified. On 27 May 2013 the PASA Council conditionally endorsed the strategic intent and direction to move to a new EFT platform.

During the period of 2011 to 2013, SARB reviewed the Early Collections environment and instructed PASA to initiate a project to address authentication of mandates for debit transactions by accountholders. The Authenticated Collections (AC) project was launched as a result and was tasked to develop its solution on the ISO 20022 message standard.

The Modernisation of Payments (MoP) Project was initiated during August 2014 with the strategic objective to “modernise all electronic funds payments systems by establishing a common standards platform based on ISO 20022 methodology and standards.”

The Authenticated Collections project re-proposed a phased implementation plan to the SARB in August 2016 which was approved in September of that year. The pilot commenced in July 2017 and ramp-up will begin in February 2018. The AC project is one of the largest interbank payment projects in SA to-date, and has largely absorbed the focus and resources of the payments ecosystem for the past two years.

The research project which led to the development of this report, is a complementary effort to the modernisation work that has been ongoing. It is anticipated that this report will serve as one of the documents upon which industry consensus can be achieved in order to determine an overarching approach and roadmap for modernisation of the LVPI.

The ISO 20022 Journey

2009
ISO20022 initiative initiated

May 2013
PASA Council conditionally endorsed the strategic intent to move to a new EFT platform messaging standard

August 2014
Modernisation of Payments (MoP) Project was initiated

June 2016
MoP Credits Platform Project re-initiated

July 2017
Authenticated Collections platform implemented

SARB's Vision 2025

The SARB has developed its much anticipated Vision 2025 document, however its release has been delayed. It is anticipated that this research echoes and supports the ten themes which Vision 2025 encapsulates. The goals of any modernisation will have to be aligned with SARB's vision for the National Payment System.

The Reserve Bank's Vision 2015

In 2011, SARB released its Vision 2015 outlining eight main strategic objectives:

1. Continue to evaluate and improve the participation of non-bank stakeholders in the clearing system and/or in formal payment system management structures.
2. Enhance the oversight of banks and increase the focus on non-banks.
3. Enhance communication among stakeholders regarding NPS matters.
4. Participate in international workgroups and forums.
5. Enhance payment system human resources capacity in the broader NPS.
6. Ensure a high level of operational effectiveness of the payment system infrastructure.
7. Facilitate regional payment system infrastructure integration to meet the needs of the SADC region.
8. Formalise and implement the interchange determination process.

Vision 2025

According to SARB, "Vision 2025 aspires to modernise the NPS thereby enhancing the safety, efficiency and accessibility of the NPS in a manner that meets both domestic and international requirements and benefits all South African citizens." Ten themes emanated from an extensive consultation process which was undertaken with all stakeholders. The themes aim to support and address the four main goals of financial sector regulation which are: financial stability, efficiency and integrity of the financial system, financial inclusion, and prevention of financial crime.

- Theme 1: Competition and collaboration within payment systems
- Theme 2: Regulation and governance of the NPS
- Theme 3: Standards and interoperability
- Theme 4: Innovation in payments infrastructure
- Theme 5: Risk and cybersecurity in the NPS
- Theme 6: Interchange determination in the NPS
- Theme 7: Financial inclusion
- Theme 8: Capacity building and consumer education
- Theme 9: Integrated management information in the NPS
- Theme 10: Regional integration and international participation

When released, SARB's Vision 2025 will serve as the cornerstone for modernising the LVPI in South Africa.

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Lipis Advisors IQbusiness BankservAfrica PASA

Demands and pressures on the LVPI

South African demographic and economic context

South Africa remains one of the most unequal societies in the world. Macroeconomic indicators paint a bleak picture: the country is emerging from a technical recession, has been downgraded, unemployment and poverty are increasing, and economic growth is slowing. SARB has lowered its growth expectations for 2017 to 0.5%.

The South African government has stated its ambitions through the National Development Plan 2030 (NDP), which lays out specific goals for the South African economy to reach by 2030. Key goals include:

- Increase GDP by 270% (avg. annual GDP growth of 5.4%).
- Increase GDP per capita to R110,000 per person (from approx. R50,000 per person in 2010).
- Steady reduction in the unemployment rate to 14% in 2020, with the ultimate goal of 6% by 2030. This requires the addition of 11 million jobs and a rise in total employment from 13 million to 24 million.
- Reducing income inequality to a Gini coefficient of 0.6 (from 0.7).
- Reduce population living below lower-bound poverty line to 0% (39% in 2010) and reduce poverty-induced hunger to 0%.
- Increase share of income to bottom 40% of income earners from 6% today to 10% in 2030.

Many are skeptical of the feasibility of these goals. Indeed, the economic development scenarios commissioned for this report confirm this skepticism: The highest growth scenario predicts 3% annual GDP growth going forward, with flat growth leading up to the next general election in two years' time. Reductions in unemployment are only expected under the high growth scenario, and will be insufficient to meet the NDP targets.

Despite this difficult outlook, the industry must embrace the NDP's spirit. The gap between South Africa's two economies must converge, with the goal of ultimately becoming one. The current situation is unsustainable and the consequences of inaction are beyond consideration.

The NPS is not a magic wand and cannot directly improve the economy, but it can act as an obstacle to economic growth if it fails to meet the needs of users and regulators. Many stakeholders are required to work together to start to address the country's challenges, including government, business, labour, and society at large. The NPS can play a key role in supporting GDP growth.

The banking industry will have to focus on making the pie bigger – on inclusive growth. Studies show a direct link between personal income and financial inclusion and participation. By strengthening the economy and broadening its base, the industry can help contribute to the stabilisation of society while at the same time enlarging its customer base.

Development of the LVPI needs to occur along two parallel tracks, although these should converge in the long-term. The industry needs to continue serving the financially included while offering services to the unbanked that can help bring them into the formal financial system. The LVPI needs to be "future-proofed" and the payment system should be built with the next decades in mind. Given these requirements, as well as uncertainty in the macroeconomic environment, the LVPI will need to be designed to be inclusive, flexible, low cost and scalable.

South Africa has a dual economy

South Africa is classified as an upper middle income developing country, nevertheless it has one of the most unequal societies in the world. The two sectors of the country's economy highlight this inequality. Of 56.52 million South Africans, more than one in two live in poverty, while the top 19% have the needs of modern consumers in a developed economy. The corporate sector comprises multinationals that compete on the global stage and banks which are ranked globally in the top two for being the "most sound".

Developing

- High levels of poverty – 55% live in poverty (over 30.4 million people)
- High unemployment - 27.7%
- High income and wealth inequality – 63.4 Gini coefficient
- Social grants - R164.9 billion in 2016/17, 29.7% receive grants.
- Low standard of education (72th of 138 countries)
  - High drop out rates – more than 40% by matric.
  - Maths and science ranked 138 out of 138
- Low skill workers
- Poor healthcare
- Poor nutrition – 13.8 million live below the food poverty line
- Low life expectancy - Estimated at 59.7 years for males and 65.1 years for females (66th out of 79 developing countries)
- Moderately banked population (58% are formally banked, and that number increases to 77% when SASSA grant recipients are taken into account), but still primarily cash-based.

Developed

- Advanced infrastructure (ports, roads, telecoms etc.)
- Large and sophisticated business sector
  - Skilled professionals
  - Relatively high number of successful MNCs originate from SA
- Highly developed financial system
  - SA's banks ranked 2nd "most sound" in the world (behind Finland) (Lafferty's 2017 Global Bank Quality benchmarking)
  - Efficient financial markets
  - Sophisticated payment system
- Upper middle income – R77,606 GDP per capita
- SA is ranked as the second most competitive economy in Africa according to the WEF's *Global Competitiveness Report in 2017*, and it is ranked 47 overall (an improvement from its 2015 position on the index).

The economy is struggling to serve all South Africans

South Africa has been plagued by weak economic growth with many factors seemingly conspiring to constrain growth. Unfortunately, many of the challenges have been self-inflicted through, among other things, policy uncertainty and poor policy implementation. While salaries are growing at the fastest rate since 2015 and the Gini coefficient has improved slightly, poverty has increased. Over a quarter of the population, mainly children, are unable to obtain enough food to provide them with a sufficient diet for healthy development.

Current economic trend

- Average GDP growth between 2009 to 2016 was 1.6% per year. However, average GDP growth slowed to 1.1% over 2014 to 2016.
- SARB lowered the growth expectation for 2017 to 0.5%, while growth of 1.2% and 1.5% is expected in 2018 and 2019, respectively.
- SA is emerging from a technical recession and has been downgraded by international ratings agencies.
- Unemployment is increasing. Since 2011, the unemployment rate has increased from 24% to 27.7%.
- Poverty and hunger are increasing – over 55% now live in poverty (refer to the box below).
- Fragile States Index - South Africa finds itself within the Elevated Warning category. SA has had a “rapid decline” over the past decade, with “only Libya, Syria, Yemen, Mali, and Senegal having worsened more in the past ten years.” The economic decline factor has also worsened.

Unfortunately, these trends are likely to continue until underlying structural issues start to be addressed. Investor and consumer confidence have been eroded and continue to be affected by the political climate which will likely remain volatile until the next general elections in 2019. A depressed economy stifles employment creation, which means that it will be difficult to reduce poverty.

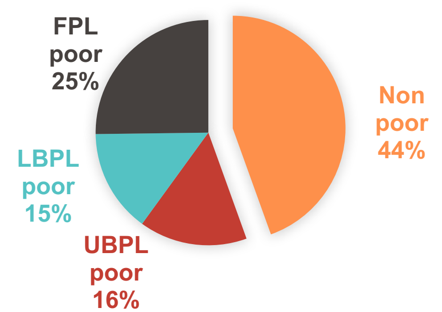
Poverty is on the rise

More than half of South Africans are considered poor. Poverty has increased from 53.2% to 55.5% since 2011. Only 44% of the population is deemed ‘non poor’.

Three poverty lines	Income pppm*	% below line	Number of people	Description
Upper-bound poverty line (UBPL)	R1138	55.5%	Over 30,4 mn	Individuals able to purchase adequate levels of food and non-food items.
Lower-bound line (LBPL)	R758	40%	21.9 mn	Individuals forced to sacrifice food to obtain essential non-food items.
Food poverty line (FPL)	R531	25.2%	13.8 mn	Extreme poverty: Individuals unable to obtain enough food to provide a sufficient diet for healthy development.

*Per person per month, inflation adjusted prices

POOR AND NON-POOR SOUTH AFRICANS (2015 FIGURES)



Source: StatsSA Poverty Trends, 2017

Over-burdened middle class can't provide sustainable growth

The middle class is essentially a very small "pie" upon which business and government depend for revenue. The middle class is relatively small and is under pressure. At the broadest definition, the middle class make up just 16% of the population. Given high levels of competition for this market, this segment is not significant enough to support sustainable growth. The proverbial "pie" needs to grow and both sectors of the economy need to improve.

Middle class "three salaries away from poverty"

The 'middle class' is difficult to define:

- It is variously defined as households with an income ranging from **R5,600 to a maximum of R40,000** per month after direct income tax for a family of four (although FinScope defines the upper class as those earning above R30,000 per month).

Its size is estimated as being between **13.7% to 16%** of the population or approximately 6 million people at the upper end of the range. However, there are claims that the South African middle-class is shrinking.

- Social anthropology expert, professor Leslie Bank, says that the middle-class is too small and needs to increase by "at least 20% to 30%" if economic growth is to become sustainable.

The middle class is under pressure and finds itself in a precarious position:

- Three quarters are purported to be under **financial stress**.
- **Dangerously high levels of debt** have been reported.
- Much of the middle class are approximately **three salaries away from poverty** (i.e. the length of time the banks allow for catch-up on unpaid mortgages, after which a foreclosure is initiated).
- The **repossession rate is four times higher than the world average** on a per-capita basis.

The size of a country's middle class is viewed as an indicator of the health of an economy. It is an important source of tax revenue and spending. Unfortunately, SA's middle class has been described as vulnerable as even mild economic shocks may be sufficient to push households back below the threshold of poverty.

The IRR's 2015 report found that "any significant future middle class expansion would depend on South Africa securing an economic growth turnaround".

Economic strengthening is critical for creating stability

The government adopted the NDP in 2012 as a strategic framework to address socioeconomic and developmental challenges in SA, with the overarching goal to eliminate poverty and reduce inequality in SA by 2030. However, since being adopted, progress has been poor and, in certain areas, SA has regressed. The goals may appear to be too ambitious given the current challenges, however the industry must embrace its spirit. The LVPI needs to be built for the economy that South Africans want as the current situation is unsustainable. The consequences of inaction are beyond consideration.

NDP economic goals for 2030

- **Gross Domestic Product (GDP) should increase by 2.7 times** in real terms, requiring average annual GDP growth of 5.4 percent over the period.
- **GDP per capita should increase to R110 000 per person** in 2030 from about R50 000 per person in 2010, in constant prices.
- The unemployment rate should fall from 24.9 percent in June 2012 to 14 percent by 2020 and to 6 percent by 2030. This requires an additional 11 million jobs. Total **employment should rise to 24 million** from 13 million.
- **Income inequality (measured by the Gini coefficient) should decrease to 0.6 in 2030**, from 0.7 in 2010.
- Reduce the proportion of the population living below the lower-bound poverty line from 39% in 2009 to 0% by 2030.
- **Reduce poverty-induced hunger to 0%** by 2030.
- Increase the share of income going to the bottom 40% of income earners to 10% (from 6%).

Most recent status of economic goals*

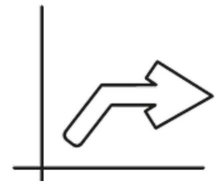
NDP Target	Baseline	2030 Target	Most Recent Status
Reducing the proportion of persons living below the lower-bound poverty line from 39% (in 2009) to 0% by 2030.	39.0% (2009)	0%	40.0% (2015)
Reducing income inequality from 0.7 in 2010 to 0.6 by 2030.	0.70 (2010)	0,60	0.68 (2015)
The share of income going to the bottom 40% of income earners should rise from 6% to 10%.	6.0% (2010)	10,0%	8.3% (2015)
Reducing poverty-induced hunger to 0% by 2030.	21.4% (2011)	0%	25.2% (2015)

*Sourced from the StatsSA Poverty Report 2017

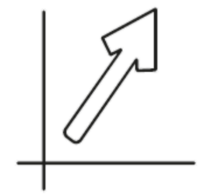
Economic scenarios highlight the challenge of NDP goals

Three scenarios (a high growth, base case and low growth scenario) were included in an analysis undertaken to determine the possible influences that each may have on the modernisation of the LVPI and the requirements for the payment system. The scenarios commissioned for this report confirm the challenge of achieving the NDP goals: The highest growth scenario predicts 3% annual GDP growth going forward, with flat growth leading up to the next general election in two years. Even the most “sunny day” scenario will be insufficient to meet NDP targets

Base case
Just over 2% on average per year

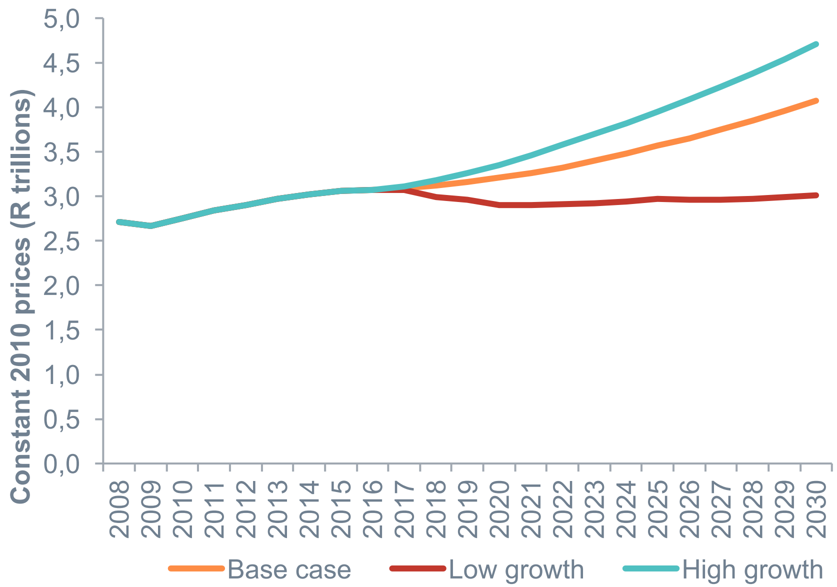


Low growth
Below 1% on average per year



High growth
Just more than 3% on average per year

Historic South African GDP across three scenarios



Stats SA, 2017, Own forecasts

Although it is impossible to make an exact forecast on demographic and economic variables, scenario planning can help to provide different potential paths of the future given current forces or trends. The three scenarios are closely linked to the international and domestic economic environments. Domestic political decisions and policies, as well as policy implementation, quality of leadership and human capital development are also seen as important drivers of the different scenarios.

In all three forecasts, low growth is expected in the next two years before the next general election. The high growth scenario does not demonstrate an average growth of more than 3% because, assuming that the elections yield a result that encourages investment in SA, that investment will take time to realise. Unemployment, in particular, only sees an improvement in the high growth scenario. The variance in the GDP per capita for the different growth scenarios is relatively small (R62,100 for the base case in 2030, R45,800 in 2030 for the low growth case and R71,700 in 2030 for the high growth case). Refer to Appendix 1 for further detail.

While these scenarios make a big difference for the lives of South Africans, they don’t make a significant difference in the requirements for the payment system under current projections.

Inclusive growth is required

Growth of the economy needs to be inclusive to benefit the majority of South Africans. Achieving inclusive growth requires many stakeholders, including government, business, labour, and civil society, to work together to start to address the country's challenges,. The National Payment System is one of the contributors which can play a role in supporting inclusive growth.

Defining inclusive growth

The OECD defines inclusive growth as "economic growth that creates opportunity for all segments of the population and distributes the dividends of increased prosperity, both in monetary and non-monetary terms, fairly across society."

In order for poverty reduction to be achieved, the World Bank claims that economic growth must be both rapid and sustainable. Sustainable economic growth has become synonymous with inclusive growth, which means including the majority of a country's labour force in economic activity. However, inclusive growth emphasises the need for productive employment, rather than employment or income redistribution in themselves. As such, inclusive growth is a long-term perspective and is hinged on the meaningful engagement of a country's workforce in economic activity through equal opportunities, and access to markets and resources.

The NDP is the South African government's leading policy framework. It was adopted by the South African Government in 2012 as a long term vision and plan for the country. The NDP aims to eliminate poverty and reduce inequality by 2030. According to the Plan, South Africa can achieve these goals through the energies of its people, growing an inclusive economy, enhancing the capacity of the state, and stimulating leadership and partnerships throughout society.

The role of the National Payment System

The South African payment ecosystem stakeholders interviewed for this report believe that the payment system is one of the elements that can support inclusive economic growth.

Including a greater proportion of the population in the formal payment system brings a variety of benefits, such as:

- Improving the lives of individuals and families, and can contribute to inclusive growth and economic development.
- Reducing reliance on cash reduces the costs and risks associated with cash handling and management.
- Allowing consumers to build payments data history which can be leveraged to access credit and which also assists financial organisations to better assess credit risk.
- Reducing marginal operating costs through greater numbers of consumers.
- Reducing incidents of crime, particularly cash theft
- Reducing black market activity
- Increasing tax revenue
- Increasing the ability to oversee and manage the economy holistically

It is widely acknowledged that the NPS is only a part of the solution. The NPS is not a "silver bullet," but it can be a significant obstacle to growth and economic development if not designed correctly. Many stakeholders will be required to work together to address complex issues, ranging from policy amendments to financial education. Other stakeholders, such as SASSA, ICASA, and retailers will need to work with the NPS to enable it to provide full benefit to all South Africans. This includes many aspects from a fit-for-purpose regulatory framework through to improving telecommunications infrastructure.

Inclusive growth improves income & market for financial services

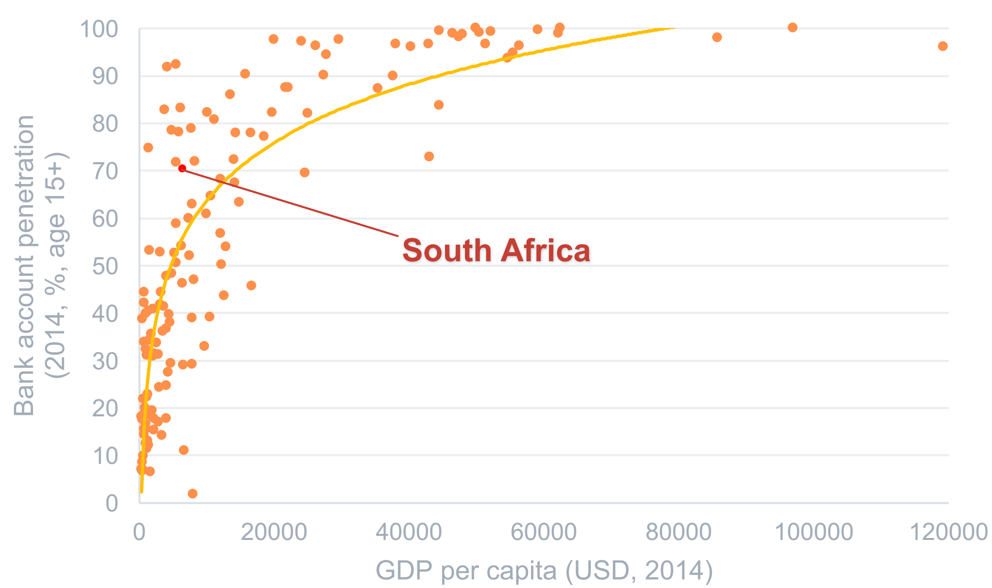
The banking industry will have to focus on making the pie bigger – on inclusive growth for the developed and developing sectors of the economy. Growth of the economy needs to be inclusive to benefit the majority of South Africans. There is a relationship between personal income and bank accounts that demonstrates that once the former reaches a certain level, that bank accounts become near universal.

Increasing income is linked to account penetration

- The statistical record is clear that once personal incomes reach a certain threshold, bank accounts become an indispensable way of securely storing and accessing personal assets. In other words, growing the economy and ensuring a more equal distribution of wealth increases the customer base for the payment system.
- South Africa already has a moderately banked population : 58% have a formal bank account and that number jumps to 77% when the SASSA grant beneficiary card holders are included.
- Unfortunately, many low income account holders use their accounts as a mailbox, withdrawing all funds in a single transaction when they are received. Many reasons exist for this behaviour, including a lack of card acceptance infrastructure in rural areas.
- Ordinary South Africans, particularly the poor, require more income to improve usage of their accounts. Economic growth and lower inequality are required to drive the need for and use of bank accounts.

National income explains much of the variations in account penetration across all economies – but far less among lower income economies. Each dot on the chart below represent the percentage of adults with a bank account and GDP per capita by country. Although South Africa appears to be above the trend line (the yellow line) for its account penetration, the number is inflated because of SASSA accounts. Without these, it would be below the line. Countries with a GDP per capita of more than $20k have nearly universal bank account penetration.

Adults with an account at a formal financial institution (%)



Source: World Bank, own analysis

Linking payments, financial inclusion, & inclusive growth

The link between electronic payments and macroeconomic growth is difficult to quantify, however the use of electronic payments is widely believed to be beneficial to the economy. Electronic payments are an aspect of financial inclusion that can reduce waste and improve efficiency, convenience, and safety, as detailed below. But there are a number of barriers that hinder the adoption of electronic payments. These barriers require action from many stakeholders to address.

Financial service	High-level benefits	Reduces waste	Improves efficiency, convenience and safety	Barriers to the adoption and use of electronic payments
Access to electronic payments	• Makes everyday financial transactions more efficient, convenient and safe • Reduces friction	• ↓ cost of making / receiving payments • ↓ travel (e.g., to bank branch or ATM) • ↓ wait times / inefficiency • ↓ losses due to unauthorised / incorrect payments (human error) • ↓ administration costs for government/business • ↓ working capital / ↑ interest • ↓ crime / theft and corruption • ↓ 'ghost' accounts / fake recipients for government payments • ↓ reduce non-performing loan (NPL) portfolio for financial institutions when payments data history is assessed for credit risk	• ↑ speed • ↑ transparency and ability to track payments • ↑ control • ↑ confidentiality • ↑ productivity / output • ↑ automation of operations • ↑ consumption • ↑ security • ↑ access to credit - regular bill payments via account can build payments data history, which can be leveraged for better access to credit / allows assessment of credit risk • ↑ empowerment of women which has been found to result in increased spending on health, housing and nutritious food	• Low income levels & high fees/ banking costs • Lack of ubiquitous electronic money ecosystem • Lack of consumer trust and willingness • Low levels of literacy & financial education • Poor marketing • Culture / consumer behavior / habit • A focus on commercial drivers by the role players in the ecosystem • Regulation (AML & KYC) • Risk management requirements • Disconnect between different channels (lack of interoperability) • Lack of connectivity and high data costs

The four pillars of financial inclusion are access to electronic payments, savings, credit and insurance. The table summarises the benefits that have been found to be associated with electronic payments. Not all of the pillars are equal in reaching development goals. Microcredit has had mixed results while the benefit of insurance is less clear. Access to electronic payments, as well as appropriate savings mechanisms, report the biggest impacts on development goals, such as lower poverty and inequality, according to the World Bank. Refer to Appendix 2 for the full table which includes all four pillars of financial inclusion.

Creating an LVPI for all South Africans

The LVPI needs to be developed with the next decades in mind. It must serve all South Africans in the developed and developing economies, and should be built to serve the economy that South Africans want.

Flexible	**The LVPI needs to be future-proofed cater for new use cases as expectations evolve** • The LVPI needs to be built with the next 20 years in mind. It is nearly impossible to predict the changes and new technologies or solutions that will be developed in that time. Fifteen years ago, no one could have foreseen the impact that smartphones would have on our lives, so it is fair to say that we may all be surprised by what emerges in 10 to 20 years. • The rise of on-demand services has resulted in consumers seeking seamless services and experiences, and collaboration among brands to provide these. Payments will disappear into the process as it becomes a holistic experience that becomes intuitive, habitual, and automatic, requiring less and less from the consumer to enable it. • The use of international standards such as ISO 20022 can increase the flexibility, utility, and appeal of the LVPI by providing a single data standard that can be used to implement a panoply of payment instruments and services. The LVPI therefore needs to be built with flexibility, scalability and modular extensibility in mind.
Inclusive	**Building for the economy that South Africans want requires that the LVPI is inclusive** • The development of the LVPI needs to cater the developed and developing economies in South Africa. The requirements of each sector of the economy are driven by different factors. Serving both economies requires a dual strategy from the payment system. It needs to support modern, advanced payments for the financially included and corporate users. But it also needs to provide paths in and out of the financial system for the excluded. Development must occur along two parallel tracks, although these should converge in the long-term. • The LVPI needs to be inclusive of more stakeholders as the payments ecosystem extends well beyond the banks. This is likely to involve the participation on non-banks (fintechs, users, and others) in governance bodies.
Low cost	**The LVPI must be low-cost** • The high-volume, low-value nature of LVPI payments requires a cost efficient infrastructure. • Supporting the underbanked with appropriately priced accounts and payments can increase financial inclusion. • Corporate users require low-cost payments to reduce friction in the economy.
Scalable	**The LVPI needs to be scalable to ensure that it caters for the economy that South Africa has and for the one it wants** • The three possible scenarios do not change the underlying needs that exist for the payment system. Volumes, distribution and cost per transaction may change depending on the scenario; but the underlying functionality that is required does not change. • No matter the real outcome, the payment system will have to cater for a bigger population and a more tech savvy consumer. Population growth estimates put numbers at 59 million by 2020 and 65.6 million by 2030. Millennials are, at the oldest end, 37 years of age today and the generations born since will all continue to be more comfortable with technology and therefore likely to accept newer payment methods.

A modernised LVPI can help SA meet its challenges

- Macroeconomic indicators paint a bleak picture in South Africa. Increasing unemployment and poverty figures attest to the worsening situation faced by far too many citizens, while growth expectations have been lowered to 0.5%
- South Africa faces many challenges, structural and otherwise, in its efforts to meet the targets laid out in the NDP.
- Despite the difficult outlook, the industry must embrace the NDP's spirit. The gap between South Africa's two economies must converge, with the goal of ultimately becoming one.
- Many stakeholders will be required to work together to achieve the ambitions of the NDP, and the NPS has a role to play in supporting inclusive growth which is required.
- In order to do this, the LVPI must serve all South Africans, now and in the future. It must serve the financially included while offering services to those not currently included.
- To meet this need and in order to 'future-proof' itself, the LVPI's design must be: **flexible, inclusive, low-cost, and scalable**.
    - **Flexibility** can be achieved chiefly through a technological and business model design that encourages innovation.
    - **Inclusivity** can be achieved by including all stakeholders in the decision-making process.
    - **Low-cost** can be achieved through clever system design and expanding the pie, maximising the volume being put through a fixed-cost infrastructure.
    - **Scalability** is primarily function of the technological design.

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Goals proposed for the modernisation of the LVPI

Stakeholder views on the goals of payment modernisation

When asked about the goals of payment system modernisation, South African stakeholders echoed nine of the ten goals found in the international comparison:

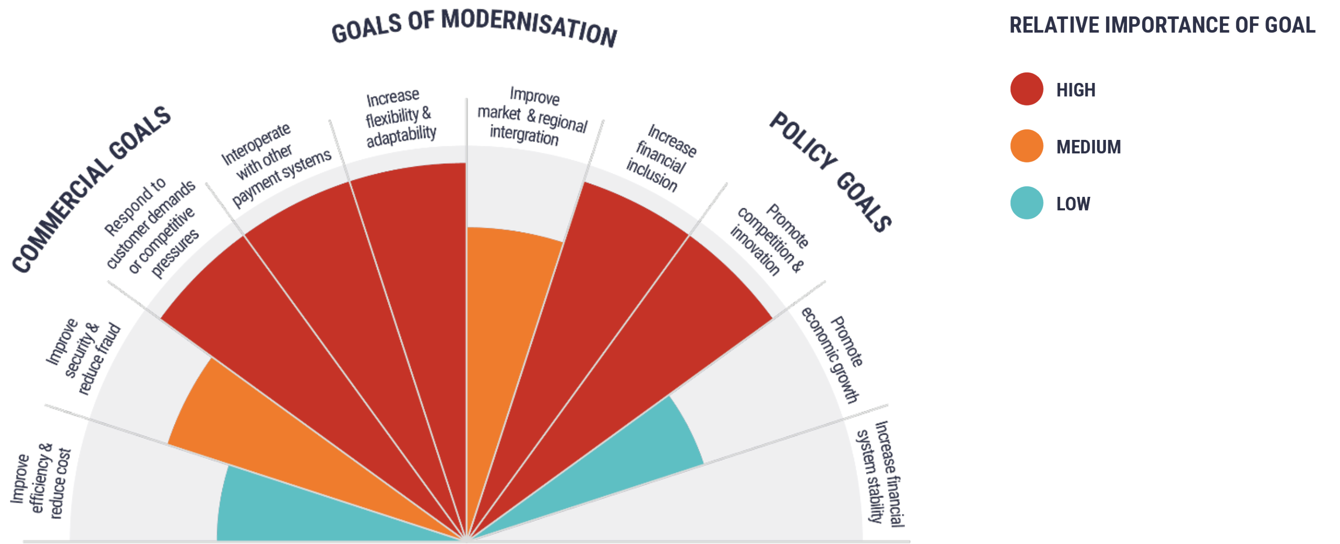
- Promote competition and innovation
- Respond to consumer demands and competitive pressures
- Interoperate with other payment systems
- Increase flexibility and adaptability
- Increase financial inclusion
- Improve security and reduce fraud
- Improve market and regional integration
- Improve efficiency and reduce cost
- Promote economic growth

The interviewees did not articulate any new goals. The remaining goal was not perceived as specifically needing to be addressed by the modernisation programme.

The goals are linked; one goal can assist in achieving another goal. Some of the goals are significantly more difficult to achieve than others, while some can be achieved within a relatively short period. The pursuit of any or all of the goals needs to be determined through an inclusive process.

The diagram highlights the goals that were articulated in the local interviews. The research team subjectively estimated the importance of each goal based on the relative frequency, enthusiasm, and emphasis of the topic in the interviews, as well as the impact that the goal has on achieving the other stated goals.

The section following describes and comments on each of the goals proposed by the interviewees.



Linked nature of modernisation goals

The proposed modernisation goals are linked. Reaching one goal can assist in achieving another. For example, achieving interoperability between money transfers can assist with promoting competition & innovation.

The achievement of the goal listed below impacts the achievement of the goal listed to the right	Promote competition & innovation	Respond to consumer demands & competitive pressures	Interoperate with other payment systems	Increase financial inclusion	Increase flexibility & adaptability	Improve security & reduce fraud	Improve market and regional integration	Improve efficiency & reduce costs	Promote economic growth
Promote competition & innovation		x		x		x			
Respond to consumer demands & competitive pressures	x			x					
Interoperate with other payment systems	x	x		x	x		x	x	x
Increase financial inclusion									x
Increase flexibility & adaptability	x	x	x	x			x	x	x
Improve security & reduce fraud		x		x				x	
Improve market and regional integration		x		x				x	x
Improve efficiency & reduce costs		x		x					
Promote economic growth	x			x					

The table to the left summarises the ways in which the ten goals influence one another. Certain goals have a broad influence (e.g. interoperability). Others, such as financial inclusion, are influenced by all of the other goals. This reflects the emphasis in the interviews that some goals are more important than others, either because of their strong impact on others or the complexity required to achieve them.

The achievement of all other goals has a positive impact on financial inclusion, however its impact is not reciprocal. The only goal supported by financial inclusion is promote economic growth.

The importance of two goals, interoperability with other payment systems and increasing flexibility & adaptability, is underscored by their impact on other goals. They have a positive impact on all other goals, except for improving security & reducing fraud.

Some goals have a bi-directional influence. For example; financial inclusion and promote economic growth can positively impact each other; as can promote competition & innovation and respond to consumer demands & competitive pressures.

The table also emphasises that goals are not equal in complexity. Although it is not a table of dependencies – financial inclusion does not require market and regional integration, for example, even though market and regional integration can support financial inclusion – the more a goal is impacted by others, the more complex it is likely to be. Financial inclusion, and responding to consumer demands and competitive pressures stand out in this regard.

Goal: Promote competition & innovation

Description and drivers

GLOBAL DESCRIPTION

Encourage the entry of new providers and the development of new services.

This is primarily a policy goal but has commercial implications if achieved: more innovation attracts customers and increases usage of electronic payments. From a policy point of view, more competition reduces prices and improves options for consumers while innovation can improve the services that are provided to citizens. Several interviewees suggested goals are actually broader than payments and include banking services. More broadly, separating payment services from banking services has been a key policy tool employed in other countries (e.g., Brazil, EU, Nigeria, UK) to promote greater competition.

Promoting competition and innovation can be achieved through technical changes, rule changes or a combination of both.

DRIVERS AND BENEFITS

Drivers:

- The need to increase usage of electronic payment systems and the ubiquity of payment services.
- The need to meet corporate and consumer demands for new services.
- The need to support effective commerce and trading.

Benefits:

- Increased consumer choice
- Increased variety of services
- Improved services / addition of value added services
- Improved customer experience
- Attraction of new consumers
- Possible inclusion of unbanked
- Increased usage of the payment system
- Lower cost / prices.

Goal: Promote competition & innovation

Key	
SA interviewees' suggestion	
SA suggestion & applied Internationally	
Applied internationally	
Authors' suggestion	

Insights from the interviews and the available levers

Insights from South African voices

Two major themes emerged from the interviews:

1. The role of new entrants in creating innovation.

- They bring competition, innovative ideas and a balance of power.
- New entrants will be important contributors to furthering financial inclusion.

However, the existing bank stakeholders believe that other organisations do not appreciate the regulatory burden that banks have and that new entrants need to fairly accept some of this burden if they want to participate.

"Let's have more people participating but on a fair basis."

2. Regulation for innovation.

A common sentiment shared by many respondents is that regulation is a hurdle to innovation.

- Regulation inhibits new players from entry, thereby stifling innovation.
- The regulatory burden can also limit innovation by existing players.
- Regulation can inadvertently suppress innovation and hinder financial inclusion, i.e., by requiring players to follow the same KYC regulations when providing services to the underbanked.

The suggestions that emerged from the interviews were:

- A layered approach to regulation - such that parties are only regulated according to the realm within which they play and the relative risk that they bring to the system. This could facilitate the inclusion of new players into the value chain.
- Some flexibility where it makes sense to improve financial inclusion.

" The industry can create rails. They can create platforms and they can create regulatory incentives, or at least an environment where innovation can take place."

Suggested levers

Potential levers	Benefits of levers
Financial education / literacy	Awareness of options improves consumer choices
Micro payment model	A lower cost model provides alternative option
Risk-based regulation	Allows new entrants and includes unbanked
Increase consumer access to the payment system	Increased usage of the payment system incentivises providers to provide new solutions
Online alternative to card payments	Increases options for consumers
Link legacy payment system & alternatives for the underbanked	Increases options for consumers
ISO 20022	Enables value added services through additional data
Transparency requirements	Visibility of pricing allows comparisons by consumers
Require standardised APIs	Allows access to provide new services & reduces risk
Expansion of participants	Increases options for consumers
Broaden access to non-banks	Creates opportunities for non-banks to provide payment services
Inclusive governance	Including more organisations in governance can create rules / services that better serve needs
RT pull payments / RFP instrument	Increases options for consumers
Proxy database	Makes electronic payments more convenient
Pricing regulation	Prevents overcharging for services
Revise settlement method	Can enable new entrants
Real-time payments	Platform for innovative products & services

Goal: Promote competition & innovation

Barriers, interactions with other goals and commentary

Barriers

- Lack of regulatory framework that allows for organisations to provide payment services without a banking license
- High costs of entry for new entrants
- Lack of interoperability between payment systems and closed-loop systems
- High price of RTC payments to consumers and users

"If you're seeing more new entrants, you're getting better competitive outcomes, you're getting better solutions at a better cost point to end consumers."

Commentary

- Rule changes can be used to further the achievement of this goal. In particular, easing the regulatory burden and easing access to non-banks to the payment system through fit-for-purpose regulation.
- Risk-based, or principals-based, regulation works by assessing the level of risk that an organisation brings into the payment system and then applying appropriate controls to manage that risk. In the EU, for example, new legislation separated payment services from banking services by creating separate regulatory regimes. This lowers the regulatory burden and therefore encourages non-banks to participate in the payment system.
- The questions that arose from the interviews and which need to be considered are:
  - How to strike the balance between making regulation less complex while still managing the risks?
  - How to avoid a 'one-size-fits-all' approach that excludes new entrants and discourages innovation?
  - How to set up regulation to cater for the whole economy?
- Fixing price and reach issues with RTC can help promote new services.

Interaction with other goals

Enabled by:
- Respond to consumer demands & pressures
- Promote economic growth
- Interoperate with other payment systems

Enables:
- Respond to consumer demands & pressures
- Improve security & reduce fraud
- Increase financial inclusion

Goal: Respond to customer demands & competitive pressures

Description and drivers

GLOBAL DESCRIPTION

Encourage the development of services that more completely serve modern customer and user needs, and help organisations to respond to competitive pressures, typically from fintechs and challenger banks.

The requirements for the payments system span both the developed and developing aspects of the South African economy. There are demands which need to satisfy a developed economy as well as those which need to cater for a developing one. Interviewees primarily responded to questions relating to this goal by discussing the requirements of the developed aspect of the economy.

Responding to customer demands and competitive pressures is a commercial goal. The levers used to reach this goal can be both technical or rules-based.

DRIVERS AND BENEFITS

Drivers:

- New entrants into the market for payment services threaten to take market share.
- Customers want new services currently unavailable in the market (online payment by EFT, proxy database, seamless payments, etc.).
- Banks need to look for new sources of fee-based revenue, because interest revenue is declining.

Benefits:

- Remaining relevant and preventing relationship erosion
- Increasing usage of payment services
- Maintaining / growing market share
- Increasing revenue

Goal: Respond to customer demands & competitive pressures

Insights from the interviews

Insights from South African voices: Users

Four user / corporate demands and pressures were mentioned:

1. **Assurance** that collections are likely to be successful and that disputes will be minimal. Some suggestions were made in this regard:
   - A **dispute process for EFT** (similar to that for card)
   - A **qualification process for users and fines for banks who allow rogue users into the system** could prevent some of the abuse that exists and prevent erosion of trust in the payment system.
   - **Prescreening of consumers** would help users to determine up front whether their debit orders are likely to succeed.

"We need to really safeguard the trust that the users also have for the system."

2. **A richer data** standard which will assist with providing value added services and will create efficiencies. Expected benefits include:
   - **Improved reconciliation** processes
   - Reduced disputes and **increased successful collections**
   - Innovative **value-added services** that can be built around payment messaging which could help customers with treasury management, supply chain management, order fulfilment, or other functions.

"Users are looking for better information around payments that they can use internally for their own capabilities, and also for how they can improve their fulfilment with their consumers. The data enrichment opportunity is absolutely critical."

3. **Real time** - The high costs associated with RTC were often cited as a reason for low uptake.

"Time to money is a key thing for our clients. The costs of getting real-time value is still reasonably expensive, considering what it really costs."

4. Users need to **control costs.** There are cost implications for investing in new payments infrastructure / innovations.

"Cost efficiencies are a big thing, there's a lot of pressure on the industry."

Insights from South African voices: Consumers

Four consumer demands and pressures were identified:

1. A **real time experience** when paying. Interviewees universally recognised the instant gratification trend among South African consumers and the resulting impact on payments.

"Consumers want instant gratification. They want payments to be done now – instantly into their account."

2. **Control, visibility, and choice** – Consumers want to decide when and how they pay, have transparency in pricing, and want bespoke solutions to meet their needs.

"The bargaining power has shifted in many ways away from banks and more toward the consumer. The consumer is much more aware of options, and that is translated to pressure you will see in the fees for banks in that market."

3. **Seamless payments** - The rise of on-demand services has resulted in consumers who are seeking seamless services and experiences, and expecting brands to collaborate to provide these. Payments need to disappear into the process. The expectation is to have a holistic experience that becomes intuitive, habitual, and automatic and which will require less from the consumer to enable it to function.

"Banks are going to become less visible in the payment process."

4. Better **value for money**, lower prices or even free basic payments.

Goal: Respond to customer demands & competitive pressures

Insights from the interviews

Insights from South African voices: On technology

Mobile
The growth of **mobile as a channel** is recognised by South African stakeholders. It is predicted that by 2020, mobile traffic will surpass 1 000 PetaBytes in Sub-Saharan Africa and that Smartphone adoption will be 58%.

"My kids are teenagers. They will only ever make financial transactions on the phone. Certainly for the next 15 years, they will never go into a branch, they will never use Internet banking. There is an expectancy that they'll be able to do everything from one point."

The potential of mobile will, however, likely be limited. This is due to high data costs. In addition, a number of respondents raised concerns about the fact that mobile and digital solutions run off the back of the costly card rails.

"Many mobile or digital solutions today become successful off the back of the card payment system rails. It just becomes extremely costly, ultimately. Cost doesn't go away. The models are changing to recoup the cost."

Digitalisation
One of the main impacts of digitalisation on payments is how it changes the customer's experience and expectations. Consumer needs for seamless payments and the growing need for real-time transactions, are all fueled by digitalisation. Digitalisation and digital were identified as key trends.

"If you look at how embedded digital is in people's lives, and apps within people's lives, the ability to pay has to be integral to that digital experience."

"I think the information age is here, digitalisation is here, unless we figure out how we are going to digitise, how we are going to utilise the technology, we are obsolete, and not just in the payments arena."

Contactless
QR codes are relatively popular in SA, and this is possibly a step in the process towards greater contactless adoption, which seems to be increasing gradually. Contactless payments are limited by a lack of interoperabilty.

"Contactless is here. They've just upped the limit on the acceptance, but we've got a problem with interoperability, in the sense that I can issue a contactless transport card in Johannesburg for the Joburg rail network, but I can't use it in Cape Town."

Biometrics
South African stakeholders did not often discuss biometrics, but some made it clear that it should be part of the modernisation journey, especially as it has potential to aid financial inclusion.

"So they rolled out the Aadhaar programme [in India], which is a biometric assessment for a billion people now. That removed all the documentation, so whereas FICA is all this kind of paperwork that excludes people."

Blockchain and Bitcoin
These are issues which stakeholders are aware of, yet do not yet appear to focus on. They are long term considerations, to be tackled once more pressing issues have been solved.

"We haven't given enough thought to that: Bitcoin - do we receive, do we participate, do we not? There are just so many basic things that we are focused on trying to solve, and that's not one of the things we have to worry about."

"I don't believe that Blockchain in South Africa is going to be around in the ten year scope. I'm not saying that there are not other uses for Blockchain. We've got bigger issues to sort out first, before we even start going with Blockchain."

Goal: Promote competition & innovation

Key
- SA interviewees' suggestion
- SA suggestion & applied Internationally
- Applied internationally
- Authors' suggestion

Insights from the interviews and the available levers

Insights from South African voices

Real-time payments are key to responding to both consumers and corporate users. However, interviewees mentioned several barriers to increase usage:

- The current RTC system is priced as a premium product – it is too expensive.
- Not all banks have made RTC available to their clients.
- Some banks delay sending notifications meaning that people don't experience the transaction as real-time.
- Banks have experienced fraud issues and therefore 'slow down' the process.
- RTC can't handle remittance data and is constrained for B2B payments.

Several people believe that the the current RTC system is not scalable enough to cater for retail payment volumes.

"Banks expected higher costs of processing for RTC , therefore things like interchange for real time clearance was set high, to cater for those costs."

"There is a need to take stock of what we have learnt and determine if the cost is too high. And if so, how do we drop it."

"RTC is never going to be scalable for normal payments. If you want to do real time payments person-to-person, at proper levels where cost is not sitting at fifty to sixty bucks, then we're going to have to re-architect that system. I don't believe the current rails are the rails for that. We will have to transition out of that."

Suggested levers

Potential levers	Benefits of levers
Risk-based regulation / Principles-based regulation	Removes barrier to entry for products aimed at lower LSM segment/unbanked
Transparency requirements	Users can make better informed choices
Increase access to the payment system for consumers	Access through more convenient channels will encourage and increase use
Link legacy payment system and alternatives for the underbanked - cash to account and cash to cash	Helps bridge SA's two economies
ISO 20022	Enables cost reductions for corporates
Proxy database	Makes electronic payments more convenient
Real-time payments	Makes electronic payments more convenient. Many mentioned fixing RTP
Acceleration of bulk clearing / settlement	Accelerating clearing could be advantageous
RT pull payments / RFP instrument	Also reduces fraud and increases value of EBPP
Nat'l bill payments system	Improves ease of payments and levels playing field
Pricing regulation	Improving affordability of payment services
Transparency requirements	Building trust in payment system and allowing people to choose best option
Broaden access to non-banks	Increases competition and provides segmented services
Inclusive governance	Improve ability to understand requirements
Micro payment model	Encourages use of electronic payments over cash

Goal: Respond to customer demands & competitive pressures

Barriers, interactions with other goals and commentary

Barriers

- Existing infrastructure and message formats
- Lack of interoperability
- Limited use of ISO 20022
- Cost structure of RTC
- Cost of modifying internal IT of financial institutions
- Compliance burden for new products
- Cost of compliance limits resources available for new product development

"From a user experience perspective, we live in a real time world. People expect to be able to do things off a mobile device, an always-on device and they expect things in real time. I think that connectedness and embedding the payment experience into people's day to day lives is really where we are going to get to. The payment itself is not going to be an event. It needs to be integral to the way people consume and interact in a digital world. Those are going to be the critical things."

Commentary

- User and consumer needs are evolving in line with changes in technology. They demand a good customer experience, and better quality services immediately. Technology and consumer demands create opportunity, but also an urgency to respond before becoming obsolete.
- Improving RTC and greater use of ISO 20022 are key elements to reaching this goal.
- The dichotomy of the first and third world elements of South Africa present both a challenge and an opportunity for the payments system. The opportunity is that the wealthier portion of the population can fund the development of the requirements which can be provided at a marginal cost to the poor.
- Underbanked consumers in South Africa have some overlapping requirements with financially included and active consumers, e.g., security and transparency. Additional needs are outlined in the 'financial inclusion' goal, and the achievement of the elements identified as part of this goal may contribute to further financial inclusion.
- Data enrichment is necessary for the experience of seamless payments and points toward increased use of ISO 20022 for enablement.

Interaction with other goals

Enabled by:

- Promote competition & innovation
- Improve security & reduce fraud
- Improve market and regional integration
- Interoperate with other payment systems
- Improve efficiency and reduce cost

Enables:

- Promote competition & innovation
- Increase financial inclusion

Goal: Interoperate with other payment systems

Description and drivers

GLOBAL DESCRIPTION

Interoperability among payment systems can help ensure that payment services can reach all providers and users with uniform service levels.

The SARB defines interoperability as “the ease of interlinking different systems on a business and a technology level,” and specified the technology level as being “the ability of different types of computers, networks, operating systems, applications, and other infrastructure of different banks and relevant stakeholders to interlink and work in partnership effectively, without interruption, explicit communication or translation prior to each event, in order to enhance the efficiency of the payment system.” Interoperability also includes standardising and harmonising payment instruments and processes in other countries, particularly those in SADC, so that banks and corporates can serve these markets at lower cost and with less friction.

Interoperability is chiefly a commercial goal and enables several other modernisation goals, including policy goals such as financial inclusion and market & regional integration.

DRIVERS AND BENEFITS

Drivers:

- Meeting consumer needs for uniform, easily accessible services
- Lowers costs for banks and corporates and promotes cross-border trade
- Promotes financial inclusion and participation
- Increases the usefulness and usage of payment systems.

Benefits:

- Widespread access, convenience & ease of use for customers
- Increased functionality through a collective network
- Positive network effects – the more people use a payment mechanism, the more it will be offered by merchants
- Economies of scale – greater efficiencies & lower costs due to volumes
- Can enable competition, which can lead to increased choice and lower costs
- A standardised set of core rails reduce the marginal cost of experiments which encourages innovation.

Goal: Interoperate with other payment systems

Key

- SA interviewees' suggestion
- SA suggestion & applied Internationally
- Applied internationally
- Authors' suggestion

Insights from the interviews and the available levers

Insights from South African voices

Two major themes emerged from the interviews:

1. The lack of interoperability limits the utility of payment solutions
Interoperability could connect closed-loop networks, which would immediately improve the utility of remittances for South Africans. This applies equally to e-wallet, account-to-cash and cash-to-cash solutions.

"Within the SA context and within the Africa context we are very, very fragmented. There is limited payment interoperability between payment streams and different geographies."

"It is a crying requirement in SA, to be able to transfer your cash from here to your family cross border but also in the rural areas. The retailers have done an incredible job but unfortunately those systems are not interoperable."

"The challenge is whether it is for parking, for transit, etc. That none of these wallets are interoperable."

"We're seeing the convergence of mobile and ATM. There are a lot of cardless ATM transactions, where the mobile is effectively the initiator of the transaction. The challenge there is that none of those things are interoperable. I can't launch a cardless transaction from one bank's mobile app and go to the nearest ATM. It's not really convenient if my bank doesn't have an ATM in that area."

2. The role of the regulator / industry bodies in driving interoperability
The regulator has a role to play in ensuring that interoperability is achieved as stakeholders are less likely to ensure that it exists when left to their own devices. Industry bodies also play an important role in driving interoperability.

"When you are talking interoperability it immediately implies collaboration - you need to talk to each other about that. The regulator could play a role in that space to just say these are the standards we expect."

Suggested levers

Potential levers	Benefits of levers
Link legacy payment system and alternatives for the underbanked - cash to account	Improves cash in and cash out
Link legacy payment system and alternatives for the underbanked - cash to cash	Improves cash in and cash out
ISO 20022	Enables bridges between diverse systems
Proxy database	Enables transaction routing based on convenient information
National bill payment system	Provides a uniform standard for bill payments & promotes use of electronic payments
Require standardised APIs	Enables open and secure exchange of data

Goal: Interoperate with other payment systems

Barriers, interactions with other goals and commentary

Barriers

- Closed loop systems
- Proprietary standards and lack of common standard for messaging
- Lack of uniform security standards poses security risks
- Stakeholders wanting to protect a perceived competitive advantage / potential loss of competitive advantage
- A lack of willingness of stakeholders
- Lack of volume to justify cross-border interoperable systems

Commentary

- Interoperability must strike the right balance between competition and collaboration. If a service is standardised too quickly, it suppresses innovation, but if it is allowed to become too differentiated, it loses the network effect and is less useful.
- Interoperability of account-to-cash remittance solutions was among the most frequently mentioned problems in the interviews.
- The key issue is identifying which payment solutions should be made interoperable. Initial feedback from interviews suggests the following solutions should be considered:
    - Account-to-cash remittances
    - Cross-border P2P payments (remittances)
- ISO 2002 is a key lever in enabling interoperability, as evidenced in SEPA, SADC, and elsewhere.

Interaction with other goals

Enabled by:

- No dependencies identified

Enables:

- Improve efficiency and reduce cost
- Promote competition & innovation
- Respond to consumer demands & pressures
- Improve market and regional integration
- Increase financial inclusion

Goal: Increase financial inclusion / participation

Description and drivers

GLOBAL DESCRIPTION

Financial inclusion involves ensuring that consumers have access to and can effectively use formal financial products: electronic payments, savings, credit and insurance. Access to these four pillars of financial services can greatly improve the quality of life of individuals and can prevent standards of living from falling sharply in an emergency.

South Africa has a moderately banked population (77% when SASSA grant recipients are included) however this has not translated into meaningful activity or participation in the electronic payment system as a high percentage of citizens withdraw all funds upon receipt, effectively using their accounts as mailboxes into which funds are received and then immediately withdrawn in their entirety. Everyday transactions are then conducted in cash.

The **adoption and usage** of financial instruments, particularly electronic payments, is critical. This implies that electronic payments must be made more available and attractive to this segment.

This is primarily a policy goal but has commercial implications if achieved: more South Africans using electronic payments not only improves their lives but, through increased volumes, can reduce the marginal operating costs and increase revenues for payment providers.

DRIVERS AND BENEFITS

Drivers:

- Targets for financial inclusion as outlined in the National Development Plan (NDP) and the Financial Services Charter (FSC).
- A moral imperative exists to improve the lives of South Africans and reduce the poverty and inequality that is a legacy of apartheid.
- Economic strengthening is urgently required to relieve acute societal tensions.

Benefits:

- The inclusion of more participants in the formal financial sector will not only improve the lives of individuals and families, but can contribute to inclusive growth and economic development.
- Reduced reliance on cash reduces the costs and risks associated with cash handling and management.
- Reduced fraud and incidents of crime through use of secure electronic payment channels instead of cash.
- Use of formal financial products can help individuals build a payments data history which can be leveraged to access credit and also assists financial organisations to better assess credit risk (thus reducing their nonperforming loan portfolio).
- Reduced marginal operating costs for payment services providers through greater numbers of consumers.

Goal: Increase financial inclusion / participation

Insights from the interviews

Insights from South African voices

Six factors to improve financial participation were identified:

1. **Accessibility** – Regulation needs to reflect SA realities to enable improved access to formal payment services (e.g. people should not be precluded from using the system because they cannot prove where they live).
   - Well-meaning regulation needs to be revisited so that it does not exclude people from electronic payments; regulation needs to be "fit-for-purpose."
   - It should accommodate South African conditions, including non-standard methods of identification and proof of address.

2. **Reach** – The system must meet people where they are. Reach may be improved by:
   - The roll out of **more traditional infrastructure** (ATMs, POS and branches) in underserved areas.
   - **Leveraging non-bank stakeholders** and their infrastructure, which already exists in the regions (retailers, MNOs, etc.)
   - Innovative, easy to use and understand **alternative channels,** likely utilising mobile.

"Mobile gives us an option to extend reach. The issue of inclusive banking in SA is more a distribution challenge than it is product challenge."

3. **Affordability** – The system must be significantly less expensive, if not free.
   - A new **micro payment model** may be required for P2P and P2B, as the business case for banks to service the lower end of the market is weak.
   - **Alternative stores of value** may need to be considered over bank accounts. High fees for holding money in bank accounts leads many to seek other options for storing value.

"Being poor is actually quite expensive when it comes to the prices that people pay."

4. **Utility** – The system must be as easy to use as (or easier than) cash if it is to be a viable alternative.
   - Cash is useful! (refer to the text box below). It must be possible to easily bridge into and out of cash.
   - Any alternative will have to be accepted by the informal sector.
   - Paradoxically, one of the keys to displacing cash may be making it more available.

Cash is useful!
- **It's real time**
- **It's understandable - you know how much you have at any point**
- **It's standard**
- **It's ubiquitous**
- **It's available, accessible and doesn't fail - it doesn't need electricity / a battery**
- **It provides certainty and is therefore trusted**
- **It's anonymous and untraceable – it also allows tax avoidance**
- **Cash is free to use (cost of cash is invisible to most consumers)**

"There are many people who will be worse off with a bank account. That's why we are seeing a growing trend in money transfer in remittance versus bank accounts, because remittances fit in naturally with their realities."

5. **Appeal** – The system should not be identified as one for "poor people" and should be aspirational.

"Many don't swipe their SASSA card because it signifies that you are poor."

6. **Education** – Greater financial literacy is required to ensure that consumers know what payment options exist, their benefits and costs; to enable informed decision-making.

"Physical cash is still considered a 'free' transaction just simply because if I give you R100 in cash I haven't seen any devaluing of that."

Goal: Increase financial inclusion / participation

Key

SA interviewees' suggestion	
SA suggestion & applied Internationally	
Applied internationally	
Authors' suggestion	

Insights from the interviews and the available levers

Insights from South African voices

Respondents provided additional insights regarding the why some lower income South Africans withdraw all of their money soon after it is received. These included behavioural aspects related to beliefs, habit, and even misinformation that may drive cash withdrawals, for example:

- **Fear** – There is an erroneous belief that if grant money is not withdrawn in its entirety, then it will not be provided again the following month (perhaps related to a rule which says that if money is not withdrawn regularly, then the grant recipient is assumed to be deceased and the funds are not made available again).
- **Visibility** – Grant recipients are unable to easily view how much money is in their account and are afraid of having their payment rejected at a point-of-sale. Drawing the full balance means that they know exactly what is available to them.
- **Budgeting** – To improve budgeting, cash is easily dividable into envelopes kept for different purposes.
- **Reputation / Aspiration** – There is a reluctance to use a card that visibly associates the cardholder with a low income group.
- **Community** – There is a "vibe" and an event that is created around getting dressed up, travelling to a town, and queuing with members of the community to withdraw funds from the only available ATM. People experience this as an important social occasion.
- **Prayer** – To give thanks for the grant or income, recipients withdraw all of the cash to pray over it.

Suggested levers

Potential levers	Benefits of levers
Financial education / literacy	Improves consumer decision-making
Micro payment model	Encourages use of electronic payments over cash
Risk-based regulation	Allows access to the payment system by consumers who are currently excluded
Mutual ATM network	Increases access & reduces costs for underserved
Increase access to the payment system for consumers	Increases access & reduces costs for underserved
Link legacy payment system and alternatives for the underbanked - cash to account and cash to cash	Increases options for underserved; encourages use of electronic payments over cash; improves ease of use / reduces friction
Proxy database	Encourages use of electronic payments over cash; improves ease of use
Displace cash	Encourages participation in electronic payments
Real-time payments	Encourages use of electronic payments over cash
Broaden access to non-banks	Increases options for underserved
Expansion of participants	Increases options for underserved
RT pull payments / RFP instrument	Can encourage use of electronic payments over cash for POS and bill payments. Could be a secondary step.
Nat'l bill payment system	Improves ease and encourages use of electronic payments
Pricing regulation	Prevents overcharging by payment service providers
Improve cross-border payments	Can encourage use of electronic payments over cash.

Goal: Increase financial inclusion / participation

Barriers, interactions with other goals and commentary

Barriers

- FICA requirements
- High fees
- Inadequate reach of the payment system
- Lack of a ubiquitous electronic money system
- Lack of interoperability between payment systems
- Low connectivity in rural areas for mobile payments
- High data costs for mobile payments
- Distrust of the financial system
- The negative association of products aimed at ‘poor’ people
- Behavioural patterns
- Financial literacy
- Literacy

Commentary

- Achieving meaningful financial inclusion is among the most difficult goals identified. It will require political will and endurance to address.
- Financial inclusion requires many collaborative initiatives to make meaningful progress, including: A legislative & regulatory review; the implementation of ICT infrastructure; improvement of the education system and the implementation of financial education programs.
- A unique opportunity exists, whereby the developed side of the economy can fund the infrastructure required to support financial inclusion.
- A partnership between the public and private sector has the best chance of producing significant improvements.
- The six factors identified by the interviewees may be tackled individually to gain some benefit but would be most powerful if done collectively.
- Success is not a given – many levers have been applied elsewhere and minimal progress has been made despite these interventions.
- Electronic payments are not currently a viable alternative for many in SA. Until mechanisms exist that are ubiquitous and easy to use, it is unlikely that there will be a big move away from cash.

Interaction with other goals

Enabled by:

- Interoperate with other payment systems
- Improve efficiency and reduce cost
- Promote economic growth
- Promote competition & innovation
- Respond to consumer demands & pressures
- Improve market and regional integration
- Improve security & reduce fraud

Enables:

- Promote economic growth
- Promote competition & innovation

Goal: Increase flexibility and adaptability

Description and drivers

GLOBAL DESCRIPTION

Increase ability of the payment system to deal with the changing needs of society.

The payment system needs to:

- Provide relevant services to consumers and users.
- Support the digital economy of the future.
- Enable beneficial economic change.

Increasing flexibility and adaptability is a commercial and policy goal. It supports the achievement of nearly all other goals suggested in the interviews, and is therefore a cornerstone of payment system modernisation. It requires both rule-based and technical changes.

DRIVERS AND BENEFITS

Drivers:

- The need to 'future-proof' the payment system so that it can adequately serve the needs of the country for the next decades.
- The need to easily embrace new technologies and channels for payments.
- The need to ease development and integration of new services into the payment infrastructure.

Benefits:

- Lower cost
- Improved services
- Increased innovation
- Increased competition
- Improved customer experience

Goal: Increase flexibility and adaptability

Key
- SA interviewees' suggestion
- SA suggestion & applied Internationally
- Applied internationally
- Authors' suggestion

Insights from the interviews and the available levers

Insights from South African voices

Three major themes emerged from the interviews:

1. **The rate of technological and social change is increasing. The payment system needs to be built to cater for new technology and new use cases.**
- New technology can be a catalyst for change. Stakeholders need to be able to adopt and embrace new technologies and new ways of interacting with the LVPI.
- New technologies present both threats and opportunities. If existing stakeholders aren't able to meet consumer demands, they can become obsolete; however, new use cases may emerge.

2. **The design of the payment system is critical to enable the industry to more easily embrace new technologies and channels.**
- The design should have an open-standard, be modular and have a modern technology stack.

"How you structure your infrastructure can make a big difference."

3. **There is a desire to simplify the system.**
- A desire was expressed to have one core system which allows the consumer / user to select the payment type that they prefer.

"The payment streams have to come together more than they do at this time. You don't want to lose the varied functionality but there is a wonderful opportunity to utilise this tech to converge a whole lot of these payment streams and simplify the environment."

"Ideally, there would be one menu with many options and at the back you'd have one payments system."

"My vision is that we have one pipe with many options and depending on what you use on the menu, that's what you pay."

Suggested levers

Potential levers	Benefits of levers
Risk-based regulation	Allows new entrants which may improve the range of services to consumers and users
Require standardised APIs	Allows access to provide new services
Inclusive governance	Including more organisations in governance can create rules / services that better serve needs
Broaden access to non-banks	Creates opportunities for non-banks to provide payment services
ISO 20022	Enables value added services through additional data, improves efficiency and lowers costs for payment service providers. A single data standard can be used to implement a panoply of payment instruments and services.
RT pull payments / RFP instrument	Allows users additional options for initiating payments.
Link legacy payment system & alternatives for the underbanked – cash to account and cash to cash	Allow payments to be initiated and completed through multiple channels.

Goal: Increase flexibility and adaptability

Barriers, interactions with other goals and commentary

Barriers

- Legacy systems
- Existing message standards
- Lack of interoperability between systems
- Lack of inclusive governance
- Cost of affecting change
- Inertia as existing infrastructure works

Commentary

- The LVPI needs to be built with the next 20 years in mind. It is nearly impossible to predict the changes and new technologies or solutions that will be developed in that time
- Additionally, the economy is changing more rapidly, and in ways that can't always be predicted. The payments system needs to be built to enable beneficial economic change in SA and should not inhibit or prevent it. It needs to support the digital economy of the future.
- The LVPI should be built with flexibility, scalability and modular extensibility in mind.
- Flexibility can be achieved chiefly through a technological and business model design that encourages innovation.

Interaction with other goals

Enabled by:

- Interoperate with other payment systems

Enables:

- Promote competition & innovation
- Respond to consumer demands & competitive pressures
- Interoperate with other payment systems
- Increase financial inclusion
- Improve market and regional integration
- Improve efficiency & reduce costs
- Promote economic growth

Goal: Improve security & reduce fraud

Description and drivers

GLOBAL DESCRIPTION

As South Africa seeks to increase the use of electronic instruments, new security challenges and safety considerations will emerge:

- Use by market segments unaccustomed to dealing with electronic fraud (phishing, spoofing, etc.).
- Access in environments and through devices (e.g., smartphone apps) for which payment systems were not designed.
- Increased speed of clearing (or use of RTC) decreases the amount of time available to identify and prevent fraud, while potentially increasing the risk.

To address many of the other goals, it will be critical to engender trust among large segments of consumers that currently do not trust the banks. The recent Authenticated Collections project was begun in response to abuse of debit orders, and was aimed at supporting this goal.

This is chiefly a commercial goal which is primarily addressed by technical changes.

DRIVERS AND BENEFITS

South African stakeholders recognise the importance of security as a goal of modernisation.

Drivers:

- Lack of trust inhibits consumer adoption of electronic payments.
- Increasing the customer base may require new approaches to security.
- Fraud losses need to be contained.
- Maintain integrity and safety of the payment system and the financial system.

Benefits:

- Protect consumers
- Improve trust
- Reduce fraud losses and increase profits
- Reduce crime

Goal: Improve security & reduce fraud

Key
- SA interviewees' suggestion
- SA suggestion & applied Internationally
- Applied internationally
- Authors' suggestion

Insights from the interviews and the available levers

Insights from South African voices

Three major themes emerged with regard to security and fraud:

1. **Trust –** Lack of trust in the payment system inhibits adoption, usage, and access.
   - Increased security can improve trust in payment systems.
   - Consumer protection is central to security and fraud-prevention enablement.

2. **Standards and collaboration** –Industry collaboration on security could support increase in security and greater ease of use
   - All role players should collaborate on standards and in particular, security standards.
   - Managing the security around digital identities is essential.
   - Biometrics could play a key role in improving security.

3. **Fraud prevention** – Controlling fraud losses is equally important for banks, users, and consumers.
   - Monitoring is key to combating fraud. Using patterns seen by system operators and data analytics to tackle fraud across the payment system is critical.

"A big barrier is security. There are huge risks in the payment arena: particularly around digital payments and real time."

Suggested levers

Potential levers	Benefits of levers
Multifactor / biometric authentication	Improves security at point of entry into the system
Financial education and literacy	Consumers make better choices
Proxy database	Can help stop authorised push payment fraud
Displace cash	Can reduce incidences of theft
Retire legacy systems or instruments	Reduces cheque fraud
RT pull payments / RFP instrument	Requires each payment to be authorised
Nat'l bill payments system	Especially good when combined with authenticated collections or RFP pull payments
Require standardised APIs	Uniform API standards increase security over screen scraping or file submission
Inclusive governance	Improves understanding of vulnerabilities

Goal: Improve security & reduce fraud

Barriers, interactions with other goals and commentary

Barriers

- High cost of implementing solutions
- Complexity around authenticating identity and payments initiation
- Sophistication of criminals; attacks are constantly evolving
- Consumers are often the target of fraudulent schemes that involve payment (authorised payment fraud). Payment system stakeholders have limited ability to prevent authorised payments made for fraudulent schemes.

Commentary

- All interviewees, when asked to describe the ideal future state, described the payment system as “secure”.
- Security is generally seen as a “hygiene factor” that is a necessary pre-requisite for any payment system operator or product to have a chance at success.
- Improving security & reducing fraud is supported by some of the other goals identified in the primary research:
    - Cash displacement – digitising payments reduces the risk of carrying and handling cash
    - Promote competition & innovation – new solutions may improve security

Interaction with other goals

Enabled by:

- Promote competition & innovation

Enables:

- Respond to consumer demands & pressures
- Increase financial inclusion

Goal: Improve market and regional integration

Description and drivers

GLOBAL DESCRIPTION

Integrate various domestic payment systems and/or link them with systems in other markets to stimulate trade (esp. with regional trading partners).

The key issue for integrating the South African market is interoperability:

- Within the national market, this refers to interoperability among closed-loop systems, e.g., a more integrated market for local remittances.
- Internationally, this goal requires the adoption and usage of global data standards such as ISO 20022 (currently used in SEPA and in SADC regional infrastructures).

This goal has both commercial and policy elements. A more integrated market is likely to stimulate usage, thereby increasing revenues for payment service providers. A more integrated market also serves public policy objectives, especially with regard to cross-border payments. Achieving the goal chiefly requires technical changes, but rule changes can ensure uniform adoption timelines and service levels, enabling more rapid integration if desired.

DRIVERS AND BENEFITS

Drivers:

- Consumer demand for uniform solutions
- Greater need for ubiquity of payment services
- Political and economic integration in SADC
- Market & regional integration can stimulate economic activity

Benefits:

- Reduced friction for cross-border trade
- Reduced costs
- Increased efficiency

Goal: Improve market and regional integration

Key
- SA interviewees' suggestion
- SA suggestion & applied Internationally
- Applied internationally
- Authors' suggestion

Insights from the interviews and the available levers

Insights from South African voices

Interviewees commented on both domestic and international integration:

1. **Domestic integration** – The fragmentation of payment solutions in the national market is seen as a barrier to wider usage.
   - Relationship to interoperability in a domestic environment is paramount.
   - Standards and guidelines are necessary, especially around mobile payments.
2. **International integration** – As a leading trade partner in southern Africa, a prime destination for migrant workers, and a prominent voice in SADC, South Africa can lead regional integration.
   - SADC integration is important to many, and critical to some.
   - Some see modernisation as necessarily entailing a cross-border element in the long term, even if it is not present in the near term. It is thus important to begin thinking about eventual international/regional integration from the outset.
   - Relaxation of exchange controls to enable cross-border payments especially for migrant workers is required.

"Regional integration is absolutely critical … we are not interested in defining a modernised environment for South Africa and not considering the region. Modernisation cannot be done in isolation; otherwise we are dead, quite simply. We've got to make sure we are enabling regionalisation as well as optimisation of the domestic payment infrastructure."

Suggested levers

Potential levers	Benefits of levers
ISO 20022	ISO 20022 bridge data standards or replace legacy standards
Pricing regulation	Can drive integration (cf. SEPA)
Nat'l bill payments system	Could provide a uniform way of presenting bills to integrate a domestic market
Require standardised APIs	Uniform API standards ease the development of pervasive services by enabling standardised communication between systems.
Inclusive governance	Including more organisations in the governance structures can ensure discussion on IT and business issues that might otherwise present barriers to integration

Goal: Improve market and regional integration

Barriers, interactions with other goals and commentary

Barriers

- Proprietary standards used in different systems
- Stakeholders wanting to protect a perceived competitive advantage / potential loss of competitive advantage
- A lack of willingness of stakeholders
- Lack of business case for cross-border infrastructures

Commentary

- Bridging the two economies in SA is a key challenge for integrating the national market. In this sense, interoperability between the formal payment system and the alternative for the underbanked will be critical.
- South Africa has been described as the gateway to Africa and many local businesses have extended operations into the rest of Africa. Regional integration can greatly improve efficiencies for South African businesses and foreign operations in the region. It could also have positive effects on foreign direct investment due to ease of doing commerce.
- Integrating the domestic and international markets for migrant remittances could make a major contribution to financial inclusion.
- Regulation and financial authorities have a key role to play in this goal due to the lack of business case for change.

Interaction with other goals

Enabled by:

- Interoperate with other payment systems

Enables:

- Increase financial inclusion
- Promote economic growth
- Improve efficiency and reduce cost
- Respond to consumer demand & competitive pressures

Goal: Improve efficiency & reduce cost

Description and drivers

GLOBAL DESCRIPTION

Harmonise interbank infrastructures and back-office processes within banks, increase automation for banks and businesses, and develop services that allow financial institutions and users to reduce the end-to-end cost of a transaction.

- The LVPI can provide services which benefit both parties, but also which the financial institutions can offer to their corporate clients as white labelled services.
- Examples of these types of services include:
  - Extended remittance data which eases the reconciliation of accounts receivable and accounts payable.
  - A national bill presentment service to replace fragmented, closed-loop solutions.
  - Direct access for corporates to the LVPI which rationalises their connection points to one for multiple banks. This also lowers the costs for the banks.

This is chiefly a commercial goal which can be achieved through various measures, including both technical changes and rule changes.

DRIVERS AND BENEFITS

Drivers:

- Corporate customers are demanding that the payment system help them to reduce the end-to-end cost of transactions, e.g. by going deeper into the payment workflow and increasing STP (straight through processing).
- Improved efficiency and cost reduction are essential in low growth environment.
- Fragmented solutions in market reduce efficiency in payment systems (e.g. proliferation of closed-loop bill payment and remittance schemes).

Benefits:

- Lower costs for providers and users
- Potentially lower prices for consumers
- Improved service
- Reduced complexity, increased convenience
- Reduced losses

Goal: Improve efficiency & reduce cost

Key
- SA interviewees' suggestion
- SA suggestion & applied Internationally
- Applied internationally
- Authors' suggestion

Insights from the interviews and the available levers

Insights from South African voices

With regard to commercial viability for banks and users, two themes emerged:

Efficiency:
- Interviewees believe in the value of **improved standards.** However, these should be implemented within the context of a larger vision and with a view of the problems that are being solved.
- Some interviewees expressed a desire (if able to start from scratch) to have a single payments "pipe," which has multiple options that can be selected by the user.
- Specific concerns raised:
  - The adequacy of the existing **disaster recovery (DR)** processes as the ability of users to accept payments is impacted when payment systems are down.
  - The speed of 3D Secure.

"My vision would be that we have one pipe with many options and depending on what you use on the menu, that's what you pay for."

Cost:
- High costs were the primary reason provided that the case for financial inclusion cannot be made.
- Corporates want lower costs:
  - Lowered administrative costs associated with attempting to collect from unfunded bank accounts. These costs end up being subsidised by other consumers.
  - Retailers will need to invest in connectivity in their stores for mobile payments. However, the current fees for a mobile transaction are too high because they tend to be based on card rails with high interchange fees – the same as card not present. This makes investments in mobile hard to justify.
- Lower entry costs are required to allow for new entrants.

Suggested levers

Potential levers	Benefits of levers
Pricing regulation	Influence customer behaviour through pricing
Link legacy payment system and alternatives for the underbanked - cash to account and cash to cash	Decreases cost and increases convenience
Mutual ATM network	Serve rural communities more efficiently
ISO 20022	Interoperability among multiple systems should lower cost
Broaden access to non-banks	Increase in competition will lead to better prices for users
Displace cash	Reduces cash handling costs
Retire legacy systems or instruments	Reduces cost and complexity of processing
Inclusive governance	Including more organisations in governance can lead to services that better serve customer needs
RT pull payments / RFP instrument	Efficient and secure method of RT collections
Nat'l bill payments system	Provides an efficient, secure and uniform method for presenting bills
Require standardised APIs	Creates efficient and standardised way of interacting with payment systems
Improve cross-border payments	Ensuring that payments can flow between countries at lower cost
Real-time payments	Can help business lower working capital requirements by increasing the speed of transactions in the supply chain

Goal: Improve efficiency & reduce cost

Barriers, interactions with other goals and commentary

Barriers

- Lack of interoperability between payment systems
- Legacy infrastructure and message formats
- Willingness of all stakeholders to make the required changes
- Pricing structure in legacy systems (e.g. card interchange fees)

Commentary

- Achieving this goal can help financial institutions and users lower costs and serve market segments that otherwise might not be profitable.
- It also allows them to weather tough market conditions and will allow them to use savings to focus on other growth activities or provide better prices to consumers.
- The realisation of this goal can assist with financial inclusion and cash displacement, particularly if the benefits of lower costs are passed onto consumers.

Interaction with other goals

Enabled by:

- Interoperate with other payment systems
- Improve market & regional integration
- Improve security & reduce fraud

Enables:

- Increase financial inclusion

Goal: Promote economic growth

Description and drivers

GLOBAL DESCRIPTION

Promoting inclusive growth in the South African economy that raises living standards for a wide swath of citizens and increases commerce for SA businesses.

- Typically measured by growth in real GDP and GDP per capita, although personal income and reduction in the Gini coefficient are also relevant.
- The Gini coefficient is a big issue in South Africa, which is one of the most unequal societies in the world. The NDP aims for a reduction of the Gini coefficient to 0.6 in 2030 (from 0.7).
- Characterised by increased output, increased investment, increasing employment and tax revenues.

DRIVERS AND BENEFITS

Drivers:

- SA is facing dire challenges and economic growth is required to start to address some of these.
- Government requires growth to increase tax revenues in order to support spending
- Businesses require growth to ensure increases in demand and therefore income.
- Growth must be inclusive to combat inequality in South Africa that harms the majority of the population (55% of South Africans live in poverty).

Benefits:

- Increased employment
- Improved standard of living for the population
- Improved tax collection
- Increased velocity of commerce could lead to increased use of electronic payments.

Goal: Promote economic growth

Key

- SA interviewees' suggestion
- SA suggestion & applied Internationally
- Applied internationally
- Authors' suggestion

Insights from the interviews and the available levers

Insights from South African voices

Only a few stakeholders made a direct link between payment modernisation and economic growth, yet many recognised the link between financial inclusion and the resulting economic growth, as well as the improvement in the lives of South African citizens.

Others commented on the national importance of the modernisation initiatives and the adverse effect to the economy when there is little cooperation in this regard.

"The economy in some of the informal settlements, is just getting bigger and bigger, and the banks struggle to get their hands on that. If you could stimulate that into the banking sector, you could stimulate the economy: create GDP growth."

Suggested levers

Potential levers	Benefits of levers
Link legacy payment system and alternatives for the underbanked - cash to account and cash to cash	Can bring more of the informal economy into the formal economy
Proxy database	Makes electronic payments more convenient
Real-time payments	Enables instant and convenient electronic payments
Broaden access to non-banks	Non-banks can be more effectives a serving the underbanked and bringing them into the formal economy
Demonetisation	Forced removal of cash from circulation can have disastrous consequences (as was the case in India in 2016).
ISO 20022	Efficiency for users operating in multiple markets. Efficiency improvements.
Nat'l bill payments system	Convenience & efficiency which may improve the velocity of money

Goal: Promote economic growth

Barriers, interactions with other goals and commentary

Barriers

- Political uncertainty
- Lack of investor confidence
- Lack of jobs
- Poor levels of education

Commentary

- Economic growth is critical to reducing inequality and poverty in SA. Due to its nature, economic growth is not something which can be achieved by the payment system alone and there is not a direct link from the payment system to economic growth. However, a poorly designed payment system can present an obstacle to commerce.
- Economic growth requires many long-term interventions (such as improving the education system) as well as actors in many spheres including government, business, and society to work towards its achievement. The payment system plays a supporting role in the promotion of economic growth.
- The road to inclusive growth involves connecting people with financial services that meet their needs, which allows them to become players in the economy.
- The statistical record is clear that once personal incomes reach a certain threshold, bank accounts become an indispensable way of securely storing and accessing personal assets. In other words, growing the economy and ensuring a more equal distribution of wealth increases the customer base for the payment system.

Interaction with other goals

Enabled by:

- Increase financial inclusion
- Improve market and regional integration
- Promote competition & innovation

Enables:

- Increase financial inclusion
- Promote competition & innovation

Summary of high priority goals

The five high prioirity goals can help to develop an LVPI that serves all South Africans

The five goals which were identified as having the highest relative importance were:

- Promote competition and innovation
- Respond to consumer demands and competitive pressures
- Interoperate with other payment systems
- Increase financial inclusion
- Increase flexibility and adaptability

These goals appear to be appropriate given the South African context discussed in the earlier part of this report as they address both sides of the economy and improve the efficiency and effectiveness of the payment system.

Two of the goals are weighted towards serving the two sides of the economy: increase financial inclusion supports the underserved consumer and respond to consumer demands and competitive pressures supports the requirements of the already included consumer and user. Two of the goals relate to enabling elements of the NPS: interoperability and increasing flexibility and adaptability. These goals support every other goal, except for improve security and reduce fraud. The final goal, promote competition and innovation, is critical to ensure that more providers provide more services which can support both the developed and developing aspects of the economy.

The table summarises these five goals and the key themes related to each.

High priority goal	Goal description	Benefits	Key themes emerging from the interviews
Promote competition and innovation	Encourage the entry of new providers and the development of new services.	• Increased consumer choice • Increased variety of services • Improved services / addition of value added services • Improved customer experience • Attraction of new consumers • Possible inclusion of unbanked • Increased usage of the payment system • Lower cost / prices	1. The role of new entrants in creating innovation. 2. Regulation for innovation.
Respond to consumer demands and competitive pressures	Encourage the development of services that more completely serve modern customer and user needs, and help organisations to respond to competitive pressures, typically from fintechs and challenger banks.	• Remaining relevant and preventing relationship erosion • Increasing usage of payment services • Maintaining / growing market share • Increasing revenue	**Four user demands / pressures emerged:** 1. Assurance that collections are likely to be successful and that disputes will be minimal. 2. A richer data standard is required. 3. Real time is a requirement. 4. Users need to control costs. **Four consumer demands / pressures emerged:** 1. A real time experience when paying. 2. Control, visibility, and choice. 3. Seamless payments. 4. Better value for money, lower prices or even free basic payments.

Summary of high priority goals

The five high prioirity goals can help to develop an LVPI that serves all South Africans

High priority goal	Goal description	Benefits	Key themes emerging from the interviews
Interoperate with other payment systems	Interoperability among payment systems can help ensure that payment services can reach all providers and users with uniform service levels.	▪ Widespread access, convenience & ease of use for customers ▪ Increased functionality through a collective network ▪ Positive network effects ▪ Economies of scale ▪ Can enable competition, which can lead to increased choice and lower costs ▪ A standardised set of core rails reduce the marginal cost of experiments which encourages innovation.	1. The lack of interoperability limits the utility of payment solutions. 2. The role of the regulator / industry bodies in driving interoperability.
Increase financial inclusion	Financial inclusion involves ensuring that consumers have access to and can effectively use formal financial products: electronic payments, savings, credit and insurance.	▪ The inclusion of more participants in the formal financial sector can contribute to inclusive growth and economic development. ▪ Reduced costs and risks associated with cash handling and management. ▪ Reduced fraud and incidents of crime through use of secure electronic payment channels instead of cash. ▪ Use of formal financial products can help individuals build a payments data history which can be leveraged to access credit and also assists financial organisations to better assess credit risk. ▪ Reduced marginal operating costs.	Six factors to improve financial participation were identified: 1. Accessibility 2. Reach 3. Affordability 4. Utility 5. Appeal 6. Education
Increase flexibility and adaptability	Increase ability of the payment system to deal with the changing needs of society.	▪ Lower cost ▪ Improved services ▪ Increased innovation ▪ Increased competition ▪ Improved customer experience	1. The rate of change is increasing. The payment system needs to be built to cater for new technology and new use cases. 2. The design of the payment system is critical to enable the industry to more easily embrace new technologies and channels. 3. There is a desire to simplify the system.

Refer to Appendix 3 for a feasibility and impact analysis of the levers on the goals to assist with prioritisation for modernisation.

Goals are complex, but selecting them is essential

Under the guidance of SARB and other policy makers, South African payment industry stakeholders will have to come to a consensus about what goals are to guide modernisation efforts. Nevertheless, the interviews give the impression of the high importance of several goals (in alphabetical order):

- Promote competition and innovation
- Respond to consumer demands and competitive pressures
- Interoperate with other payment systems
- Increase financial inclusion
- Increase flexibility and adaptability

The selection of the most appropriate goals and their relative priority and sequence is a precondition for modernising a payment system. Analysis can give a clear view of benefits, barriers, complexity and options available for achieving these goals, but finding the right path for South Africa requires a robust, inclusive process, and the section that follows presents South African stakeholders' opinions regarding the process of modernisation.

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A suggested approach to modernisation

A change in thinking the most important factor identified to ensure the success of the modernisation

Modernisation of the LVPI is a massive undertaking that requires a long-term investment in collaborative infrastructures. This requires willingness, budget, and the investment of significant resources from many stakeholders. However, the major theme that emerged from the interviews was the view that **a new way of thinking is needed as stakeholders approach modernisation**.

A clear approach for modernisation emerged from the interviews and is represented in the diagram. Each of the ideas were stressed by the respondents as being absolutely critical to the way forward.

Include all stakeholders → **Begin with the end in mind** → **Determine a holistic, strategic approach**

Include all stakeholders

Determine an inclusive process and include all stakeholders in a meaningful way.

Ensure that the level of participants involved in the discussions are senior enough to ensure that the appropriate strategic discussions can take place.

Begin with the end in mind

Determine the answers to the questions:

- Why are we modernising? What does modernisation mean?
- What are we trying to solve for? What are we currently not solving for?
- What is the desired outcome?
- What are the specific use cases?

Determine a holistic, strategic approach

Take a holistic view that considers all aspects which are required to achieve the desired outcome.

Consider the interactions between goals, payment systems, and the end-to-end payment chain as well as legislation, public policy, rules, etc.

Collaboration / co-opetition

- Strike the right balance between collaboration and competition.
- Modify as needed as new areas of collaboration/co-opetition are identified.

Change the thinking

Modernisation requires fresh thinking. Three themes emerged:

Broaden the thinking: While there is a realisation among stakeholders that infrastructure or “rails” need to be addressed, interviewees would prefer to broaden the discussion as they recognise that **technology is only an enabler** to modernisation, and should not be the goal itself. Modernisation cannot simply just achieve a standards change.

Whole ecosystems must be considered: Many interviewees stated that the way that payments is approached needs to be changed. A new understanding of the eco-system needs to be created, one in which the roles of traditional players and other stakeholders are re-evaluated, the way that these role players interact, the way that rules are made and even in determining the role the payment system plays in South Africa.

Be clear on what needs to be achieved: The way that the problems and issues are viewed and approached should be reconsidered, as well as the way that the industry thinks about and approaches the changes that are required. This includes:

- Determining what the purpose of the payment system is
- What its role is in helping to grow the economy and in improving the lives of South Africans
- What we are trying to solve for? What are the use cases? What is the best approach to the required changes?

“It’s modernised thinking of the industry, as opposed to just moving to another standard.”

The approach to modernisation

The process of modernisation needs to be inclusive and requires a clear vision.

Include all stakeholders

The governance structures for the payment system need to be far more inclusive than they have been in the past. The PASA Review was acknowledged, but interviewees were not all of the same view. Some felt that the changes that are coming are good, but some felt that the review has not gone far enough.

Many respondents felt that a more inclusive approach to decision-making is required. All stakeholders are affected by payments and have different needs, and many non-bank interviewees felt that their voices were not heard.

There was a acknowledgement that forums need to include :

- **Non-bank** suppliers and providers of payment infrastructure and services; MNOs; etc.
- **Users** - corporates including retailers
- **Consumer** advocacy groups – "if individuals wish to voice something, there should be some kind of forum."

These parties should have a voice that can be heard and which influences decision-making. This will allow a more comprehensive approach to problem-solving.

"There needs to be recognition at national level, that the payment world does not just belong to the banks anymore."

"The banks need to send the right people to these committees: authorised to act and competent to know what the consequences to their organisations are."

Begin with the end in mind

Modernisation needs to begin with a clear vision of the desired direction and destination. As obvious as it sounds, the process needs to begin with the end in mind. The questions that were raised for consideration are:

- **Why** are we modernising? What is the **purpose** of modernisation?
- What does it **mean** to modernise? What are we actually talking about?
- What are we trying to achieve? What is the desired **outcome**? What are the **use cases**?

The modernisation effort needs to be seen within the larger context of SA. Respondents felt that modernisation has to be about uplifting ordinary South Africans and has to play a role in promoting economic growth. It needs to be built for the economy that South Africans want. Modernisation of the LVPI needs to be about:

- **Inclusion** – of all stakeholders in the process a meaningful way as well as of affordable inclusion of the financially excluded into the payments system.
- **Growth** – of the economy and growth in the number of people that are actively participating in electronic payments.

What are the goals that a payment system actually needs to serve?"

"The right level of conversation has to be had by business strategic thinkers, which could bolster and really give some legs to why we are doing this."

The approach to modernisation

A holistic approach is required with appropriate collaboration between stakeholders to achieve the desired outcomes of modernisation

Determine a holistic, strategic approach

A holistic view needs to be taken when determining the modernisation roadmap to ensure that:

- Changes are embarked on with the ecosystem in mind.
- Development is done in an efficient way – to avoid having to rebuild when the next element is developed and to be as efficient as possible in terms of the investment required.
- Solutions implemented will be useful to the user / consumer community and that they will be adopted.
- Solutions are sustainable and that they will be supported – particularly in the financial inclusion space.
- The other role players, such as policy makers, work alongside the modernisation process to ensure that more people participate in the NPS. For example, regulation should not present a barrier to adoption.
- There is a progression that works with the existing infrastructure and gradually moves to the new. A "big bang" migration to a new system is rarely recommended.

"The industry needs to do things differently, strategically, and it needs to invest accordingly for that. We need a holistic strategic approach."

Collaboration / co-opetition

A balance needs to be struck between collaboration and competition throughout the process of modernisation.

- A lack of appropriate collaboration was raised many times as the reason for a lack of progress on various initiatives.
- The payment system stakeholders should determine the desired outcome of modernisation as well as guiding principles in order to assist with setting ground rules. This should help to guide the decision-making process to support the ultimate goals of modernisation.
- As a participant in payment system, the regulator should play a role in helping to guide stakeholders and to allow appropriate collaboration.
- Collaboration with stakeholders outside of the payment ecosystem will be required to address issues outside of the LVPI that affect the likely success of modernisation efforts: A public / private partnership is essential.

"Financial inclusion should not be a space that we compete in. I think we compete in too many things and financial inclusion should not one."

"Being poor is actually quite expensive when it comes to the prices that people pay for cash-to-cash remittances for example. A part of the big reason for that cost is there hasn't been that collaborative effort to streamline. Working cooperatively can drive those costs down."

On lack of collaboration: "But there are many examples, unfortunately: like money transfers. As banks, we've got no solution to do money transfers across banks in this market."

Industry collaboration

Collaboration was viewed as important by all stakeholders, however a number of barriers to collaboration exist. The Competition Commission enquiry also has lingering effects which hinder the industry's ability to collaborate.

Competition vs. collaboration

Interviewees were clear on where they felt that the line between competition and collaboration was, but they each drew that line in a different place. At the highest level, they agreed that:

Collaboration areas include:

- Standards
- Interbank transactions / interoperability
- Interbank clearing and settlement

Competitive spaces are:

- The client-facing service
- The customer experience
- Pricing and terms & conditions

Some discussion was had around the evolution of payment products into the collaborative space, with many feeling that the natural order was for them to become commodities. The way that commodities are currently viewed by the industry was also questioned as far greater efficiency could be achieved if ATMs, for example, were operated differently.

Impediments to collaboration

A number of impediments to collaboration were recognised:

- Self-interest related to commercial interests and retention of perceived competitive advantages.
- Various banks' lack of technical readiness for changes means that they simply stop certain initiatives in their tracks.
- The perception that not all stakeholders are able to have their voices heard or that they are not taken into account.
- The ongoing effect that Competition Commission's enquiry had on stakeholder's willingness / comfort to engage.
- Willingness of the parties to collaborate.
- The ownership structure of BankservAfrica was also discussed as being an impediment.

It was agreed that working together, rather than as competitors, will yield the best results.

"The biggest problem we've got with even moving into any sort of modernisation within the SA market is bank cooperation."

Effects of the Competition Commission

Much was said by the interviewees on the topic of the Competition Commission Banking Enquiry. Many felt that the enquiry did a lot of damage to the industry's ability to collaborate on important issues such as financial inclusion and also in terms of its ability to innovate in the payments space.

Some felt that the risk of falling foul of the legislation meant that they had concerns about any form of collaboration, while many said that the regulations are used as a convenient excuse by stakeholders. Some felt that the result of the enquiry is that industry conversations are restricted to discussions on fraud for example.

"I think that the enquiry put us back, innovation-wise, years. Because you then had this ridiculous situation where you're sitting in PASA and banks don't know whether they can talk to each other. You know what banks are like. You send the compliance guy. It's game over. The guy sits there and there can be no collaboration."

The role players

Steward leadership is required for the modernisation process. Interviewees expressed their views on the roles of the regulator, PASA, and BankservAfrica.

The regulator

- **SARB has a key role to play in facilitating collaboration.** Stakeholders often find it difficult to negotiate around the Competition Act. Some stakeholders feel that in taking a facilitative role in driving collaborative efforts, SARB can help to iron out issues and speed up the process. The regulator will also help to ensure that stakeholders do not frustrate progress if a required change does not suit a particular organisation's current level of readiness or because it may involve their loss of a competitive advantage.

"The regulator needs to participate with all of the powers that they have. Because what I've found is as soon as competitors sit in a structure, it is unwieldy. It is difficult by its very nature. The regulator can create the container for participants to collaborate appropriately, and secondly to prevent the strategic dissonance to take place in these forums where a bank simply doesn't want to work with the industry because they think, strategically, it will not be in their own best interests."

- **Consultation is important but ultimately a decision has to be made.** It is difficult to reach consensus, but once consultation has been concluded, the regulator should take the decisions in the absence of industry consensus.

"The regulator should get input from the different players in the industry but not for consensus seeking. Just to say: thank you very much for your input but on consideration this is the conclusion we have come to. Let's move to execution."

"Even in businesses: you don't run businesses by committee. They consult, they discuss, they look at the pros and cons; but ultimately somebody at the head has got to make a decision."

PASA

- Various opinions were expressed regarding PASA and its focus. Some felt that it needs to serve a broader cross-section of stakeholders.
- Others expressed the wish that PASA focus more on industry collaboration and strategy rather than technical issues regulatory enforcement.

"PASA is a forum to drive and to help the regulator and to create the glue between the members. You need a body like PASA to create the facilitation, to create the views and to help the regulator through that."

"I believe PASA should be a collective body regarding everybody's opinion, but that's not the way it works."

BankservAfrica

- There were differing opinions on the role of BankservAfrica and its ownership structure. The question of whether it should operate as a utility or a commercial entity was also raised.

*"It's a very difficult life that the BankservAfrica executive leads because you've got a **customer and a shareholder."***

*"BankservAfrica needs to be a proper **commercial entity**, free from the constraints of the shareholders, and ideally, you'd want another competitor who can actually play in this space."*

Conclusion

Summary

This section of the report aimed to provide a substantiated view of the future consumer and user demands on South Africa's Low Value Payments Infrastructure (LVPI), including anticipated demographic changes and pressures in South Africa, and the impact of these changes on consumer and user needs.

Context of modernisation

- The NPS is one of many actors which has a role to play in creating the economy that South Africans want.
- Regardless of which of three economic scenarios is realised, the requirements of the LVPI are the same: it must be flexible, inclusive, low cost and be scalable; and it needs to serve all South Africans.

Proposed goals of modernisation - Nine needs, expressed as goals, were articulated by the stakeholders which were interviewed:

- Promote competition and innovation
- Respond to consumer demands and competitive pressures
- Interoperate with other payment systems
- Increase financial inclusion
- Increase flexibility and adaptability
- Improve security and reduce fraud
- Improve market and regional integration
- Improve efficiency and reduce cost
- Promote economic growth

The goals are linked in that reaching one goal can assist in achieving another goal.

Modernisation approach

- The purpose of modernisation must be clear from the outset and the process of modernisation needs to be inclusive and collaborative.
- The regulator should play a stronger role in facilitating industry discussions to ensure that progress is not stalled and to ensure that the payment system serves all South Africans adequately.

Key insights

Inclusive governance is desirable from a process management perspective and desired by many non-bank stakeholders. Absolute consensus may be impossible, but consultation is indispensable. Industry collaboration is unlikely without empowered decision-makers. Modernisation needs to serve goals beyond the payment system itself. There was broad agreement about the need for modernisation related to five goals:

- Promote competition and innovation
- Respond to consumer demands and competitive pressures
- Interoperate with other payment systems
- Increase financial inclusion
- Increase flexibility and adaptability

Despite the unique socioeconomic and political situation in SA, the goals articulated were largely in line with findings in other markets as presented in the International Comparison.

Some stakeholders want modernisation to be mandated, including voices from within several large banks. Given tight budgets, funding for compliance is easier to obtain.

There was virtually unanimous agreement that RTC is not serving the country well. Its high price, lack of uniform experience, and lack of ubiquity inhibit adoption and innovation.

Increased access to cash, paradoxically, can promote use of electronic payments by the underbanked. More convenient cash-in / cash-out options, including ATMs, linkages to closed-loop remittance solutions, engenders trust in formal payment channels.

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Appendix 1: Macro-economic environment: Scenarios

All three forecasts do not expect to see much growth in the next 2 years leading up until the next general election. Even the high growth scenario does not demonstrate an average growth of more than 3% because, assuming that the elections yield a result that encourages investment in SA, that investment will take time to realise.

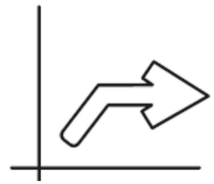
Base case
Just over 2% on average per year

While global economic growth is improving, SA is stuck in a low growth environment.

This is due to many reasons such as political infighting, poor policies, policy uncertainty and a lack of policy implementation.

A lack of consumer and investor confidence result in lower investments in key value added sectors and, as a result, lower economic activity.

This, together with a lack of skills development, poor quality of education and a brain-drain of existing skills, result in a situation where the country is trapped in a low growth environment.

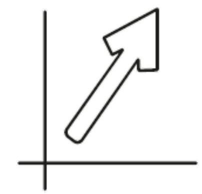


Low growth
Below 1% on average per year

Government pursues an approach in which assets are partially nationalised and redistribution of wealth is prioritised over growing the economy. Consumer and investor confidence drops further as a result and SA becomes an increasingly fragile state. Rating agencies further downgrade SA debt, making it difficult to finance an increasing government deficit and increasing state debt.

Such a scenario is characterised by large scale civil unrest and protest action, failing state owned enterprises and municipalities. Corruption, strike action and crime is on the increase, as well as unemployment levels. The emigration of skilled and highly-skilled individuals exacerbates the situation.

It is possible that this scenario could go to -5% growth as a worst-case, however various stakeholders such as foreign lenders, civil society action groups and the media are likely to stem the decline.



High growth
Just more than 3% on average per year

Policies including the NDP are implemented and this, together with improved and accountable leadership, result in improving confidence levels in the economy. This leads to higher levels of investment, value-added exports and consumption.

Although this growth rate is not nearly enough to get SA out of poverty, redistribution is taking place as a result of inclusive growth with a focus on skills development and quality education.

Employment opportunities are created and human capital is developed that can result in even higher growth and a more equitable society beyond 2030.

Macro-economic environment: Scenarios

The three possible scenarios projected for South Africa are expanded below.

Base case
Just over 2% on average per year

Employment (QLFS as basis):
- 2020 → 16.2 million
- 2025 → 17.5 million
- 2030 → 19.4 million

Unemployment %
- 2020 → 29.5%
- 2025 → 29.9%
- 2030 → 28.3%

GDP per capita (constant 2010 prices)
- 2020 → R54 500
- 2025 → R57 100
- 2030 → R62 100

GDP (constant 2010 prices)
- 2020 → R3.21 trillion
- 2025 → R3.57 trillion
- 2030 → R4.07 trillion

GDP per working age population
- 2020 → R83 300
- 2025 → R85 300
- 2030 → R90 500

Consumption per capita
- 2020 → R32 900
- 2025 → R34 500
- 2030 → R37 400

Low growth
Below 1% on average per year

Employment (QLFS as basis):
- 2020 → 14.9 million (down from 16.2m)
- 2025 → 15.1 million
- 2030 → 15.2 million

Unemployment %
- 2020 → 35.4%
- 2025 → 39.4%
- 2030 → 43.6%

GDP per capita (constant 2010 prices)
- 2020 → R49 300
- 2025 → R47 500
- 2030 → R45 800

GDP (constant 2010 prices)
- 2020 → R2.91 trillion (down from R3.072 tn)
- 2025 → R2.97 trillion
- 2030 → R3 trillion

GDP per working age population
- 2020 → R75 400
- 2025 → R71 000
- 2030 → R66 900

Consumption per capita
- 2020 → R30 900
- 2025 → R30 100
- 2030 → R29 600

High growth
Just more than 3% on average per year

Employment (QLFS as basis):
- 2020 → 16.8 million
- 2025 → 19.2 million
- 2030 → 21.5 million

Unemployment %
- 2020 → 27.2%
- 2025 → 23%
- 2030 → 20.4%

GDP per capita (constant 2010 prices)
- 2020 → R56 800
- 2025 → R63 200
- 2030 → R71 700

GDP (constant 2010 prices)
- 2020 → R3.35 trillion
- 2025 → R3.95 trillion
- 2030 → R4.71 trillion

GDP per working age population
- 2020 → R86 900
- 2025 → R94 400
- 2030 → R104 700

Consumption per capita
- 2020 → R34 700
- 2025 → R38 600
- 2030 → R43 700

Own forecasts

Appendix 2: The link between financial inclusion & inclusive growth

The table summarises the benefits that have been found to be associated with each of the four pillars of financial inclusion. Not all of the pillars are equal in reaching development goals. Microcredit has had mixed results while the benefit of insurance is less clear. Access to electronic payments, as well as appropriate savings mechanisms, report the biggest impacts on development goals, such as lower poverty and inequality, according to the World Bank.

Financial services - Benefits	Reduces waste	Improves efficiency, convenience and safety
Electronic payments - Makes everyday financial transactions more efficient, convenient and safe. - Reduces friction.	↓ cost of making / receiving payments ↓ travel ↓ wait times / inefficiency ↓ losses due to unauthorised / incorrect payments (human error) ↓ administration costs for government/business ↓ working capital / ↑ Interest ↓ crime / theft and corruption ↓ ‘ghost’ accounts / fake recipients for government payments ↓ reduce non-performing loan (NPL) portfolio for financial institutions when payments data history is assessed for credit risk	↑ speed ↑ transparency and ability to track payments ↑ control ↑ confidentiality ↑ productivity / output ↑ automation of operations ↑ consumption ↑ security ↑ access to credit - Regular bill payments via account can build payments data history, which can be leveraged for better access to credit / allows assessment of credit risk ↑ empowerment of women which has been found to result in increased spending on health, housing and nutritious food
Savings - Helps to save for future expenses and potential emergencies. Note: Benefits are limited if product is not tailored to specific needs, has high transaction costs, if there are power imbalances between men & women, and for the very poor.	↓ impulse spending ↓ theft	↑ savings and investments ↑ cash management (also allows individuals to resist demands on income from family and friends) ↑ empowerment of women ↑ expenditure on education and business investments ↑ agricultural output ↑ ability to deal with income shocks
Credit – Helps people to climb out of poverty. Helps to invest in the future. Note: Micro credit has been found to be modestly positive, but not transformative.	N/a	↑ investment in education / business opportunities ↑ output and hence, income ↑ expenditure ↑ increases school attendance
Insurance - Prevents people falling into poverty. Allows management of financial risks in relation to large, unexpected expenses (illness, natural disasters, income loss, and crop failures).	N/a	↑ investment and output - Allows for investments in riskier crops which may offer a higher return.

Source: World Bank report 2017

Appendix 3: Feasibility and impact analysis

Based on key modernisation trends as well as the analysis of South Arica's future needs, it is clear that a modernised payment system for South Africa must exhibit several key design attributes:

- **Flexibility** to support new business processes
- Use of **international standards** to reduce cost
- **Extensibility** to support new services
- **Reach** a greater number of end customers
- Maintain **safety and security**, despite a broader customer base.

These design attributes can help guide a more detailed discussion on the goals, levers, and features needed in South Africa.

To establish priorities for the modernisation of the payment system, the feasibility and impact analysis brings together the insights from the international analysis as well as the assessment of needs and demands in the South African market. The team analysed the feasibility and impact of potential levers of change in payments systems. Each lever was evaluated for feasibility and impact on each of the nine goals relevant to the South African market. We also considered the importance of the potential goals to weight the impact of those levers.

Methodology

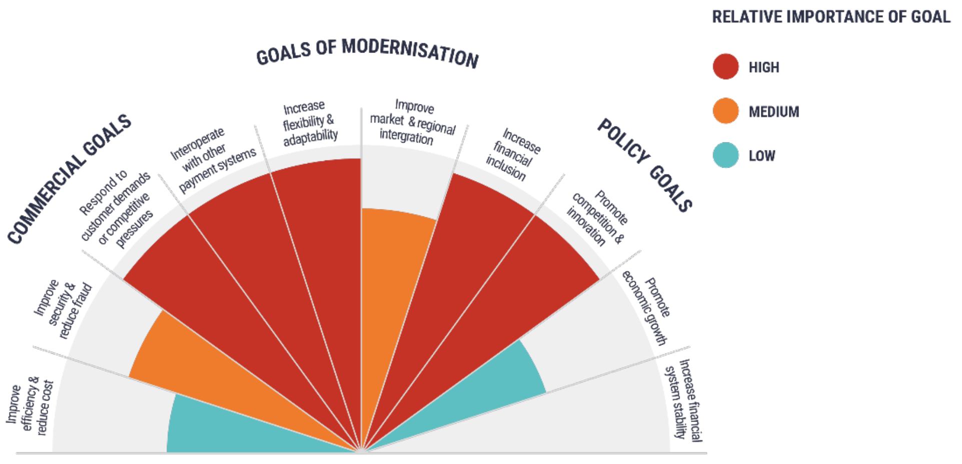
We began by collecting the levers applied internationally and supplementing them with those suggested during the interviews with South African stakeholders.

Evaluations are based on the feasibility and impact in the 9 countries within scope, as well as interviews with over 45 stakeholders to establish the potential feasibility and impact in South Africa. PASA and BankservAfrica also had the opportunity to provide feedback on draft evaluations.

Feasibility scores for the levers do not vary by goal.

Impact scores vary by the goal. Blank scores indicate no or low impact. Impact scores are weighted by the importance of the goal(s) they support.

Detailed scores, based on evaluations of feasibility and importance-weighted impact by goal can be found on the following pages.



This analysis has several limitations:

- It does not consider the cost of the levers; only of benefits.
- The importance of goals may change over time.
- Differences of opinion exist regarding feasibility, impact, and importance.

Sample feasibility and impact ratings: Financial inclusion

	Lever or feature	Feasibility	Impact on financial inclusion
Internationally applied levers	Link legacy payment system & alternatives for the underbanked – cash to acct	M	H
	Acceleration of bulk clearing / settlement	H	-
	RT pull payments / RFP instrument	M	L
	ISO 20022	M	-
	Proxy database	H	H
	Nat'l bill payment system	M	M
	Improving real-time payments	H	M
	Retire legacy systems or instruments	M	-
	Pricing regulation	L	H
	Transparency requirements	M	-
	Require standardised APIs	L	-
	Broaden access to non-banks	M	M
	Expansion of participants	H	L
	Displace cash	L	-
	Inclusive governance	H	-
	Revise settlement method	H	-
Levers suggested in interviews	Financial education and literacy	M	M
	Micro payment model - General dissatisfaction on the costs	M	H
	Risk-based regulation / Principles-based regulation	H	-
	Mutual ATM network	L	H
	Expand to geographies / Increase access to the payment system for consumers	M	H
	Improve cross-border payments	M	M
	Online alternative to card payments	M	-
	Multifactor authentication / biometrics	M	-
	Link legacy payment system & alternatives for the underbanked – cash to cash	H	H

The table depicts evaluations of the feasibility of each of the lever or features of modernisation. The table also displays estimates of their impact on the goal of financial inclusion.

Ratings are based on the feasibility and impact in the 9 countries within scope and and interviews with 50+ stakeholders to establish the levers and rate the feasibility and impact in South Africa.

Feasibility scores for the levers are the same for all goals.

Impact scores vary by the goal. Blank scores indicate no impact.

Detailed scores for each lever or feature, based on evaluations of feasibility and importance-weighted impact by goal can be found on the next slide.

Detailed feasibility and impact scores

Levers and features are compiled form international research and SA interviews. Feasibility and impact scores are assessed as high, medium, or low, based on international research and analysis of the interviews.
Impact scores are converted to numbers and importance weightings are also converting to numbers (high=3; medium=2; low=1). Impact scores are multiplied by importance to calculate the weighted impact score by goal.
The cumulative weighted impact score is the sum of weighted impact scores for each lever or feature.

			Weighted impact scores									
	Lever and features	Feasibility	Promote competition & innovation	Interoperate with other payment systems	Increase financial inclusion	Promote economic growth	Respond to consumer demands & competitive pressures	Improve efficiency & reduce costs	Improve security & reduce fraud	Improve market & regional integration	Increase flexibility and adaptability	Cumulative weighted impact score
Internationally applied levers	Link legacy payment system & alternatives for the underbanked - cash to acct	M	9	9	9	2	9	1	0	0	6	51
	Acceleration of bulk clearing / settlement	H	0	0	0	0	3	0	0	0	0	5
	RT pull payments / RFP instrument	M	9	0	3	0	9	1	4	0	6	34
	ISO 20022	M	6	9	0	2	6	3	2	6	9	43
	Proxy database	H	6	6	9	1	9	0	4	0	0	39
	Nat'l bill payments system	M	0	9	6	1	6	3	4	4	0	35
	Real-time payments	H	9	0	6	2	9	1	0	0	0	31
	Pricing regulation	L	9	0	9	0	9	2	0	6	0	41
	Retire legacy systems or instruments	M	3	0	0	0	0	2	4	0	6	15
	Transparency requirements	M	6	0	0	0	6	0	0	0	0	14
	Require standardised APIs	L	6	6	0	0	0	2	6	4	6	30
	Broaden access to non-banks	M	3	0	6	1	6	1	0	0	6	29
	Expansion of participants	H	6	0	3	0	0	0	0	0	0	11
	Displace cash	L	0	0	0	3	0	0	0	0	0	9
	Revise settlement method	H	6	0	0	0	0	0	0	2	0	8
Levers suggested in interviews	Inclusive governance	H	6	0	0	0	6	1	4	4	6	31
	Financial education / literacy	M	6	0	6	0	0	0	4	0	0	20
	Micro payment model - General dissatisfaction on the costs	M	9	0	9	0	6	0	0	0	0	24
	Risk-based regulation / Principles-based regulation	H	9	0	9	0	0	0	0	0	9	31
	Mutual ATM network	H	0	9	0	0	6	2	0	0	0	21
	Expand to geographies / Increase access to the payment system for consumers	M	9	9	0	0	6	0	0	0	0	28
	Improve cross-border payments	M	0	0	6	0	0	1	0	4	0	11
	Online alternative to card payments	M	9	0	0	0	0	0	0	0	0	9
	Multifactor authentication / biometrics	M	0	0	0	0	0	0	4	0	0	4
	Link legacy payment system & alternatives for the underbanked - cash to cash	H	0	0	0	0	0	0	0	0	0	0
	Importance weighting of goals		3	3	3	1	3	1	2	2	3	

Detailed feasibility and impact scores

Feasibility \ Cumulative weighted impact	Low		High
High	**Medium priority** • Acceleration of bulk clearing / settlement • Expansion of participants • Revise settlement method	• Link legacy systems and alternatives for the underbanked – cash to cash • Risk-based regulation	**High priority** • Link legacy systems and alternatives for the underbanked – cash to acct • Proxy database • Real-time payments
	• Multifactor authentication / biometrics • Improve cross-border payments • Online alternative to cards • Transparency requirements • Retire legacy systems or instruments	• Broaden access to non-banks • Nat'l bill payment system • RT pull payments / RFP instrument • ISO 20022 • Financial education & literacy • Increase access for consumers • Micro payment model	• Inclusive governance
Low	• Displace cash **Low priority**	• Mutual ATM network • Require APIs	• Pricing regulation **Medium priority**

The results of the prioritisation analysis are presented here and several options stand out as high priorities, including:

- Linking legacy payment systems to alternatives for the underbanked
- Improving real-time payments (RTC)
- Adding a proxy database
- Reforming governance and regulation.

The prioritisation of levers and features on this matrix depends greatly on the importance of the goals that they serve. As a result, the actual modernisation priorities will have to be decided by the organisations and bodies responsible for setting goals and responding to them. Proper sequencing of these changes, as well as their justification will also be critical.

Appendix 4: SA LVPI modernisation risks

Risk	Impact	Mitigation strategies
Resistance to program due to sub-optimal design	H	• Adopt an inclusive process
Lack of business case	H	• Socialise the findings of this research • Adopt an inclusive process
Lack of senior level buy-in and stakeholder commitment	H	• Socialise the findings of this research • Adopt an inclusive process • Define detailed goals and determine additional resources needed
Lack of budget required for investment	H	• Obtain support from the regulator • Obtain senior level buy-in from key players and recruit industry champions
Ineffective program management	H	• Implement a central programme management office
Lack of change management structure	H	• Implement an industry change management to support the programme
Inappropriate sequencing of implementation plan	H	• Adopt an inclusive process • Define detailed goals and determine additional resources needed • Implement industry change management to support the programme
Lack of strong leadership	H	• Adopt an inclusive process • Obtain senior level buy-in from key players and recruit industry champions • Obtain support from the regulator
Lack of regulatory support	H	• Adopt inclusive process • Obtain support of regulator
Failure to meet regulatory goals, e.g. financial inclusion	H	• Obtain support of regulator • Implement an industry change management process to support the programme
Inappropriate level of oversight, too much “red tape”	H	• Adopt inclusive process • Define detailed goals and determine additional resources needed • Determine sequencing in implementation of changes • Obtain support from the regulator

SA LVPI modernisation risks

Risk	Impact	Mitigation Strategies
Continued political instability in SA	**H**	• Adopt an inclusive process • Obtain senior level buy-in from key players and recruit industry champions • Obtain support of regulator • Implement an industry change management process to support the programme
Program overreach can lead to demotivation (lack of focus on core goals)	**M**	• Adopt an inclusive process • Define detailed goals and determine additional resources needed • Implement central programme management office to coordinate industry change • Obtain senior level buy-in from key players and recruit industry champions • Obtain support of regulator
Solution fails to meet needs of consumers and businesses	**M**	• Adopt an inclusive process • Define detailed ted goals and determine additional resources needed (incl. end user input) • Monitor success of new solutions through pre-determined metrics • Implement changes or additional programmes as needed
Lack of adoption of new services	**M**	• Define detailed goals and determine additional resources needed (incl. end user input) • Monitor success of new solutions through pre-determined metrics • Implement changes or additional programmes as needed • If necessary, mandate usage through regulation
Failure to meet overall goals leads to wasted investment, negative effects on collaboration in industry going forward	**M**	• Adopt an inclusive process • Define detailed goals and determine additional resources needed (incl. end user input) • Obtain senior level buy-in from key players and recruit industry champions • Implement central programme management office to coordinate industry change • Monitor success of new solutions through pre-determined metrics

Appendix 5: Reference list

Business Day. (2017). This is why South African banks have won a global award for strength.
Online: https://www.businesslive.co.za/bd/companies/financial-services/2017-06-26-this-is-why-south-african-banks-have-won-a-global-award-for-strength/

Business Tech. (2017). There are officially more South Africans on social grants than working: Institute of Race Relations.
Online: https://businesstech.co.za/news/business/180503/there-are-officially-more-south-africans-on-social-grants-than-people-who-work-irr/

BusinessTech. (2015). How big is South Africa's black middle class?
Online: https://businesstech.co.za/news/wealth/94987/how-big-is-south-africas-black-middle-class/

BusinessTech. (2016). How much money you need to be middle class in South Africa.
Online: https://businesstech.co.za/news/wealth/111285/how-much-money-you-need-to-be-middle-class-in-south-africa/

BusinessTech. (2016). This is what it means to be middle class in South Africa.
Online: https://businesstech.co.za/news/general/136257/this-is-what-it-means-to-be-middle-class-in-south-africa/

BusinessTech. (2017). SA middle class needs to increase by 30% to sustain economic growth.
Online: https://businesstech.co.za/news/finance/193494/sa-middle-class-needs-to-grow-30-to-sustain-economic-growth/

CENFRI. (2013). Cenfri response to the launch of FinScope South Africa 2013 consumer survey.
Online: http://cenfri.org/events/cenfri-response-to-the-launch-of-finscope-south-africa-2013-consumer-survey

The Economist. (2017). South Africa has one of the world's worst education systems.
Online: https://www.economist.com/news/middle-east-and-africa/21713858-why-it-bottom-class-south-africa-has-one-worlds-worst-education

Eighty20. (2017). Financial inclusion lessons from SASSA and Net1.
Online: http://www.eighty20.co.za/financial-inclusion-lessons-sassa-net1

Eighty20. (2016). Financial Inclusion and G2P payments: Lessons from South Africa.
Online: http://www.eighty20.co.za/financial-inclusion-g2p-payments-lessons-south-africa?utm_source=facebook&utm_campaign=SASSA&utm_medium=boost&utm_content=SASSA1

Esser, A. (2016). Paid, but not paying off: Why G2P payments are not yet driving financial inclusion.
Online: https://www.linkedin.com/pulse/paid-paying-off-why-g2p-payments-yet-driving-financial-antonia-esser/

Finmark Trust. (2017). An excluded society? Financial inclusion in the SADC region through a FinScope lens.
Online: https://www.finmark.org.za/an-excluded-society-financial-inclusion-in-the-sadc-region-through-a-finscope-lens/

Finmark Trust. (2016). Gender and financial inclusion.
Online: http://www.finmark.org.za/wp-content/uploads/2016/12/gender-and-financial-inclusion.pdf

Reference list

Finmark Trust. (2015). FinScope South Africa 2015.
Online: http://www.finmark.org.za/wp-content/uploads/2016/03/Broch_FinScopeSA2015_Consumersurvey_FNL.pdf

Finmark Trust. (2014). Retailers' motivation for offering financial services.
Online: http://www.finmark.org.za/wp-content/uploads/2016/01/Rep_Retailersmotivation_financialservices_20141.pdf

Finmark Trust. (2013). FinScope SA 2013 Consumer Survey.
Online: http://www.finmark.org.za/wp-content/uploads/2016/01/Pres_FSSA_2013_excluding-videos2.pdf

Finmark Trust. (2012). SaveAct - Savings and Credit Groups and Small Enterprise Development.
Online: http://www.finmark.org.za/wp-content/uploads/2016/01/pres-SaveAct.pdf

Ericsson. (2016). Mobility Report: Sub Saharan Africa.
Online: https://www.ericsson.com/assets/local/mobility-report/documents/2016/ericsson-mobility-report-november-2016-rssa.pdf

Genesis. (2017). The Cost of Cash for Consumers in SA.

GPFI: The Global Partnership for Financial Inclusion. (2017). Financial Inclusion Action Plan.
Online: http://www.gpfi.org/publications/g20-financial-inclusion-action-plan-fiap-2017

Grant, L. (2015). Mail and Guardian. Data source: Methodological report on rebasing of national poverty lines and development of pilot provincial poverty lines, Statistics South Africa, 2015.

IPSOS. (2015). Ipsos Study for PayPal reveals opportunities and best practices for online merchants who want to grow their international business.
Online: https://www.ipsos.com/ipsos-mori/en-uk/ipsos-study-paypal-reveals-opportunities-and-best-practices-online-merchants-who-want-grow-their-0

Kotzé, H. (2016). FACTSHEET: Inequality in South African cities. Africa Check.
Online: https://africacheck.org/factsheets/factsheet-inequality-south-african-cities/

May, J., Sulla, V., and Zikhali, P. (2016). South African Poverty and Inequality Assessment: Discussion Note. University of Kwa-Zulu Natal.
Online: http://ccs.ukzn.ac.za/files/World-Bank-South-Africa-CN-Discussion-Note-28-Jan-2016.pdf

Mail & Guardian. (2017). South Africa's middle class is three salaries away from poverty.
Online: https://mg.co.za/article/2017-05-26-00-south-africas-middle-class-is-three-salaries-away-from-poverty

Muronda, F. (2017). SA's poor use bank account as a mailbox for social grants. Fin24.
Online: http://www.fin24.com/Opinion/sas-poor-use-bank-account-as-mailbox-for-social-grants-20170810

Reference list

National Planning Commission. (n.d.). National Development Plan 2030: Our Future – Make it work.
Online: http://online.fliphtml5.com/slsf/boiy/#p=3

National Payment System Department. (2016). Annual Oversight Report 2015/16.
Online: https://www.resbank.co.za/RegulationAndSupervision/NationalPaymentSystem(NPS)/Documents/Oversight/Annual%20oversight%20Report%202015-2016.pdf

National Stokvel Association of South Africa.
Online: http://nasasa.co.za/site/

News24. (2017). SA education system one of the worst in the world - The Economist.
Online: http://www.news24.com/SouthAfrica/News/sa-education-system-one-of-the-worst-in-the-world-the-economist-20170106

Nkume, J. and Edinger, H. (2016). The Impact of Payments Electronification on Economic Activity in South Africa.

OEC. (2017). South Africa: Country profile.
Online: http://atlas.media.mit.edu/en/profile/country/zaf/

PASA. 2017. Annual Report 2016.
Online: http://www.pasa.org.za/docs/default-source/default-document-library/pasa-2016-annual-report.pdf?sfvrsn=0

PASA. (2013). Future-Proofing Our Electronic Fund Transfer Systems Through the Adoption of World-Class Inter-Operability Standards - Strategic Business Imperative for Migrating to ISO 20022 Standard.

SARB. (2017). Statement of the Monetary Policy Committee.
Online: https://www.resbank.co.za/Lists/News%20and%20Publications/Attachments/7899/MPC%20Statement%2020%20July%202017%20.pdf

SARB. (2017). The role of small business in the economy.
Online: https://www.resbank.co.za/Lists/Speeches/Attachments/452/Role%20of%20small%20business%202015%20.pdf

South African Institute of Race Relations. (2015). Media Release.
Online: http://irr.org.za/reports-and-publications/media-releases/black-middle-class-has-expanded-quickly-but-may-now-slow-2013-new-irr-report/view

Statistics South Africa. (2017). South African GDP. StatsSA.
Online: http://www.statssa.gov.za/?p=10005

Statistics South Africa. (2016). Statistical release P0211: Quarterly Labour Force Survey. StatsSA.
Online: http://www.statssa.gov.za/publications/P0211/P02111stQuarter2016.pdf

Reference list

Statistics South Africa. (2016). Statistical release P0302: Mid-year population estimates. StatsSA.
Online: https://www.statssa.gov.za/publications/P0302/P03022016.pdf

Statistics South Africa. (2017). Mid-year population estimates 2016.
Online: https://www.statssa.gov.za/publications/P0302/P03022016.pdf

Statistics South Africa. (2017). Poverty Trends in South Africa – An examination of absolute poverty between 2006 and 2015.
Online: http://www.statssa.gov.za/publications/Report-03-10-06/Report-03-10-062015.pdf

Statistics South Africa. (2015). General Household Survey (GHS). StatsSA.
Online: http://www.statssa.gov.za/?p=9922

Supermarket & Retailer. (2015). Heat on banks over grant payouts.
Online: http://www.supermarket.co.za/news-article.asp?ID=5584&CatTags=12-%20No%20Category%20Tags

TimesLive. (2016). Middle-class South Africans fewer than estimated.
Online: https://www.timeslive.co.za/news/south-africa/2016-09-08-middle-class-south-africans-fewer-than-estimated/

The Citizen. (2017). Standard of living in SA is on a slippery slope.
Online: https://citizen.co.za/news/south-africa/1619684/standard-of-living-on-a-slippery-slope/

Volker, WV. (2015). Essential guide to payments - An overview of services, regulation and inner workings of the South African National Payment System. Veritas Books.

World Bank. (2017). South Africa: Data.
Online: http://data.worldbank.org/country/south-africa

World Bank. (2017). World Development Indicators.
Online: http://data.worldbank.org/data-catalog/world-development-indicators

World Bank. (2017). Financial Inclusion and Inclusive Growth - A Review of Recent Empirical Evidence.
Online: http://documents.worldbank.org/curated/en/403611493134249446/pdf/WPS8040.pdf

World Economic Forum. (2017). The Africa Competitiveness Report 2017.
Online: http://www3.weforum.org/docs/WEF_ACR_2017.pdf

World Economic Forum. (2017). The Global Competitiveness Report 2016.
Online: http://www3.weforum.org/docs/GCR2016-2017/05FullReport/TheGlobalCompetitivenessReport2016-2017_FINAL.pdf

Appendix 6: Terms and definitions

AC
Authenticated Collections; a collection stream whereby debit order mandates are legally authorised, through an electronic authentication process.

ACB
Automated Clearing Bureau; became Bankserv in 1993.

AEDO
Authenticated Early Debit Order Collection; allows accountholders to mandate the contracted future dated early debit orders through bank cards.

AML
Anti-Money Laundering; refers to a set of procedures, laws or regulations designed to stop the practice of generating income through illegal actions.

ASISA
The Association for Savings and Investment South Africa; was launched in October 2008 with the aim of playing an integral part in achieving a greater savings culture in South Africa.

ATM
Automated Teller Machine; computerised telecommunications device that provides the clients of a financial institution with access to financial transactions in a public space.

Big Four
The largest banks in South Africa, namely Absa, FNB, Standard Banks and Nedbank.

CENFRI
The Centre for Financial Regulation and Inclusion is a non-profit think tank based in Cape Town.

CLC
Commercial Letter of Credit; a bank-issued document that ensures a supplier to a company gets paid for the goods and services it provides.

DR
Disaster Recovery; an area of security planning to protect an organisation from the effects of negative events.

EDO
Early Debit Order.

EFT
Electronic Funds Transfer; electronic exchange or transfer of money through computer-based systems.

EMV
Europay, Mastercard and Visa; a global standard for cards equipped with computer chips.

EPC
Electronic, Paper and Cheque.

FDI
Foreign Direct Investment; an investment made by a company or individual in a country, in the form of establishing business operations or acquiring business assets.

FICA
Financial Intelligence Centre Act; legislation promulgated to combat the abuse of financial systems.

FPL
Food Poverty Line; the level of income below which individuals are unable to obtain enough food to provide a sufficient diet for healthy development.

FSC
Financial Services Charter; a voluntary agreement to foster dialogue on social, economic and labour policy, to promote integration and access to financial services.

Terms and definitions

GDP
Gross Domestic Product; monetary value of all the finished goods and services produced within a country's borders over a specific time.

GINI COEFFICIENT
The Gini coefficient is a measure of inequality of a distribution developed by the Italian statistician Corrado Gini in 1912.

ICASA
The Independent Communications Authority of South Africa (ICASA) is an independent regulatory body of the South African government, established in 2000.

IRR
Institute of Race Relations; a think-tank promoting the ideas and policy solutions necessary to drive the investment and economic growth that will free South Africa.

ISO
International Organisation for Standardisation: ISO is an independent, non-governmental international organization with a membership of 162 national standards bodies.

KYC
Know your customer (KYC); is the process of a business identifying and verifying the identity of its clients.

LBPL
Lower-Bound Poverty Line; individuals forced to sacrifice food in order to obtain essential non-food items.

LVPI
Low Value Payments Infrastructure; the manner in which payments are structured and facilitated at a certain mean value and in context.

MoP
Modernisation of Payments; updating transactional and payments systems to meet consumer demand.

MNC
A Multinational Corporation; is usually a large corporation incorporated in one country which produces or sells goods or services in various countries.

MNO
Mobile Network Operator; providers of wireless telecommunications services to end users.

MPC
Monetary Policy Committee; South Africa is part of this trend and the decision on the appropriate monetary policy stance is taken by this committee.

NAEDO
Non-Authenticated Early Debit Order; collection system that allows account holders to set future dated collections to take place early in the day, closer to the payment window, to improve collection rates.

NDP
National Development Plan; an economic policy aimed at eliminating poverty and reducing inequality in South Africa before 2030.

NEDLAC
National Economic Development and Labour Council; national body enabling labour, business and other civil society participants to participate in the formulation of policy, prior to its presentation in parliament.

NPS
National Payment System; manages and administrates the operations and regulations of payment, clearance and settlement systems in South Africa.

NPSD
National Payments Systems Department; established in SARB in 1999.

PASA
Payments Association of South Africa; assists the South African Reserve Bank by ensuring the safety and integrity of the national payment systems.

Terms and definitions

OECD
The Organisation for Economic Co-operation and Development; is an intergovernmental economic organisation with 35 member countries, founded in 1960.

PCH
Payment Clearing House.

POS
Point of Sale; device allowing for the swiping of cards and receiving authorisation through the acquiring bank.

PSO
PCH System Operator.

RFP
Request for Payment.

RT
Real-time.

RTC
Real-Time Clearing; a web based system of near-immediate payments in which customers can move credit payments in less than 60 seconds.

SAMOS
The South African Multiple Option Settlement (SAMOS) system was introduced on 9 March 1998. The SAMOS system is an automated interbank settlement system provided by the South African Reserve Bank for banks to settle their obligations on an immediate real-time basis.

SADC
The Southern African Development Community (SADC) is an inter-governmental organization headquartered in Gaborone, Botswana.

SAPO
South African Post Office.

SARB
South African Reserve Bank; central bank in the country.

SO
System Operator.

SASSA
South African Social Security Agency; national body responsible for the delivery and administration of social grants.

TPPP
Third Party Payments Provider.

UBPL
Upper Bound Poverty Line; individuals able to purchase adequate levels of food and non-food items.

WEF
The World Economic Forum, committed to improving the state of the world, is the international organisation for public-private cooperation.