Welcome and Opening Remarks

Cyril. H. Nyatsanza is the C.E.O of Zimswitch Technologies (Private). He joined the company as an ACH consultant from September 2011 until his appointment as General Manager by the Board of Zimswitch following the retirement of Jan. Hendrik Brits in Jan 2013. Formally, Cyril served as the business development manager for Bankserv Africa between 2006-2010. A renowned banker, Cyril held several managerial positions at Stanbic Bank Zimbabwe (1977 to 2003) and was later transferred to Standard Bank head office in South Africa in a new role as Regional Operations Support Manager. Mr. Nyatsanza holds several business and operations qualifications. Presently he is the Chairman SACHA, association of SADC clearing houses and the newly set up local Payment Service Providers Association of Zimbabwe (PSPAZ). As the inaugural Chairman he was responsible for crafting of the charter for the payments grouping that is supervised by the RBZ. Cyril is passionate about operations and payments.
Did you attend the inaugural Zimswitch Payments Conference which was held last year in Victoria Falls?

A. Yes
B. No
What are your expectations of the conference?
Filling in the gaps....

Tafadzwa Mukoyi better known as COACHTaf is a marketplace minister anointed to activate potential. His coaching philosophy is Exit your Excuses, Embrace your Freedom to Fail and Activate your Potential. Tafadzwa is a MAZ Marketing Practitioner who holds a Diploma in Theology, a BSc (Hon) in Psychology and a Masters in Business Intelligence. He holds various awards including the 2018 Top 100 Global Coaching Leaders Award.
SWITCH
“Simplicity is the ultimate sophistication.”

- Leonardo Da Vinci-
When you write a piece of software you assume a certain type of hardware. If you assume hardware that's too powerful then you can't sell many copies cause very few people have that machine. If you assume hardware that's too simple your product can't do as much.

Bill Gates
I exist in two places, here and where you are.

—via (Qyrsa ‘nd Nosaq)
"Interaction design isn't only about fixing problems; it's also about facilitating interactions between people in richer, deeper, better ways - that is, finding new ways to better connect human beings to one another, and by doing so, make the world a better place to live"
Today's customer journey is an iterative, complex, pinball of touchpoints.

— David Louis Edelman —
I'm wary of the new contactless ways of paying. The idea of paying with your phone is a little worrying: I have lost more than one over the years.

— Neil Oliver —
"Being able to donate with a simple “tap” of a contactless card or smartphone has boosted donation income and will continue to revolutionise the Not For Profit sector."

Gino Colantuoni
LibertyPay
They say the chains of habit are too light to be felt until they are too heavy to be broken. The chains you put around yourself now have enormous consequences as you go through life.

— Warren Buffett —
the best way to predict the future is to design it
Advancing Financial Inclusion the Digital Way..

Maxine Hlaba joined SADC Banking Association in April 2014 as Manager: Executive Secretariat, SADC Banking Association. She previously worked for the South African Reserve Bank in various capacities over a period of 15 years. In her last role she worked with the SADC Committee for Central Bank Governors (CCBG) Secretariat, in executing their mandate as stipulated in the protocol of the Finance and Investment Protocol (FIP).

Zimswitch Payments Conference 2019
An Introduction to the Bill & Melinda Gates Foundation & Financial Services for the Poor Program

April 2019

David Lubinski
Dilwonberish Aberra
1. The Foundation’s Global Reach and Presence
2. The Foundation’s Work in Africa
3. Where Does Financial Services For the Poor Fit in the Foundation?
4. Financial Services for the Poor Strategy
5. The Global Work in Financial Services for the Poor
6. Scaling Digital Financial Services in Africa
7. What Makes a DFS System Pro-Poor?
8. Framework for Scaling DFS in SADC
THE FOUNDATION’S GLOBAL REACH AND PRESENCE
THE FOUNDATION’S WORK IN AFRICA (2014 – 2018)

$3.2 billion
Total grants disbursed in 11 African countries

$520 million
Total grants disbursed to rest of Africa

59
Employees worldwide

3
Country offices in Nigeria, Ethiopia, South Africa
# FSP: WHERE WE FIT IN THE FOUNDATION

<table>
<thead>
<tr>
<th>Global Health</th>
<th>Global Development</th>
<th>Global Growth and Opportunity</th>
<th>U.S. Program</th>
<th>Global Policy &amp; Advocacy</th>
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</thead>
<tbody>
<tr>
<td>Discovery and Translational Sciences</td>
<td>Emergency Response</td>
<td>Agricultural Development</td>
<td>K-12 Education</td>
<td>Tobacco Control</td>
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<td>Enteric and Diarrheal Diseases</td>
<td>Family Planning</td>
<td>Financial Services for the Poor</td>
<td>Postsecondary Success</td>
<td>Development Policy and Finance</td>
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<td>HIV</td>
<td>Global Libraries</td>
<td>Water, Sanitation &amp; Hygiene</td>
<td>Washington State</td>
<td>Philanthropic Partnerships</td>
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<td>Malaria</td>
<td>Integrated Delivery</td>
<td>Gender Equality</td>
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<td>Neglected Tropical Diseases</td>
<td>Maternal, Newborn &amp; Child Health</td>
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<td>Pneumonia</td>
<td>Nutrition</td>
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<td>Tuberculosis</td>
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<td>Vaccine Delivery</td>
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<td>India Country Office</td>
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<tr>
<td>Africa Country Office (Ethiopia, Nigeria, South Africa)</td>
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Source: gatesfoundation.org (May 2017)
## FINANCIAL SERVICES FOR THE POOR STRATEGY

<table>
<thead>
<tr>
<th>Building Blocks</th>
<th>Payments Outcomes</th>
<th>Usage Outcomes</th>
<th>Impact Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Policy and Regulation</strong></td>
<td><strong>DFS Payment Services that are:</strong></td>
<td><strong>Usage of DFS is ubiquitous by the Poor</strong></td>
<td><strong>Fewer people slide into poverty, more people move out of poverty, and daily consumption is increased because of their use of DFS products and services:</strong></td>
</tr>
<tr>
<td>• Enabling Regulations</td>
<td><strong>Accessible:</strong> Users in our target population can easily acquire and use DFS services</td>
<td>By 2030, 80% of adults worldwide and 60% of sub $2.50/day adults have and actively use a digital account to make payments and to access additional products beyond P2P</td>
<td><strong>Consumption Smoothing</strong></td>
</tr>
<tr>
<td>• Consumer Protection Regulations</td>
<td><strong>Reliable:</strong> Users’ money and information are secure and available for use; systems help deter usage for money laundering and terrorist financing</td>
<td><strong>Usage of DFS is ubiquitous by Women and Girls</strong></td>
<td>Households use DFS to manage and recover from income and expense shocks</td>
</tr>
<tr>
<td>• Stability and Oversight</td>
<td><strong>Valuable:</strong> There is a clear CVP for the poor to use DFS rather than cash or other traditional services</td>
<td>By 2030, the gender gap in usage has been eliminated</td>
<td><strong>Productive Investment</strong></td>
</tr>
<tr>
<td>• Policies To Drive Usage</td>
<td><strong>Affordable:</strong> End users are willing and able to pay for the cost of preferred product and receive value in excess of cost</td>
<td><strong>Diversification of Usage</strong></td>
<td>Households are better able to acquire equipment and materials that improve their long-term incomes</td>
</tr>
<tr>
<td><strong>Infrastructure</strong></td>
<td><strong>Profitable:</strong> DFS providers earn sustainable margins</td>
<td>Households use an effective range of financial tools</td>
<td></td>
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<tr>
<td>• Mobile Connectivity</td>
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<tr>
<td>• Pro-poor payment systems (L1P)</td>
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<td></td>
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<tr>
<td>• ID Systems</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>• Effective distribution/service network</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>• Data sharing</td>
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<tr>
<td><strong>Private Sector Engagement</strong></td>
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<tr>
<td>• Compelling CVPs</td>
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<tr>
<td>• Effective marketing and sales</td>
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</tbody>
</table>

Usage of DFS is ubiquitous by the Poor

By 2030, 80% of adults worldwide and 60% of sub $2.50/day adults have and actively use a digital account to make payments and to access additional products beyond P2P.

**Usage of DFS is ubiquitous by Women and Girls**

By 2030, the gender gap in usage has been eliminated.

**Diversification of Usage**

Households use an effective range of financial tools.
GLOBAL WORK IN FINANCIAL SERVICES FOR THE POOR

Any type of account (% age 15+): Global Findex 2017.; focus country statistics shown, however FSP work spans global context.
SCALING DIGITAL FINANCIAL SERVICES IN AFRICA

Africa by the numbers
- 1.2bn people/2.4bn by 2050
- 55 countries; 38 with <20m and 23 with <10m total population
- 8 regional economic communities or trade blocs with overlap
- 44 Central Banks
- 42 currencies; 2 currency unions
- ~400m+ adults unbanked; 332m have mobile phones
- ~60% of unbanked are women
- 78% mobile phone ownership

Scale drivers in Africa’s favor
- Economies of Scale opportunity
- Regional communities leading harmonization and scale
- Trade & Transport integration
- Commercial Financial Service Provider Economics
- Payments integration and harmonization exploration by the Association of African Central Bank governors

Scaling DFS in Africa
- Payment infrastructure
- Identity infrastructure
- Enabling regulations
- Research
- Cross Cutting: Gender, Capacity Building, & Advocacy

Continental & multi-country investments (not shown on map)
- Digital Economy for Africa – WBG
- Africa Scale Enablers – FTS
- ID for Development – WBG
- Africa Policy Accelerator – UNCDF
- JPAL Africa Research on ID, Payments & Governance
WHAT MAKES A DFS SYSTEM PRO-POOR?

1. Tiered KYC
2. Open and Interoperable System
3. Real Time Clearing
4. Push Payment Model
5. Same Day Settlement
6. Governance by Participant Service Providers
7. Shared Interoperability and Fraud Management Infrastructure
8. Cost Recovery Based Shared Infrastructure for Collaborative Space
### FRAMEWORK FOR SCALING REGIONAL DFS IN SADC

<table>
<thead>
<tr>
<th>Regulation</th>
<th>Business</th>
<th>Delivery</th>
<th>Technical</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Regulation &amp; Supervision</td>
<td>1. SADC CCBG/PSOC</td>
<td>1. Authorized TPA Participants</td>
<td>8. TerraPay + proprietary + COTS</td>
</tr>
<tr>
<td>2. Scheme Governance</td>
<td>2. SADC PSMB</td>
<td>2. BankServAfrica</td>
<td>8. Scheme Platform Infrastructure</td>
</tr>
<tr>
<td>8. Scheme Platform Infrastructure</td>
<td>8. TerraPay + proprietary + COTS</td>
<td>8. TerraPay + proprietary + COTS</td>
<td>8. TerraPay + proprietary + COTS</td>
</tr>
</tbody>
</table>
THANK YOU

FOR MORE DETAILS PLEASE CONTACT US AT:

- DAVID LUBINSKI - DAVID.LUBINSKI@GATESFOUNDATION.ORG
- DILWONBERISH ABERRA – DILLY.ABERRA@GATESFOUNDATION.ORG
Transact Anywhere, Anytime
Lionel Slowe entered the payments industry in 1980 and has spent 35 years with the largest ACH in Africa, BankservAfrica. Here he gained managerial experience in operations processing of EFT, Cheques, Computer operations centre, help desks and various administrative systems.

He became involved in the business aspects of payment systems in 2003 with the initial national payment system implementation in Namibia where he was responsible for winning the business for BankservAfrica and was then responsible for the Namclear build and implementation project.

He joined Finteq in 2015 to help with the selling of ACH systems across Africa which is what currently keeps him awake at night! The passion for payment systems is still the driving force which keeps him involved in the various payments initiatives in and around Africa, such as the ZEEPAY project currently underway here in Zimbabwe.
Supporting EFT Payments
Discussion Topics

- Payment Modernisation
- What are EFT Payments
- EFT Payments – Essential Elements
- Facilitating EFT
- ZEEPAY
Challenges

- Standards
- Manual processes
- Lack of STP and limited channel integration
- Challenges in supply chain finance – working capital and vendor payments
- Silo based approach – no central view of liquidity and recon – Banks and Regulator

Harnessing centralised clearing systems with inter-operable standards will reduce barriers to payment system efficiency
Why modernize?

- Regulatory compliance (e.g. BIS / BASEL III)
- Improved security and efficiency of payments
- Remove friction
- Improved customer experience

Why ISO20022?
Migration to Digital Payments

- Users require faster access to value
- AML requirements
- Reduction in the amount of cash in circulation
- Behaviour monitoring
- Lower cost
- Risk management
- Auditability

Supporting Key Regulatory and Industry Initiatives in payments (KRII’s)
ISO20022 EFT Payments Offer:

- Adhere to ISO20022 standards (Global standard)
- Account to Account (I.E. direct instructions)
- Non card based (I.E. **NOT** ISO8583)
- Single TXN or high volume submissions
- Financial instructions (carry value)
- Regulatory framework
- Auto balancing end-to-end process
- No manual interventions
- Reduce reconciliations to nearly **ZERO**
Typical EFT Transaction Streams

- Internet Origination (Corporate & Individuals)
- Mobile Banking (Corporate & Individuals)
- File upload (Corporate)
Typical EFT Use Cases

- Salaries – By Corporate to multiple Employees at multiple banks
- From Person to Corporate for purchase
- From Person or business to Government (Taxes)
- From Government to Person (Grants/Pensions)
- Person to Person – ad-hoc payments
- Business to Business
Trade Payments – Features

- Carry specific reference information relating to invoices, project/procurement details, other specific deal information
- Differ from Person to Person (P2P) due to additional information requirements such as invoice references (not normally necessary in P2P)
- Often system generated (Payroll, Creditor output from accounting system)
- Can be generated in a bulk file format
- Realtime payments speed up business
Facilitating Trade Payments

- Banks provide digital platforms for customers to generate **Account to Account** payments
- Banks accept individual or batched payment instructions
- Banks facilitate the transfer of payment instructions to beneficiaries of other banks or within the same bank
- In an efficient payment system, banks make use of a single Automated Clearing House (ACH) to connect to other banks
Global Thoughts – ISO20022
ZEEPAY by Zimswitch

✓ ISO20022 EFT ACH System
✓ Independent of the ISO8583 card switch
✓ High volume – low value system
✓ Fully interoperable between all banks
✓ Standard processing methods
✓ Bulk and single transactions
✓ Credits
✓ Debits
✓ Realtime Credits
Corporate & private customers initiate transactions for all other banks.

ZEEPAY Architectural Overview
Facilitating Trade Payments via Interoperable Ecosystem
The Value of Interoperability

- Increased Efficiencies
- Reduced industry Risk & Complexity
- Reduced Costs

Simplicity of Interoperability

- Industry Standards & Certification
- Industrywide STP
- Simplified reconciliation of input and output
- Uniform industry billing and pricing
- Effective industry DRP
- Effective regulatory framework support
- Industry escalation management

Over multiple Payments streams
The Value of Interoperability

Namibia: Key Payment Industry Numbers

Averages: January to March 2019

<table>
<thead>
<tr>
<th></th>
<th>Monthly Volume</th>
<th>Monthly Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATM</td>
<td>205 509</td>
<td>$ 120 670 987</td>
</tr>
<tr>
<td>POS</td>
<td>1 000 881</td>
<td>$ 646 240 710</td>
</tr>
<tr>
<td>Cheque</td>
<td>7 285</td>
<td>$ 88 678 745</td>
</tr>
<tr>
<td>Dated</td>
<td>502 016</td>
<td>$ 2 953 891 135</td>
</tr>
<tr>
<td>1day / SSV</td>
<td>578 224</td>
<td>$ 21 332 861 891</td>
</tr>
</tbody>
</table>

2,24 Transactions per Capita

Population – Circa 2.2 Million

Economically Active population

1,026,268 (69.4 %)

(Namibia Labour Force Survey 2016)
Thank you!
Zimswitch payment conference 2019
Transact Anywhere, Anytime
Ronald Mutandagayi, Group CEO ZBFH
Ron joined the Group then known as Finhold Group as Head of Finance and Risk in February 2004, and rose to the position of Managing Director - ZB Bank in September 2009.
Ron, a holder of B.Acc (Z) and MBL (UNISA) degrees, is a Chartered Accountant (Z) by profession. He did his articles with KPMG Chartered Accountants where he rose to the position of Audit Manager, prior to leaving in December 1991, to join Willowvale Mazda Motor Industries as General Manager, in January 1992. Ron joined Standard Chartered Bank Zimbabwe Limited in February 1998 as Company Secretary and Head of Banking Services, a position he held until April 2001 when he left to join NDH Holdings Limited as Chief Finance Officer from where he joined Finhold in February 2004 as Head of Finance and Risk.
Part 1 - In Focus: Infrastructure to Support the Digital Economy

Dereck Nyakupinda is a premier Information Systems, Technology and Critical Infrastructure Consultant/Advisor/professional with an MBA specialising in Information Technology Management. Dereck also holds Diploma in Strategic Management and Leadership in addition to a BSc (Hons) Degree in Computer Science. He is also a highly acclaimed Certified Information Systems Auditor (CISA) and Certified Information Security Manager (CISM) and a current member of the American based Information Systems Audit and Control Association (ISACA). He has previously served on the ISACA board PIAC subcommittee for 2010-11 representing Africa.

A Certified Data Center University Associate (DCCA, Dereck has vast experience in external IT and Business Consulting including Review, Design and implementation of critical infrastructure having assisted organisations in various industries in design and implementation of Data Centre projects worth several Millions(USD) Dollars to date.

As Chief Operating Officer at Tendo Electronics, Dereck leads a team of specialists in various domains that delivers turnkey Data Centre projects, having deployed more than 85% of all new Data Centres deployed in Zimbabwe since 2008. The footprint of projects commissioned includes Zambia, Ethiopia, Uganda etc.
INFRASTRUCTURE TO SUPPORT THE DIGITAL ECONOMY

PRESENTED BY:
DERECK NYAKUPINDA, CISA, CISM, DCCA
AGENDA

1. IMPACT OF DIGITAL ECONOMY
2. DATA CENTRE PHYSICAL INFRASTRUCTURE
3. DATA CENTRE DESIGN STANDARDS
4. DATA CENTRE LIFE CYCLE
5. DC MODERN TRENDS & DIGITAL ECONOMY
6. FEEDBACK
The impact of Digital Ecosystem (Cloud, Edge and Hybrid IT)

50B connected things by 2020 IOT & IIOT

Digital traffic is expanding annually by 20%+

MORE COMPUTE leads to management and security challenges

50% reduction in cost of data center design

80% more efficient data center design

NEW TECHNOLOGIES can help solve new and emerging customer problems

NEED TO RETHINK our approach to data center design to keep improving efficiency and cost
DATA CENTRE PHYSICAL INFRASTRUCTURE

DCPI, the Critical Foundation of Business Continuity

Reliable Business Operations

- People
- Process
- Information Technology

Each layer depends on everything below it

DATA CENTRE PHYSICAL INFRASTRUCTURE (DCPI)

- Racks and Physical Structure
- Cooling
- Power
- Cabling
- Security
Key Metrics for DC:
- Reliability
- Performance
- High Density
- Scalability
- Energy Efficiency
- Reducing OPEX
- Integrated system
The Big Three

Uptime Institute

ANSI
American National Standards Institute

EN 50600
Tier 4
- Multi-million dollar business
- 99.995% availability
- Annual downtime due to site is 0.04 hours
- Two independent utility paths
- Fully redundant (2N+1)
- Able to sustain 96-hour power outage

Tier 3
- Large company
- 99.982% availability
- Annual downtime due to site is 1.6 hours
- Multiple power and cooling paths
- Fault tolerant (N+1)
- Able to sustain 72-hour power outage

Tier 2
- Medium-size business
- 99.749% availability
- Annual downtime due to site is 22.0 hours
- Single path of power and cooling
- Some redundancy in power and cooling systems

Tier 1
- Typically small business
- 99.671% availability
- Annual downtime due to site is 28.8 hours
- Single path of power and cooling
- No redundant components
CURRENT DC TRENDS AND DIGITAL ECONOMY

Components ➔ Packaged Solution
ENTERPRISE HYBRID IT ECOSYSTEM

CENTRALIZED
Massive compute and storage located in remote areas

REGIONAL EDGE
Large compute and storage located in central or urban areas

LOCAL EDGE
Compute and storage where data is generated and consumed
DCIM FOR INSIGHT AND VISIBILITY

DCIM
Capacity Planning
Analytics
Simulation
Optimization
Data Management
Reporting

Facility Management (BMS, Power Management, Cooling control, Security Systems, HVAC etc.)

IT Systems, VM Management, Etc.

Data collection, meters, sensors, etc.
AUTOMATED INCIDENT RESPONSE

Analysis of one incident

1. UPS Problem

2. Problem - Registration

3. Problem - Impact Analysis

4. StruxureWare Data Center Operation informed the VM manager, which host servers and VMs are affected

5. Healthy host servers will be found

6. VM Manager will migrate the affected VMs to healthy host server

Virtual Machine Manager
UNDERSTANDING SERVER PERFORMANCE IN DATA CENTRES
QUESTIONS AND CONTRIBUTIONS

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Cell: +263 773379607
Tel: +263242774780/3/6
Part 2 - In Focus: Infrastructure to Support the Digital Economy
Infrastructure to support the Digital Economy
Overview

DIGITAL PAYMENT INFRASTRUCTURE
How the digital infrastructure works together to support the digital ecosystem

- Digital services depend on infrastructure for delivery, and without digital services, infrastructure providers have little for their infrastructure to do.
- It has taken less than two decades for the commercial internet to go from innovation to indispensable, from fun to fundamental.
- Policy-makers, industry participants and other stakeholders need to work collectively to do three things:
  - Commit to actions that promote the long-term growth of the digital payments industry
  - Remove impediments to the expansion of digital infrastructure
  - Modernize policies to encourage investment and innovation throughout the digital ecosystem.
Cloud Computing

Cloud computing is the on-demand availability of computer system resources, especially data storage and computing power, without direct active management by the user. The term is generally used to describe data centers available to many users over the Internet.

Infrastructure as a service (IaaS) is a service model that delivers computer infrastructure on an outsourced basis to support enterprise operations. Typically, IaaS provides hardware, storage, servers and data center space or network components;
Advantages of Cloud Computing

**Cost Savings** - You can save substantial capital costs with zero in-house server storage and application requirements. The lack of on-premises infrastructure also removes their associated operational costs in the form of power, air conditioning and administration costs. You pay for what is used and disengage whenever you like - there is no invested IT capital to worry about.

**Reliability** – usually companies running cloud will invest heavily in reliable power supply and backup. This increases the availability of the systems hosted on the cloud.

**Scalability** – when you go cloud you don’t need to worry about scaling because capacity is usually available to cater for growth that surpasses an individual entity.

**Manageability** – Easy to manage as all the aspects of IT infrastructure are managed by the vendor.

**Strategic Edge** – Time to market is reduced when launching new product as all the IT procurement cycle is cut short.
Disadvantages of Cloud Computing

- Security
- Limited Control
- Vendor Lock-In
- Downtime
Data

Big Data
Extremely large data sets that may be analysed computationally to reveal patterns, trends, and associations, especially relating to human behaviour and interactions. "much IT investment is going towards managing and maintaining big data"

Big Data Analytics
- Big data analytics is the often complex process of examining large and varied data sets 'or big data' to uncover information including hidden patterns, unknown correlations, market trends and customer preferences that can help organizations make informed business decisions.
- By giving businesses fast, convenient access to enterprise information, organizations can improve decision making and enhance business performance.

Big Data Analytics Tools
- Examples of Big Data analytics tools are Cassandra, Hadoop, Plotly, Bokeh, Neo4j, Cloudera, OpenRefine, Storm, Wolfram Alpha and Rapidminer. There are many more out there.
The Four Vs of Big Data

**Volume** - The sheer volume of data. This calls for huge storage to be in place to house such huge data.

**Variety** – big data is often not only made up of Traditional data types (structured data) include things on a bank statement like date, amount, and time, but also includes unstructured non-traditional data like Twitter feeds, audio files, MRI images, web pages, web logs etc.

**Veracity** - Veracity refers to the trustworthiness of the data.

**Velocity** - Velocity is the frequency of incoming data that needs to be processed. Think about how many SMS messages, Facebook status updates, or credit card swipes are being sent on a particular telecom carrier every minute of every day, and you’ll have a good appreciation of velocity. A streaming application like Amazon Web Services Kinesis is an example of an application that handles the velocity of data.
Network Connectivity Infrastructure

Carrier Networks
A carrier network is the proprietary network infrastructure belonging to a telecommunications service provider such as Verizon, AT&T or Sprint. Telecom carriers are authorized by regulatory agencies to operate telecommunications systems. Carrier networks are made up of large, complex configurations of hardware, interconnected to provide communications services to people spread over large geographic areas.
Data Networks
An access network is a user network that connects subscribers to a particular service provider and, through the carrier network, to other networks such as the Internet. Some types of access networks: Ethernet is the most commonly installed wired LAN (local area network) technology.
The Access Network
End user Devices

- What is an End User Device
  - An end user device is a technical term referring to IT hardware that, employees, customers, and other stakeholders of an organization use: during work, in off-hours, for leisure and any other purpose. These same devices are used to access financial services from banks and Fintechs.

- Types of End User Devices:
  - End-user devices include, among others:
    - Smartphones
    - Tablets
    - Wearables
    - POS machines
    - ATMs
    - Desktops
    - Laptops
    - Workstations
Mr. Amon Chitsva is currently employed by the Central Bank as Head of Policy and Research in the National Payment Systems. Mr. Chitsva has held various positions within the Central Bank which include Senior Auditor and Senior Bank Examiner in the Banking Supervision Division before being promoted to the current position. As a Head of Policy and Research, he is responsible for the drafting of payment systems guidelines and regulatory frameworks to ensure that public interest objectives of safety, efficiency and reliability of payment systems are upheld for the benefit of the transacting public.

Prior to joining the Central Bank, he worked in both the private and public sectors including ZIMRA.

Mr. Chitsva is an auditor by profession. He holds an MBA with the University of Zimbabwe. In addition he is an Assessor with the Eastern Southern Anti-Money Laundering Group affiliated to the international board, Financial Action Task Force (FATF).

He is married to Gladys Chitsva and blessed with two sets of twins.
CREATING AND MAINTAINING AN ENABLING REGULATORY ENVIRONMENT

Presented By Amon Chitsva at the ZimSwitch Payments Conference held in Nyanga-Zimbabwe on 29 May 2019
OUTLINE

- OVERVIEW
- TECH DEVELOPMENTS
- ECOSYSTEM:
  - ZIMBABWE REGULATORY FRAMEWORK
  - REGULATORY FRAMEWORK AND ENABLERS
- CHALLENGES
- REGTECH
- WAY-FOWARD
Zimbabwean financial systems has witnessed significant evolution over the years. The financial sector has evolved to cater for a large segment of the population, previously unbanked being absorbed into the financial services sector, via Fintech firms offering card payment services including mobile money and other digitised financial services. Fintech firms are already impacting the insurance, capital market or securities and the pensions subsectors of the financial system. Our approach as a supervisor is striking the right balance between catalysing the innovation and efficiency that FinTech can bring, while preserving at the same time the regulatory level playing field and a safe and sound framework.
• PS legal framework is a multi-disciplinary, multi-dimensional and multi-directional endeavour.

• For Zimbabwe to realise the vision 2030 upper middle economy & attain the SDGs, we ought to leverage ICTS & Fintech for development.
Digital disruption has already happened.

- The world’s largest taxi company owns no taxis (Uber)
- The largest accommodation provider owns no real estate (Airbnb)
- The largest movie house owns no cinemas (Netflix)
- Largest software vendors don’t write the apps (Apple/Google)
- Large phone companies own no teleco infra. (Skype, WeChat)
- Popular media owners create no content (Facebook)
- The fastest growing banks have no actual money (SocietyOne)
CONCEPTUAL ISSUES – DIGITAL ECOSYSTEM

Big Data Analytics, Cloud Computing, Cryptocurrency, and Social Media Developers

Technology Developers

Payment, Wealth Management, Lending, Crowdfunding, Capital Market, and Insurance fintech companies

Financial Regulators and Legislature

Fintech Startups

Government

Fintech Ecosystem

Financial customers

Individuals and Organisations

Traditional Financial Institutions

Traditional banks, Insurance companies, Stock Brokerage Firms, and Vent Capitalists

Source: Lee and Shin (2018)
Overview of DFS Landscape

Financial Service Providers
- Banks - Digital Bank as a priority client (Domestic / International)
- NBFIs, MFIs, PSPs, Platform/Service Provider/Tech Startups/ MNOs

Products
- Savings, Investment
- Lending (incl. Factoring, Supply Chain Finance)
- Payments, Remittances, Transactional Accounts
- Insurance

Channels
- Alternative Distribution Channels (ADC) enabled by technology:
  - Online/internet, cards/ POS, tablets and Mobile in combination with agent networks (Branchless banking)

Customers
- Unbanked and underbanked segments particularly in frontier/rural areas:
  - MSMEs (including women-owned) in underserved geographies
  - Individual consumers/retail customers
PAYMENT SYSTEM ACCESS DEVICES

DEBIT CARDS AND MOBILE BANKING TRENDS

100% from 2015 to 2018: Target

31% from 2015 to 2018 MB subscribers

59% from 2015 to 2018

225% from 2015 to 2018 Internet Banking

CREDIT, PREPAID CARDS AND INTERNET BANKING TRENDS
Zimbabwe DFS Regulatory Landscape

Regulatory framework
- RBZ Act, NPS Act, Banking Act, AML Act, etc.

MoUs with other supervisors/Regulator
Collaborate on licensing and oversight activities

Adopted international best practices
- FATF, 24PFMIs, PCIDSS, etc
Regional Treaties and protocols such as SADC and COMESA protocols also influence our laws

Guidelines
- Recognition Criteria, Oversight, Framework, Retail Payment Guidelines, Risk Based Guideline

Pending Bills
- Data Privacy
- Cyber security
- Electronic transaction
- Consumer protection
Provided an enabling regulatory framework - test and learn approach.

Allowed entrants of new non bank players into the financial sector - MPSPs.

Enhanced risk management framework – Issued Oversight and risk mgnt guidelines (Retail payments Guideline) on RBZ website.

Continue to address consumer protection issues - CP Guideline on the RBZ website.

Encouraged interoperability of systems and sharing of infrastructure - Directive of 2014 & Infrastructure sharing Regulations.

Promotion of electronic payments and banking, QR code, NFC - education and awareness programmes (promoting financial literacy)

Improvement of access to financial services through ensuring even distribution of access points and devices (POS mPOS for Buses & SMEs)

Incentives - removal of duty on POS devices, 3% and 10% incentive for remittances received if cashed out and used electronically respectively as per Mid Term Monetary Policy Statement 2017

Set up a multi-disciplinary task team to consider regulatory, supervisory and technological opportunities offered by Fintech- Framework on Fintech.

Offered policy guidance to the market on crypto currency in 2014 and 2017
CHALLENGES To Institutions/FINTECH

- Governance Issues – individually owned
- Inadequate documentation presented
- On beneficial ownership

- No Specific ‘FinTech regulation’: multiplicity of rules
- Existing regulations incompatible with the new technology

- Assessment of new products costly – pilot tests
- Time frame for pilot tests might require longer period
- Banks use their live environment

- Insufficient attention to ML/TF Risks

- Limited compliance culture & Consumer Protection Mechanisms
- Limited knowledge on the requirements and standards
1) Decentralised – No Regulator with primary responsibility of oversight

2) Cyber-security risks - financial crimes

3) Limited Regulatory Capacity

4) Application of FATF & PFMI –

5) Risky Integration - Exchanges - cryptocurrency

6) Balancing key regulatory objectives of FI, FS, consumer protection and competition.

7) No specific regulation for Fintech

8) Tax Evasion

9) Limited Cooperation Collaboration across jurisdictions

10. Interoperability
11. Data protection
REGTECH

- Leverage on FinTech solutions to mitigate the impact of de-risking
- Adopt electronic financial surveillance mechanisms
  - On-line real time, read only monitoring mechanisms.
- Assist in compliance with AML and KYC requirements
  - Compliance - Identity verification -
  - Transactions screening technology based on defined parameters.
- RegTech solutions
  - Biometrics and Iris Guard
- No one size fits all approach.
Create an enabling legal and regulatory environment
Supports market development and encourage innovation
Proportionate regulation
Risk based approach

Partnerships and cooperation
Partner with Telcos
Regulator
Encourage market cooperation (non-banks and banks)

Government Uptake of Usage DFS
Revenue payments (Licenses and small taxes)

Interoperability
Consider private sector initiatives enhancing or developing interoperability

Adoption of DFS in the economy
Public and private sector adoption for digital economy

KEY LESSONS
Regulatory sandboxes

- Minimizing legal uncertainty
- Improving access to investment
- Adaptation to test-and-learn approach
- Creating rules for new products/business models
## Financial Technology (FinTech) Firms’ Regulation

### From the prudential perspective

- As fintech steps up its presence, it might be useful to place increasing emphasis on regulating services rather than institutions.

### From a consumer and investor protection perspective

- It is key that financial investors and consumers fully understand the implications of the fintech services, including credit risk, cybersecurity, and protection of privacy risks.
- The need to strengthen policies of information and financial education regarding fintech services.
Create a conducive regulatory environment

Effective Coop & Collaboration

Adopt best practices and evidence-based regulation

Proportionate RBA-FATF Standards

Embrace Technology
“Technology is neither good nor bad; nor is it neutral”

Adopt Green finance and continue to support the SDGs

Provide framework for Sandbox Concept

Strike a balance between FI & FS

WAY FORWARD
Conclusion

• We strive to be as forward looking as possible when coming up with Regulations.

• We bank on the market support whenever we develop the laws that we may propose to achieve the vision of an optimally regulated industry.
Thank you
Tech Showcase
EFT Corporation Zimbabwe

Zimswitch Conference: 30 May 2019
Company Overview

Switching | Development | Consulting | Engineering

20 Years in the industry
Over 60 Customers | 14 African Countries

A Division of

Partners
African Presence
Overview

- **Fintech (before there were Fintech’s)**
  - Software as a Service (SaaS)
  - Service on Demand

- **Localized**
  - Skills, resources and knowledge
  - Services are local
  - Feet on the ground
  - Local currency

- **Trusted**
  - PCI DSS
  - PCI PIN
Innovation @EFT
Product Innovation
China
Top 4 China Banks
No.1 Acquiring Company
No.1 Country coverage bank

Over 1.14 Million

Over 330 000

Other Verifone Regions
APAC
EMEA & NA
EU

China
Top 4 China Banks
No.1 Acquiring Company
No.1 Country coverage bank

Over 1.14 Million

Over 330 000

Other Verifone Regions
APAC
EMEA & NA
EU
• 3rd Party App Support*
• 4G, WiFi, Bluetooth
• Secure Payment module
• 1D, 2D barcode scanner and QR Code Pick-up
• Extended Battery life and power save modes
iPOD vs Sony Walkman
**EFT Pay Overview:**
- Best in class Payment Gateway
- Fully Compliant – PCI, GDPR etc.
- Over 350+ Payment types
- Major Brand Support
- Local Card Support, BUT...

**Step-Up Authentication:**
- VbV, Secure Code, SafeKey - 3D Secure (v1.0 and v2.0)
- Customer Journey
- SMS OTP? 2-Way SMS...? Dedicated Mobile App?
- Why not WhatsApp?
Messages to this chat and calls are secured with end-to-end encryption. EFT WhatsApp may use another company to store, read and respond to your messages and calls. Click for more info.

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NEW PAYMENTS PLATFORM

EFT PAY is an innovative, never before seen payment gateway that supply modern-day user interfaces to local merchants that want a global reach.
THANK YOU