South African Reserve Bank

**An address by Francois Groepe,**
**Deputy Governor of the South African Reserve Bank,**
**at the National Payment System Department's**
**annual end-of-year cocktail function**

**Kleinkaap Boutique Hotel, Centurion**
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Good evening, ladies and gentlemen, colleagues.

It gives me great pleasure to welcome you to the annual National Payment System Department's (NPSD) cocktail function.

This has been a year in which we had more reason to celebrate, as 2018 marked the 20-year anniversary of the South African Multiple Option Settlement (SAMOS) system. Also of significance was the fact that the Southern African Development Community (SADC) RTGS system, previously known as the SADC Integrated Regional Electronic Settlement System (SIRESS), turned five this year.

Consequently, my address will firstly reflect on the journey of the SAMOS and SADC RTGS systems, respectively, focusing on highlights and also outlining the goals that we plan to achieve. Thereafter, I would like to reflect on the opportunities offered by financial technology (fintech).

## The SAMOS system

In April 1994, the South African Reserve Bank (SARB) launched a project to reform the South African national payment system (NPS) and formulated a strategy that would enable South African banks and other intermediaries in the payment system to align the needs of the domestic economy with developments in the international community.

A strategy-formulation team, consisting of representatives of the SARB and the banking community, was established, and a collaborative consensus-building approach was adopted. The SARB acted as facilitator and, in a period of 14 months, produced the first draft of the document titled *The South African national payment system: framework and strategy*, commonly known as the *Blue Book*.

A number of projects were initiated to realise the envisaged goals of the NPS framework, as documented in the *Blue Book.* One of the key projects, and the cornerstone of the new payment processing infrastructure, was a project to implement a new RTGS system that would enable settlement between participating banks in central bank money with finality and irrevocability.

On 9 March 1998, the SAMOS system was implemented, on time and within budget. Considering the complexity and multi-organisational nature of the project, this was indeed a remarkable achievement.

The new settlement arrangements facilitated by the SAMOS system placed South African settlement practices on par with international best practice and presented many opportunities to the banking and non-banking sectors. Among others, these included:

- the enablement of open access and participation of all the registered South African banks in the system;
- the provision of facilities to participating banks to monitor their exposures in real time by having access to balances in settlement and intra-day-loan accounts, as well as a view of the utilisation of collateral;
- the enablement of the SARB, through various system facilities, to ascertain when banks in the system are experiencing difficulty in meeting their payment obligations, and the ability to provide early-warning signals of a potential systemic crisis (resulting in the SARB being able to proactively take steps to address a potential systemic crisis);
- the achievement of payment settlement finality through the SAMOS system, providing an opportunity to synchronise the delivery of scrip after confirmation of payment, thereby creating a safe and secure financial markets environment; and
- the enablement of payer-to-beneficiary fund transfers in real time.

The SAMOS system has evolved over the years, adapting to market needs through the implementation of improvements that have optimised liquidity utilisation and collateral management, embracing international best practice, and providing monitoring facilities for regulators within the central bank to effectively execute their mandates.

The SARB is currently working with the payment industry to replace the existing RTGS system with a new-generation RTGS solution that will address current business functionality and cater for evolving business and technical requirements. Some of these requirements stem from advances in the fintech field and related innovation, regulatory changes, as well as the ever-evolving business landscape. The new system must enable modular design, quicker development turnaround times, and reduced time to market for changes in the payment environment and cater for multi-currency functionality. The new system will offer rich message content utilising the ISO[1] 20022 message standard.

The South African banking industry has shown that it has the capacity, both in terms of business knowledge and in terms of technology skills, to progress our payment system. NPS stakeholders have not only contributed skills; they have also had to make substantial investments in back-office systems and technology to enable them to fully participate in the system throughout the years.

The opportunity for banks and non-banks to cooperate and collaborate to leverage the potential of the SAMOS system ushered in the dawn of a new era in the provision of payment products and services.

**The SADC RTGS system (formerly SIRESS)**

The SADC RTGS system, formerly known as SIRESS, was developed as a catalyst to support the regional financial integration agenda towards the realisation of SADC's aim of facilitating trade and investment in the region. Prior to the implementation of the

[1] International Standards Organization

SADC RTGS system, regional cross-border transactions were settled via correspondent banking arrangements, which are prone to counterparty risk, lags in the settlement of these transactions on a T+1 or T+2 basis, and short cut-off times.

The system was implemented through a public-private partnership between central banks and the commercial banking industry. The role that other partners played in the project – partners like the Finmark Trust, the European Union, the World Bank, the Bill and Melinda Gates Foundation, and the International Monetary Fund (IMF) – is also appreciated and valued.

The system currently settles transactions for 82 participating banks drawn from 14 countries across the SADC region. Since July 2013, it has settled over 1.2 million cross-border transactions and a cumulative peak value of R5 trillion, which was reached in October 2018.

A project is currently underway to replace the SADC RTGS platform with a solution based on modern technology, which will provide, among other things, multi-currency capabilities, flexible settlement windows per currency, and re-engineered business processes to support the possible future business needs that could utilise distributed ledger technology (DLT).

***Vision 2025***

It is imperative that we continue to build on our legacy in our quest to enhance the safety, efficiency and accessibility of the NPS in a manner that promotes competition and minimises risk to the payments ecosystem. As outlined in *Vision 2025*, we will pursue this objective by leveraging technological developments to extend the availability of digital payment services to all sectors of society while meeting domestic, regional and international requirements for the benefit of all members of South African society.

The NPS affects the lives of all South Africans. Essentially, it exists to serve the economy and, through it, the people of South Africa. It is a crucial enabling factor for

economic activity among consumers and businesses. Payment systems can, for example, enable seamless links to public transportation.

A recent study by Visa titled *The cashless cities: realising the benefits of digital payments*[2] reveals that, should Johannesburg reach a state where 100% of transactions are digital, the city would gain just under US$500 million in net benefits cumulatively for consumers, business and government per year. The study further suggests four main long-term benefits over the next 15 years: an increase in employment, an increase in the gross domestic product (GDP), and marginal increases in wages and productivity.

The emergence of fintech, the Fourth Industrial Revolution and the continuing shift from the industrial to the digital economy all hold significant benefits and could materially contribute towards lifting the growth potential of our economy. I would like to demonstrate this by referring to examples of other countries that have not only embraced technology, but that are reaping the fruits from their foresight.

**The potential of fintech**

According to Financial Sector Deepening Africa, a development finance organisation, fintech is expected to contribute at least US$40-150 billion[3] to sub-Saharan Africa's economic output by 2022. In a similar vein, Accenture's *Pivoting with AI* report[4] states that embracing artificial intelligence, in-process automation and augmenting human capabilities could potentially double the size of South Africa's economy in a few decades. However, the most compelling evidence for the potential of fintech comes from some small countries in Europe and many from the East. The Digital Revolution has increased the growth potential in these countries.

[2] Compiled by evidence-based economics research firm Roubini ThoughtLab based on 2016 data and published in 2018
[3] https://techcentral.co.za/fintech-seen-adding-150-billion-to-africas-gdp/83628/
[4] https://www.accenture.com/za-en/_acnmedia/PDF-85/Accenture-Pivoting-With-AI-POV-Brochure.pdf#zoom=50

**Estonia**

A country leading the charge in embracing fintech and setting the pace towards the digital economy is Estonia. It is a small country, with minimal natural resources.

In 2018, there are only three things you cannot do online: get married, get divorced, and buy real estate. Everything else largely happens digitally.

Estonia has introduced e-identity, digital signatures, e-Residency and i-Voting. The Estonian Entrepreneurship Growth Strategy 2020 outlines the strategy for the Estonian economy for the next seven years, focusing on three main challenges in order to increase the wealth of Estonia: increasing productivity, stimulating entrepreneurship, and encouraging innovation.

Allow me to quote some resounding statistics marking the success of some of Estonia's efforts.

Savings and efficiency:

- At least 2% of GDP is saved due to the collective use of digital signatures.
- Every year, 840 years of working time is saved thanks to data exchange.
- The time to establish a business has been reduced from 5 days to 18 minutes.

Financial indicators:

- 98% of Estonian companies are established online.
- 99% of banking transactions are online.
- 95% of tax declarations are filed online – it takes only 3 minutes!

e-Government indicators:

- 98% of Estonians have a national identity card.
- Over 30 000 people have applied for e-Residency.
- Over 30% of Estonian voters from 116 countries use i-Voting in Estonian elections.

Healthcare:

- 97% of patients have countrywide-accessible digital records.
- 99% of prescriptions are digital.
- There are 500 000 queries by doctors and 300 000 queries by patients every year.

These are just some examples of how a small country can gain competitive advantage by embracing digital enablers that lay a foundation to rapidly move towards the digital economy.

**Singapore**

Another good example is Singapore. Singapore has adopted a Smart Nation policy, which means that they embrace technology in all their processes and encourage technological innovation and adoption.

The Monetary Authority of Singapore (MAS) has identified 10 enablers to shift towards the digital economy. One of these, similar to Estonia and India, is the ability of citizens to store their basic identification electronically. In Singapore, this initiative is called MyInfo.

MyInfo is a one-stop data repository that saves time in not having to capture basic information over again. It is a single online personal data platform. It includes your personal information, such as your unique identification number, name, gender, age etc. It can also include your education, employment and income information. Such access enables quicker completion of digital online artefacts by using the application programming interfaces (APIs) of MyInfo.

The MAS has also released its Industry Transformation Map (ITM) for financial services. Their vision is to be a leading global financial centre in Asia. The ITM aims to achieve real value-added growth of 4.3% and productivity of 2.4% annually in the

financial sector. The ITM also aims to create 3 000 new jobs in financial services and an additional 1 000 new jobs in the fintech sector annually.

**China**

Digitisation has also reshaped financial services in China. Less than a decade ago, the Chinese e-commerce retail transaction value accounted for less than 1% of the global value. This figure has risen to almost 40% today as a result of the efforts by giant fintech firms such as Alibaba, Tencent and Baidu.

In 2016, mobile payments for goods and services in China totalled US$790 billion – 11 times more than in the United States. Research by the IMF[5] shows that a 1 percentage point growth in the digitalisation of China's economy is associated with a 0.3 percentage point growth in its GDP.

The examples from Estonia, Singapore and China signal the potential of fintech and the shift towards a digital economy. They are also examples of the role that governments and central banks can play in creating an enabling environment for fintech.

There are predictions that such efforts can add significantly to the GDP of an economy. Some anecdotal estimates are between 0.5% and 1.5% of GDP. Toomas Hendrik Ilves, a former President of Estonia, has signalled how such results could be achieved. He has emphasised: "It is not about focusing on the technology itself; it is about the political will, vision, policy, laws and regulations … in that order."[6]

**The potential in South Africa**

In South Africa, economic growth has been stagnant. The issues of growing inequality, rising unemployment and increasing poverty are major challenges.

[5] https://www.imf.org/external/pubs/ft/fandd/2018/09/asia-digital-revolution-sedik.htm
[6] http://www.imf.org/external/pubs/ft/fandd/2018/03/trenches.htm

I would suggest that it is not only time that we do something *differently;* it is time that we do things *digitally*. The financial services industry has strong potential and capability to come together and collaborate towards building and influencing shifts towards a digital economy. To name a concrete example, Project Khokha provided a glimpse of this potential to work together, embrace new exponential technologies, and jointly explore future opportunities. It is time that we leverage this strength in working jointly for the greater good of SA Inc.

At the inaugural workshop of the Intergovernmental Fintech Working Group in April 2018, the participants highlighted that a South African digital identity may result in increased financial inclusion and deepening by making it easier for South Africans to access financial services.[7] This provides just one opportunity for the respective authorities and the industry to possibly pursue in order to build a digital foundation and contribute towards the longer-term digital well-being of South Africans. The workshop also highlighted the need for a national innovation policy framework. I would suggest that such a policy would equally contribute towards a vision and an enabling framework propelling a digital economy. It could be one aspect of helping us to improve our position on the World Economic Forum's Global Competitiveness Index.[8] We have dropped from being ranked 49th in 2015/16 to being 61st in 2017/18.

Aligned to *Vision 2025* and centred on leveraging innovations in the fintech environment, the SARB will host a workshop next year for regulators, overseers, policymakers and government that will focus on unlocking any inefficiencies within our current processes and platforms to stimulate economic growth.

The workshop will provide an opportunity for parties to gain deeper insights into the various innovations available, including open banking and APIs, and will take advantage of the SARB's relational capital to start a debate and craft a national strategy that will journey South Africa into the digital future.

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[7] http://www.resbank.co.za/Lists/News%20and%20Publications/Attachments/8641/IFWG%20Reportsml%205%20July%202018.pdf

[8] http://www3.weforum.org/docs/GCR2017-2018/05FullReport/TheGlobalCompetitivenessReport2017%E2%80%932018.pdf

The workshop, while designed to facilitate a unified vision around our digital future, is also intended to form the foundation on which the annual Innovation and Cybersecurity Conference will further expand.

**Closing**

The SARB would like to thank all of you for the role that you have played in creating this world-class payment system, and hopes that you will also join us as we collectively continue in our endeavour to design and create a better NPS for all.

I would like to conclude with a quote from Adam Smith: “No society can surely be flourishing and happy of which by far the greater part of the numbers are poor and miserable.”

I modestly add to this by saying: embracing fintech and moving towards a digital economy holds the potential for growth and collective prosperity.

Thank you.