



# DFS Risk and Fraud Management



INTERNATIONAL CONFERENCE ON  
RESPONSIBLE AND INCLUSIVE FINANCE

*Shared commitment to scaling impact*



**March 21-22, 2018 Marriott Hotel  
Kigali-Rwanda**

## Session Objective

By the end of the session, participants will discuss the potential provider and consumer risks in digital finance and learn how to manage those risks having full awareness of the issues that stand in the way of effective of risk management.

## Session Outline

1. Definition of DFS
2. DFS Models for MFIs
3. DFS Risk Categories
4. Consumer Protection and DFS
5. Challenges to Effective Risk Management
6. Risk Management Frameworks in DFS
7. Q&A

# Introduction

# MicroSave: Who we are



International FI consulting firm with **20+** years of experience



**11** offices around the world



Projects in **~50** developing countries

## Our impact so far

**300+**  
Clients

Implemented **>75**  
DFS projects

Developed **250+**  
FI products and channels now used by  
**50 million+**  
people

**>550**  
Publications

**MicroSave**  
Market-led solutions for financial services

Trained **6,500+**  
leading FI specialists globally

## Key partners and clients



MicroSave is globally recognized as the local expert in financial inclusion



**Joyce C. Murithi** is a Senior Manager in the Inclusive Finance and Banking domain with insightful understanding of financial sector in various markets in Africa.

She has extensive experience in financial product development, corporate and product marketing strategies formulation, transformation of MFIs and credit operations.

Joyce has also conducted numerous market researches in Kenya, Uganda, DRC, Pakistan, Ghana, Tanzania, Nigeria and Malawi for financial institutions, mobile money operators and non-financial providers including NGOs. Her other areas of interest are in digital financial services, social performance management (SPM), capacity building and youth inclusive financial services.

# Introduction to DFS

# What is Digital Finance?

**Access to and use of formal financial products and services by the end consumer through digital channels, leveraging technology enabled/oriented processes.**

## Product



Electronic G2P payments



Supply Chain Finance



Remittances/P2P transfers



Transfers and bill payment solutions



Retail payments

## Process



ID Verification



Process Efficiencies



Product origination, disbursements & collections



Alternative Credit Scoring

Data Analytics

## Channel



ATMs



Agent Networks



Internet Banking



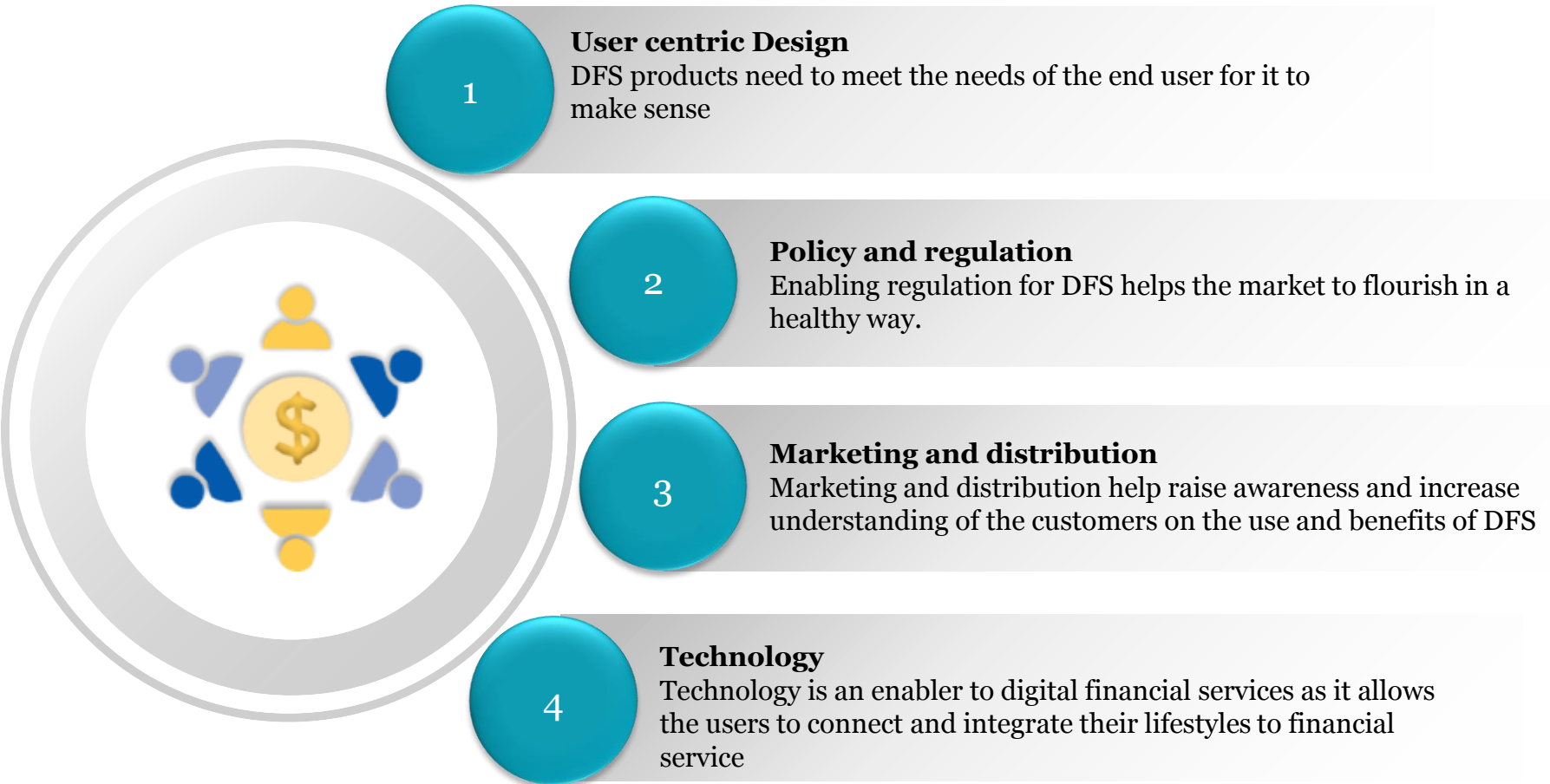
Mobile Phone



POS



# DFS Enablers; For Consumer Uptake and Usage





# DFS Current Status Globally

118 MILLION

accounts were active  
(30-day) during  
December 2016



MOBILE  
MONEY



is available in TWO-THIRDS of low-  
and middle-income countries

REGISTERED ACCOUNTS  
SURPASSED  
HALF BILLION  
IN 2016



Mobile money providers are  
processing an average  
30,000 transactions  
per minute, or more than

43 MILLION  
PER DAY



IN DECEMBER 2016,  
THE INDUSTRY  
PROCESSED MORE THAN  
US\$ 22 BILLION  
IN TRANSACTIONS



MORE THAN 40%

of the adult population in Kenya,  
Tanzania, Zimbabwe, Ghana, Uganda,  
Gabon, Paraguay and Namibia are  
using mobile money on an active basis  
(90-day). This is an increase from  
just two countries in 2015 (Kenya &  
Tanzania).

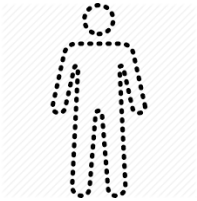
MOBILE MONEY IS STRENGTHENING  
THE BANKING INDUSTRY

Between September 2015 and June 2016,  
the volume of flows to and from bank  
accounts grew more than

+120%



# Implications of DFS to Financial Service Providers



- There is an emergence of **new** customer segments previously unreachable – an ‘invisible’ set of customers is now ‘visible’



- New **players** in the financial services sector (Mobile Network Operators, Fintechs) have emerged that are both competitors and potential partners. These competitors are agile and largely unregulated and are dis-intermediating the traditional incumbents



- New **distribution** models have been created

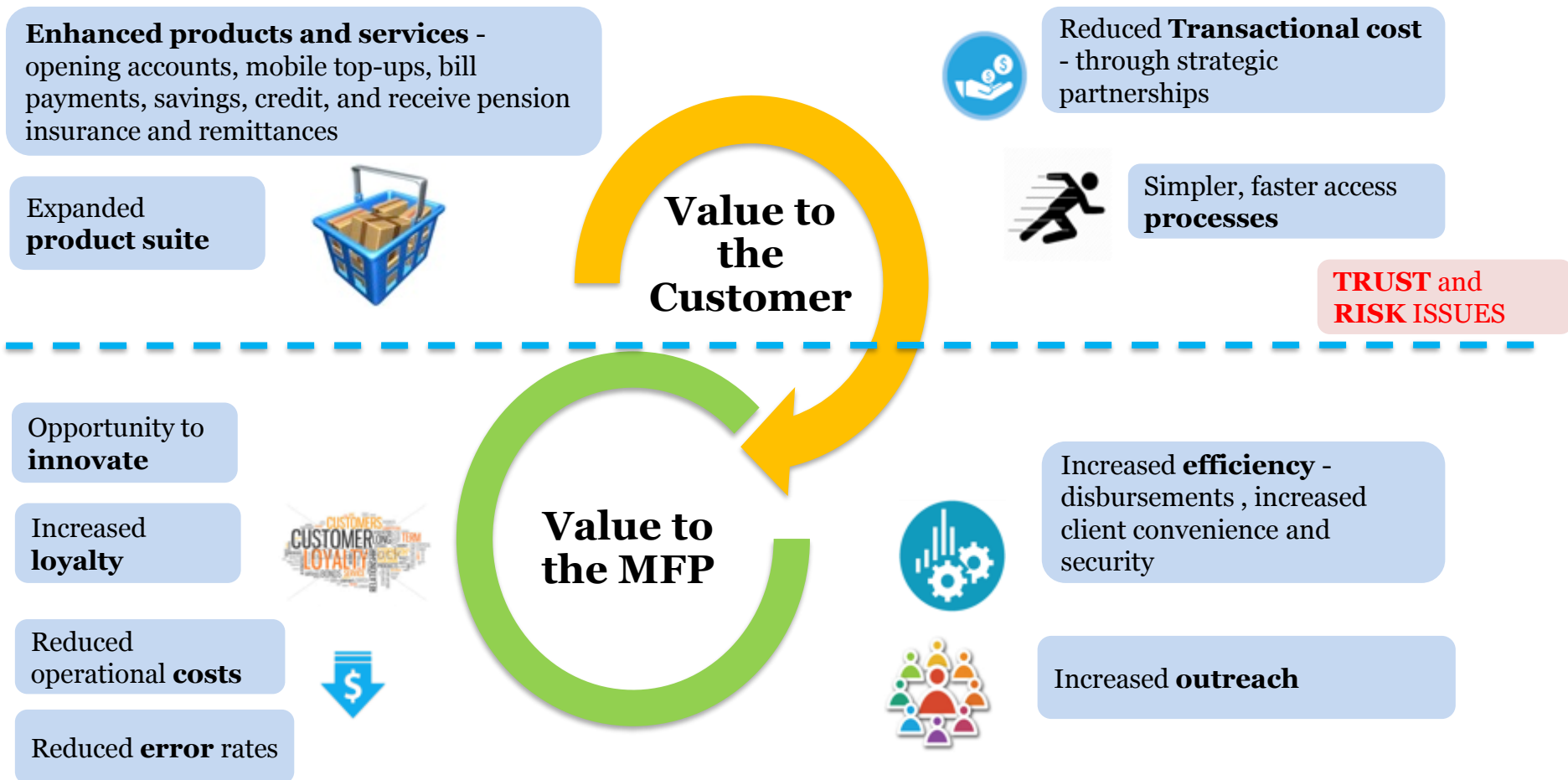


- There are now new opportunities for MFP's **internal operations** - use of data to guide decisions, improve processes



- Has also exposed MFPs to new **risks** that require new mitigation approaches such as operational risk, cyber risk (hacking), and fraud risk

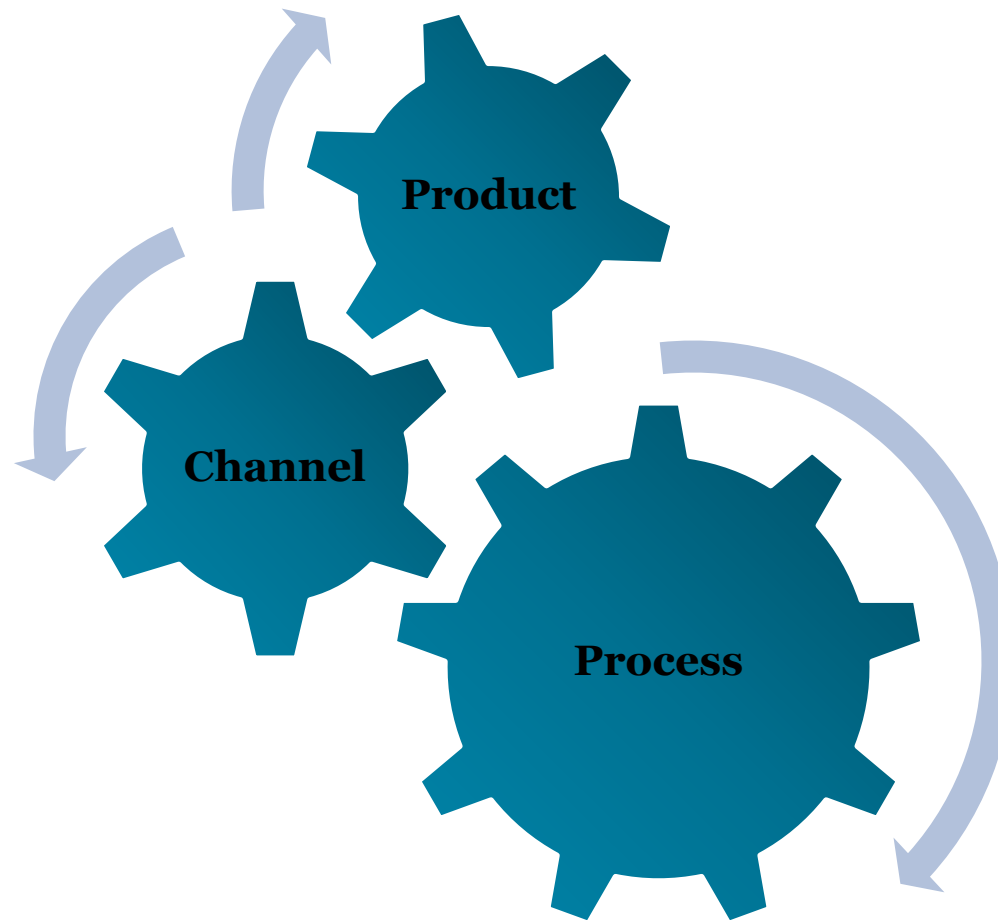
# Impact of Digital Financial Services for FSPs and Clients



Source: [www.helix-institute.com](http://www.helix-institute.com)

# Digital Transformation

# Digital Transformation Models



# Core Strategic Options for MFPs

	Use as a Service	Leverage Existing Opportunities	Build
<b>Processes</b>	<ul style="list-style-type: none"> <li>• Outsource automation of processes</li> <li>• E.g. Ujjivan and Artoo in India</li> </ul>	<ul style="list-style-type: none"> <li>• Use service providers to automate processes</li> <li>• E.g. First Access and FINCA in Tanzania</li> </ul>	<ul style="list-style-type: none"> <li>• Build/buy systems to automate processes</li> <li>• E.g. Equity Bank</li> </ul>
<b>Channel</b>	<ul style="list-style-type: none"> <li>• Act as agents for existing deployments</li> <li>• Cashpor in India as agents of ICICI</li> </ul>	<ul style="list-style-type: none"> <li>• Ride on existing deployments</li> <li>• UGAFODE in Uganda</li> </ul>	<ul style="list-style-type: none"> <li>• Build own agency network</li> <li>• CRDB Tanzania</li> </ul>
<b>Product</b>	<ul style="list-style-type: none"> <li>• Offer existing products of other service providers</li> <li>• E.g. Cashpor in India</li> </ul>	<ul style="list-style-type: none"> <li>• Offer own traditional/digital products riding on existing deployments</li> <li>• Tea Saccos in Rwanda with Tigo</li> </ul>	<ul style="list-style-type: none"> <li>• Develop and implement digital financial products</li> <li>• E.g. Equity Bank in Kenya</li> </ul>

# Benefitting from Digital Transformation – Case of M Shwari

**M-Shwari**



Launched in November 2012 in Kenya

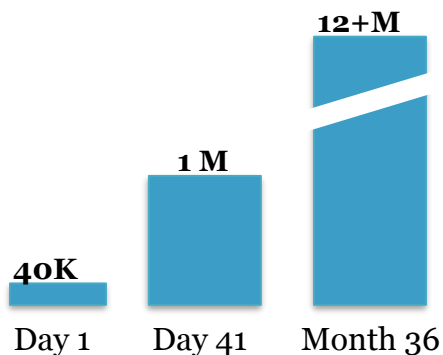
Mobile based micro savings and micro credit product offered by Commercial Bank of Africa through the Safaricom mobile network

Commercial Bank of Africa uses documents submitted to Safaricom for KYC to vet against the National ID system to fulfill KYC requirements – takes 30 seconds

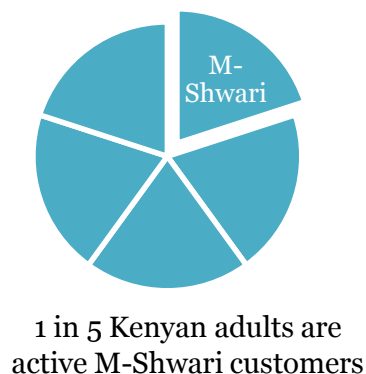
Unsecured loans for a short term (1 month) at 7.5% facilitation fee

## M-Shwari in Numbers

### Growth in Accounts



### User Base



### Savings (till Dec- 2015)

Total Savings	USD 76M
Lock-in Savings	USD 14M
Users with Lock-in Savings	193,313
Average Lock-in Period	3.8 Months

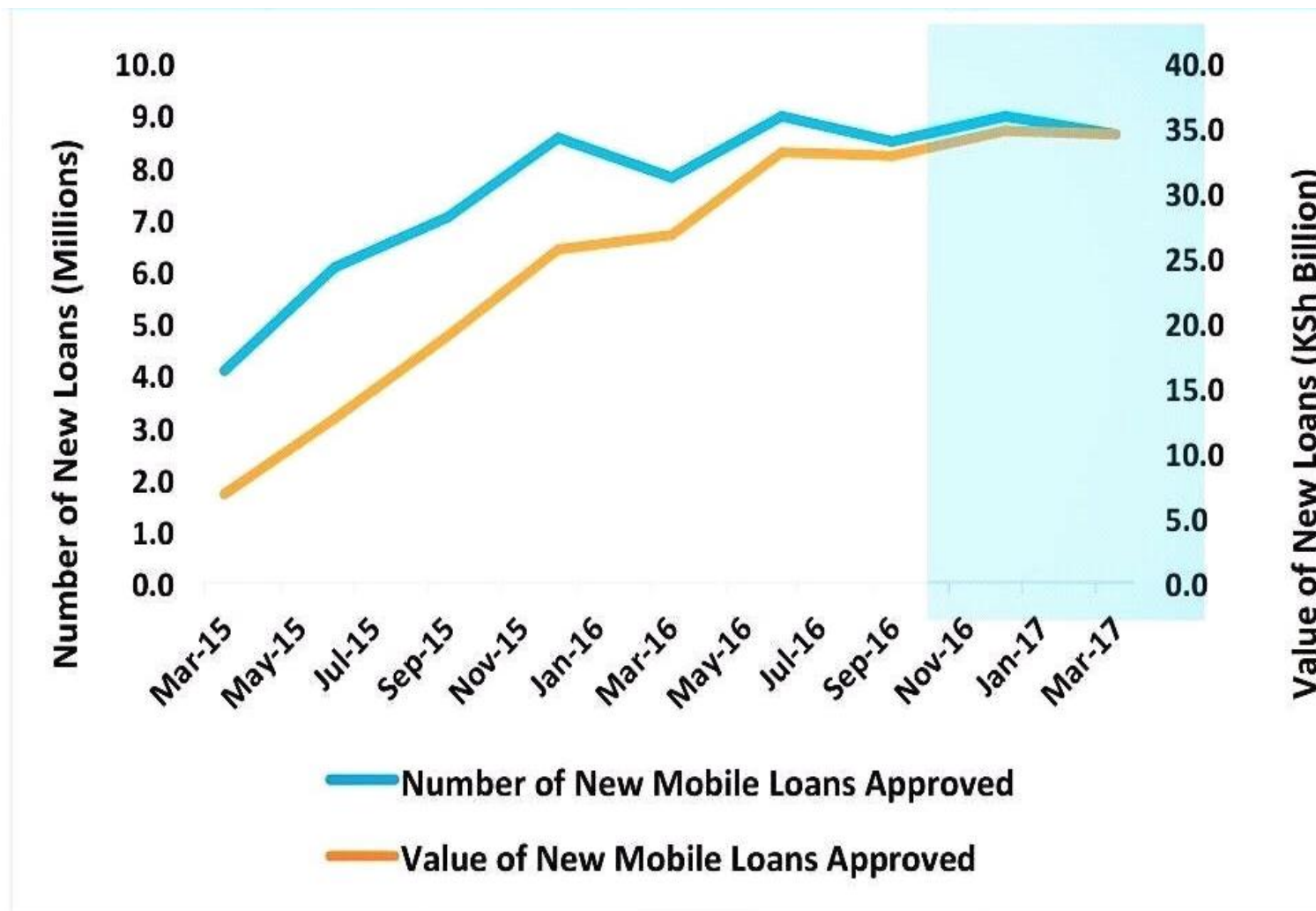
### Loans (till Dec-2015)

Loans	USD 646M
Average Tenure	26 days

**This represents a sample of the opportunities available for financial institutions when they leverage DFS and attract mutually beneficial partnerships**



# Growth in Digital Lending in Kenya



Source: CBK



# Call Out:

Think about:

- ❖ The emerging digital financial services (DFS) in your market?
- ❖ Who are they?
- ❖ What are the use cases of DFS

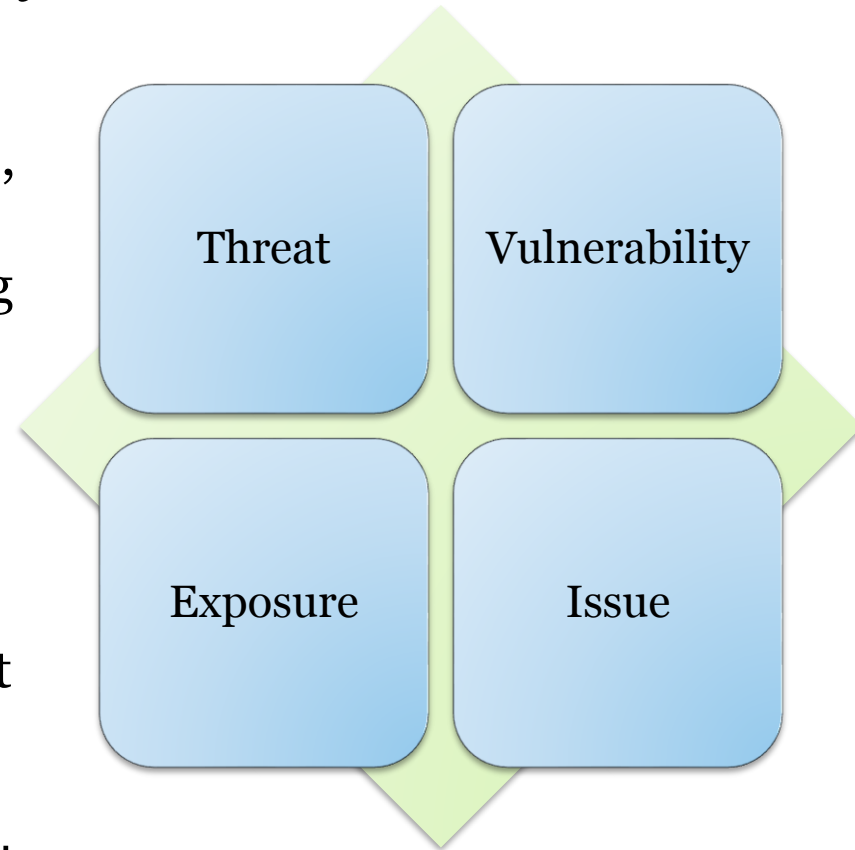


# DFS Risk Categories

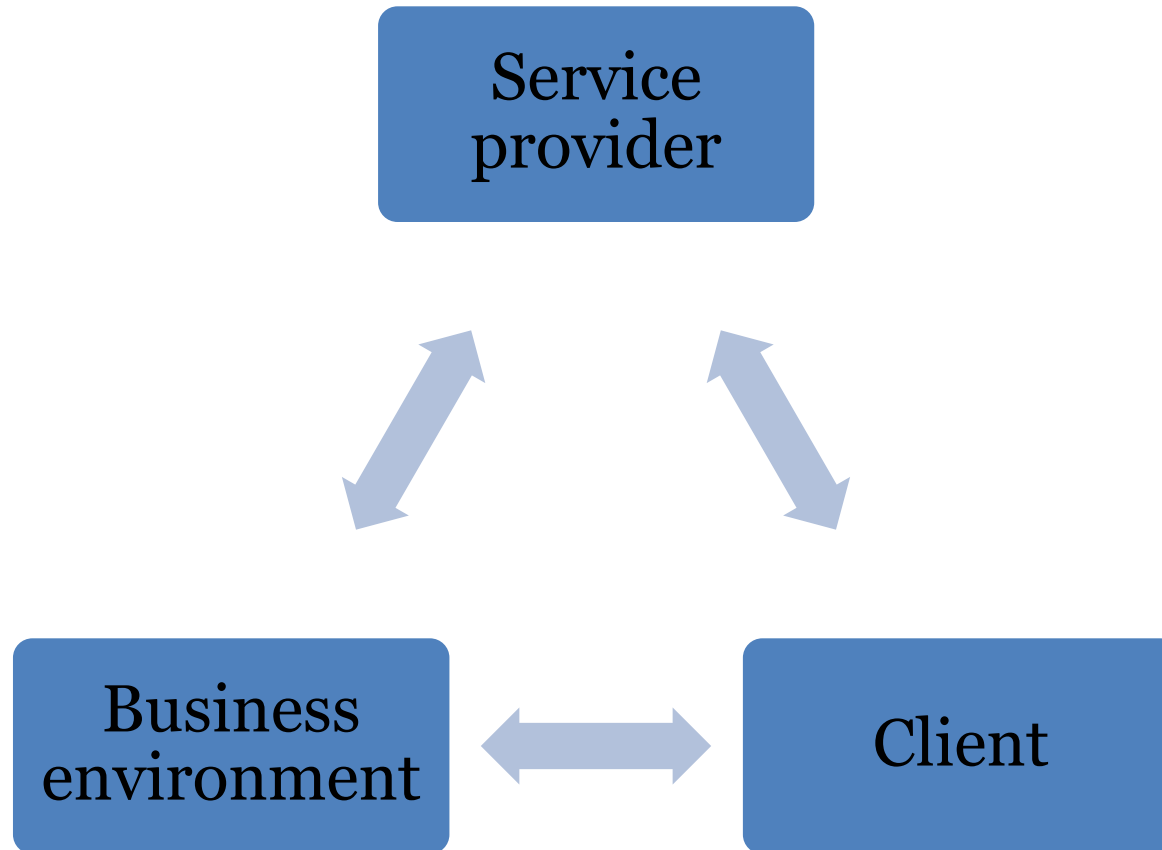
## Introduction to DFS Risks

Risk is “*the effect of uncertainty on objectives\**”

- Organizations now engage in business activities outside of their core business, such as or banks and MFIs partnering with MNOs to offer traditional banking products through new channels
- While providers have extended their existing risk frameworks to include alternative channels there is still a nascent understanding of the risks that DFS bring
- Providers now face new threats, exhibit vulnerabilities, face uncertainties that expose them to issues



## Categorisation of Risks



# Call out:

On the next slide...



Think about;

1. What do you see?
2. What you don't see in the picture?

Share with the forum

# What do you see?





# DFS Risk Categories



# Key Strategic Risks

Launching poorly designed service

Unrealistic business case

Provider does not fully understand its target market for DFS

Competitive threat from partner

Provider does not fully invest in resources required to meet targets

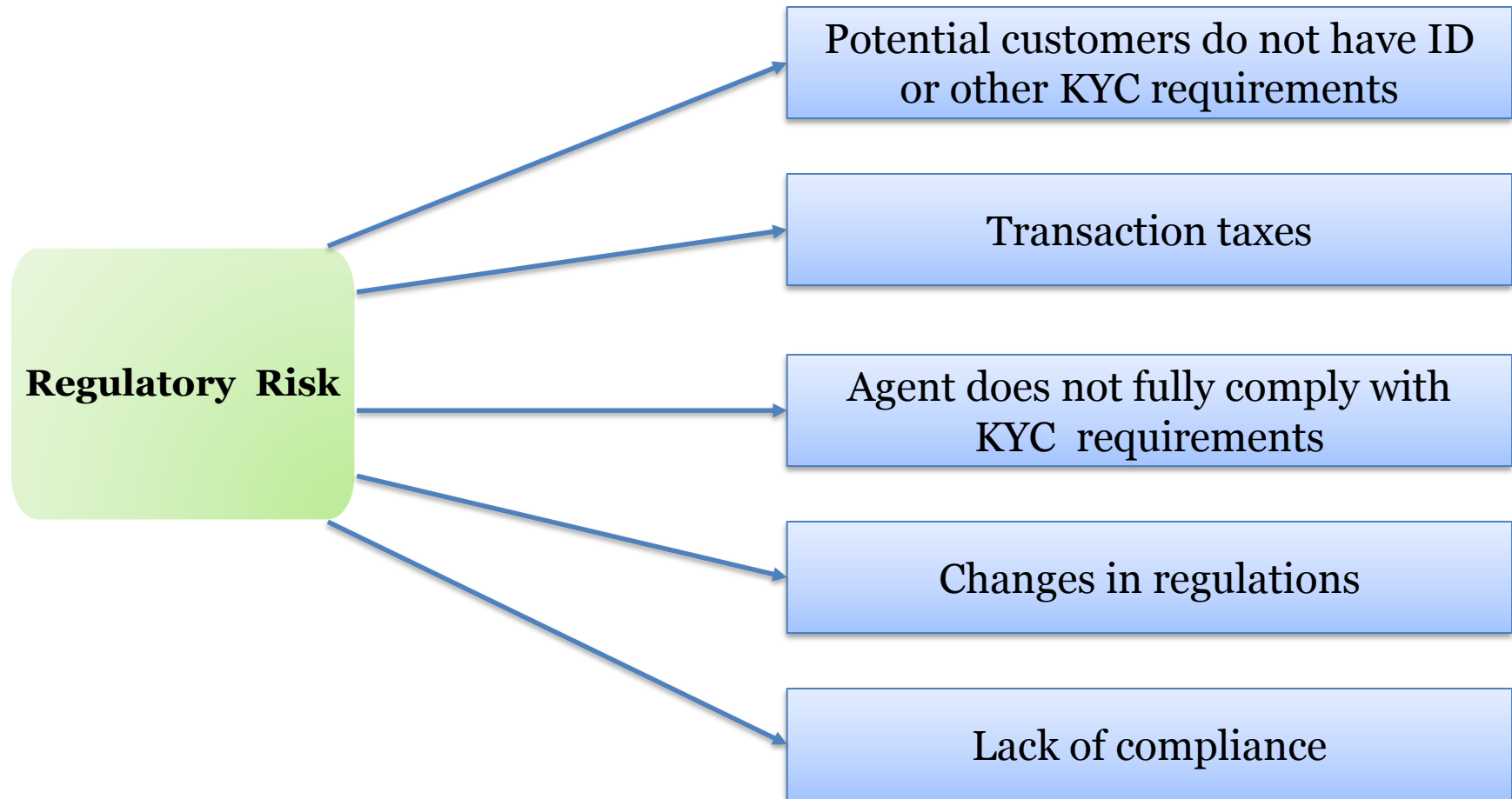
Lack of interoperability prevents customers from transacting with desired third party

De-prioritisation of DFS products or channels

Competition

**Strategic risk is broadly defined as the actual losses that result from the pursuit of an unsuccessful business plan or the potential losses resulting from missed opportunities**

# Key Regulatory Risks

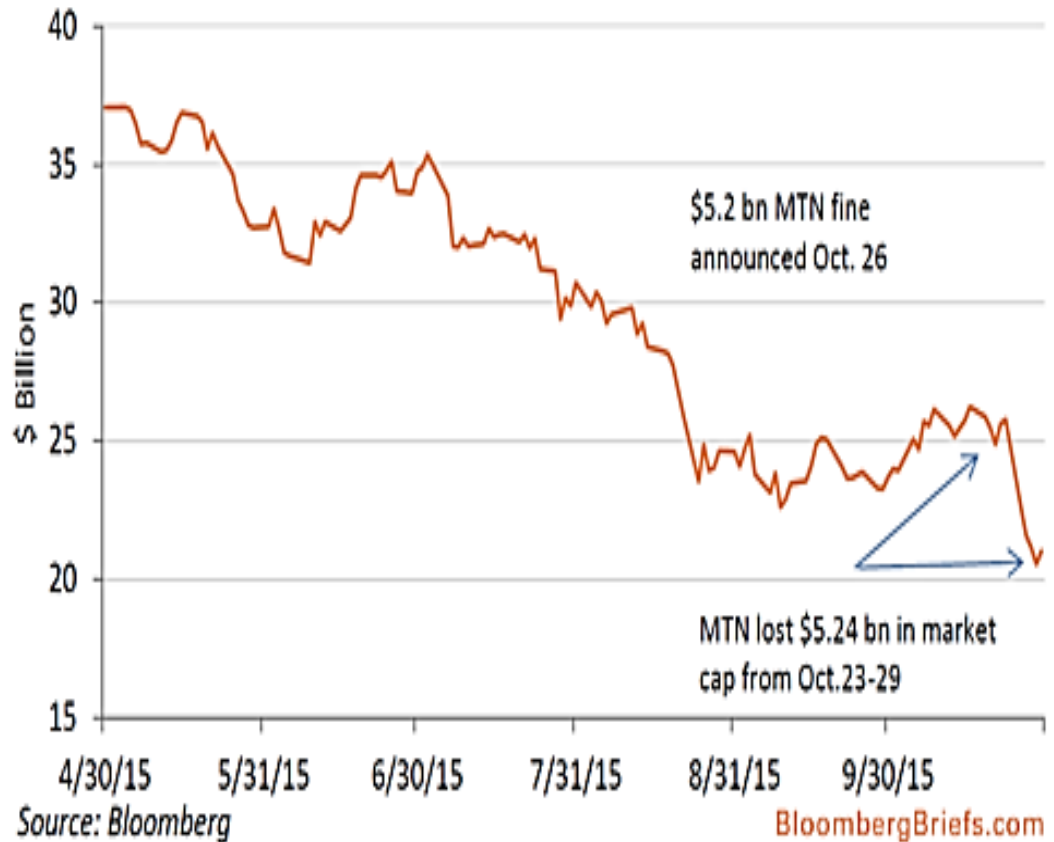


**Regulatory risk refers to the risks associated with complying (or not complying) with regulatory guidelines and rules**

# Regulatory Risk

## MTN Nigeria Case

- MTN relied on roadside vendors for registration
- 1.5 million subscribers were unregistered
- Fine imposed for failing to disconnect customers with unregistered SIM cards. Paid \$1.7b
- The CEO resigned with issue threatening to shut down operations



- 20% of MTN market value was wiped out

# Key Operational Risks

Financial risks:  
Reconciliation and  
account variances,  
fraud

Customer is unable to  
resolve transaction  
with provider, -

Lack of operational  
manuals and business  
processes

Lack of operational  
audits

Lack of internal  
controls, internal  
reporting and data  
monitoring

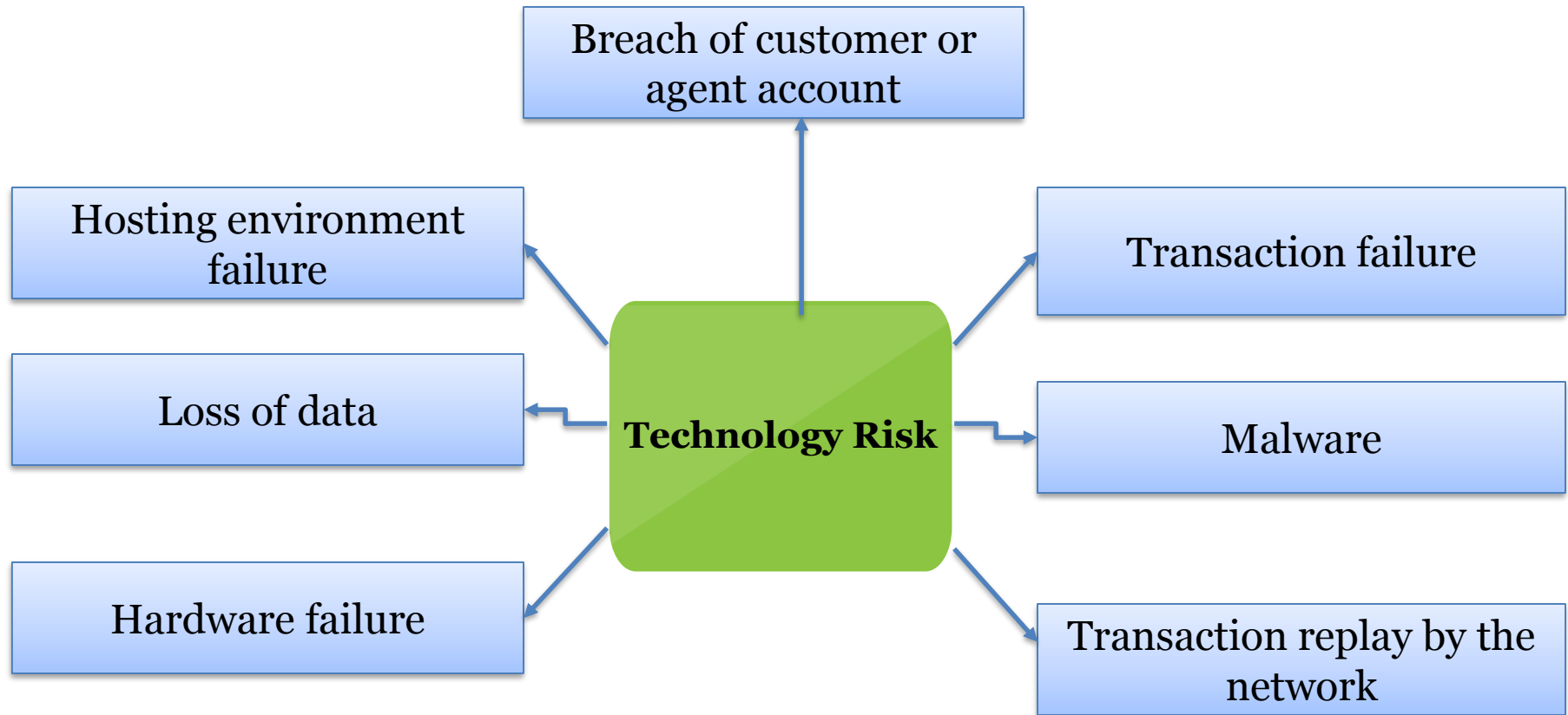
Data input errors

**Refers to risks associated with products, business practices, damage to physical assets, as well as the execution, delivery and process management of the service**

# Key Financial Risks



# Key Technology Risks



**Technology Risk refers to technology failure that leads to the inability to transact**



# IT Genius With a Digital Footprint That Keeps Cash-Rich Firms Awake

## Suspect in Sh4bn KRA cybercrime to remain in custody for 40 days

March 28, 2017 1:03 pm

727  
SHARES



*'Suspected accused of hacking and stealing from State agencies such as the Kenya Revenue Authority (KRA), the National Transport and Safety Authority (NTSA), the Independent Electoral and Boundaries Commission (IEBC) and Saccos.*

*He breached **Safaricom's impregnable system** and made away with electronic airtime worth **Sh20,000**.*

*Earlier in January he and an accomplice had infiltrated **NIC Bank's system**, demanding to be paid **Sh6.2 million in bitcoins**. They were also charged with stealing **Sh2.88 million from NIC Bank**.*

# DFS Consumer Risks

## Consumer Protection Risks in DFS 1/2

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### **1. Appropriate product design and delivery**

*Standard features- Agric balloon payments*

*Penalising non-payment rather than rewarding good repayers*

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### **2. Prevention of over indebtedness**

*Multiple registrations*

*Funding past-times (betting, lifestyle)*

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### **3. Transparency**

*Limited financial literacy- Listing on CRB*

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### **4. Responsible Pricing**

*Hidden fees*

*Agents overcharging*

## Consumer Protection Risks in DFS 2/2

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### **5. Fair and respectful treatment of clients**

*Agent support/education; poor quality service at agent*

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### **6. Privacy of client data**

*Sharing data with third parties without consent*

*Partners with FI accessing/using data without FI consent*

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### **7. Mechanism of complaint resolution**

*Agents unable to address disputes*

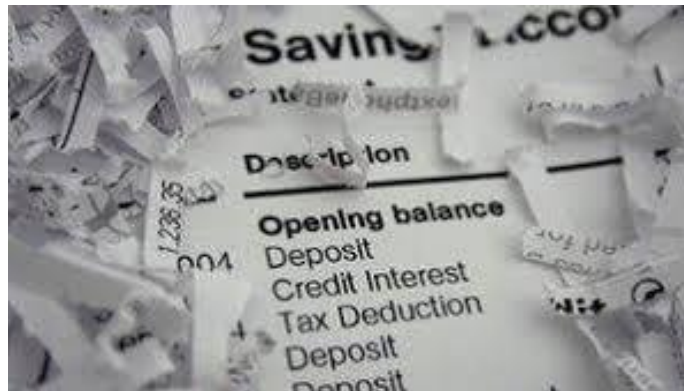
*No channel for redress*

# Challenges to Effective Risk and Fraud Management

# Call out:



**Do you know of any case where there has been impediments to Risk Management? Can you share the case? What do you think this impediment was?**

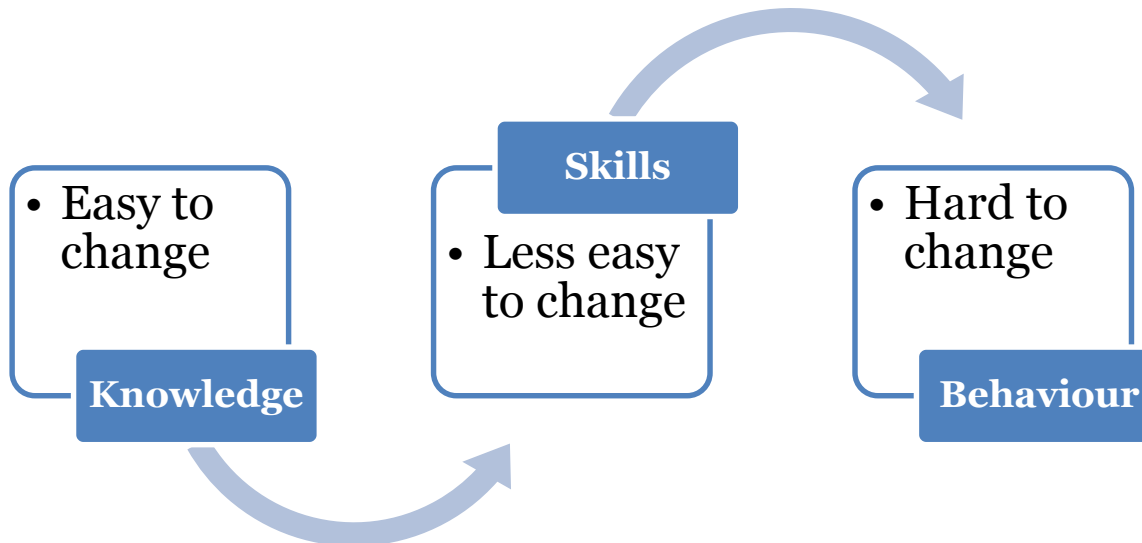


# What does this Mean?

DFS has created opportunities for providers to unlock new markets and segments.

Risk management is heavily contingent on how we identify, perceive and assess risks.

Risk management process is susceptible to several biases





# Risk Management Framework in DFS



# What risk management frameworks are you familiar with?

# Internal Risk Mgt. Control Framework

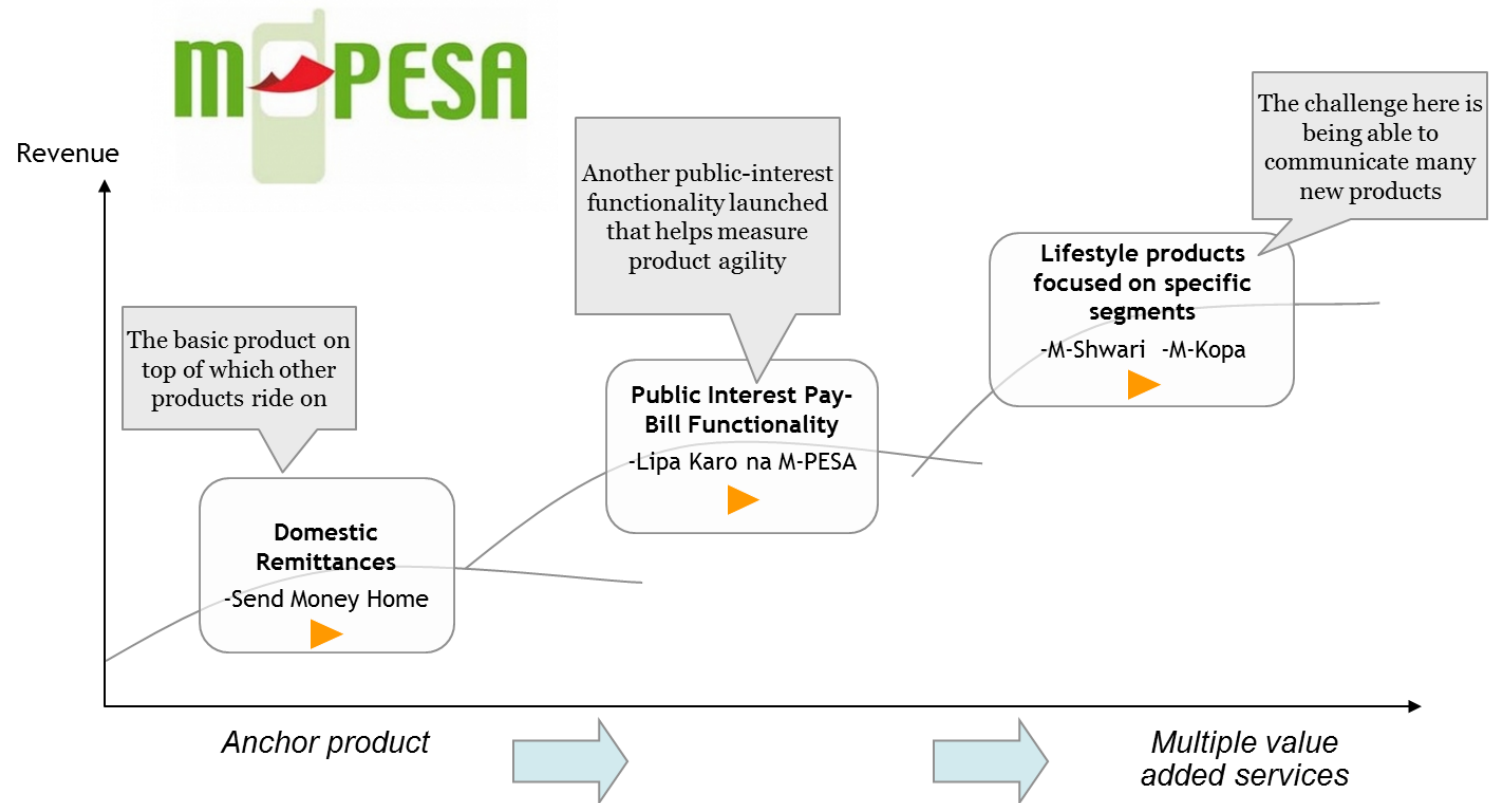


# Risk Heat Map

<b>5 Severe</b>	<b>Transfer</b>	<b>Avoid/ Transfer or Reduce</b>	<b>Avoid/ Transfer, Reduce</b>	<b>Avoid/ Transfer, Reduce</b>	<b>Avoid/ Transfer, Reduce</b>
<b>4 Major</b>	<b>Transfer risk</b>	<b>Reduce</b>	<b>Transfer/ Reduce</b>	<b>Avoid/ Transfer, Reduce</b>	<b>Avoid/ Transfer, Reduce</b>
<b>3 Moderate</b>	<b>Accept</b>	<b>Reduce</b>	<b>Reduce</b>	<b>Transfer/ Reduce</b>	<b>Avoid/ Transfer, Reduce</b>
<b>2 Minor</b>	<b>Accept</b>	<b>Accept</b>	<b>Reduce</b>	<b>Reduce</b>	<b>Transfer, Reduce</b>
<b>1 Insignificant</b>	<b>Accept</b>	<b>Accept</b>	<b>Accept</b>	<b>Reduce</b>	<b>Reduce/ Accept</b>
<b>Impact Probability</b>	<b>1 Rare</b>	<b>2 Unlikely</b>	<b>3 Moderate</b>	<b>4 Likely</b>	<b>5 Almost Certain</b>

Each risk is considered separately and also collectively

# Example 1: Scenario Analysis: Why is it Hard to Predict the Future?

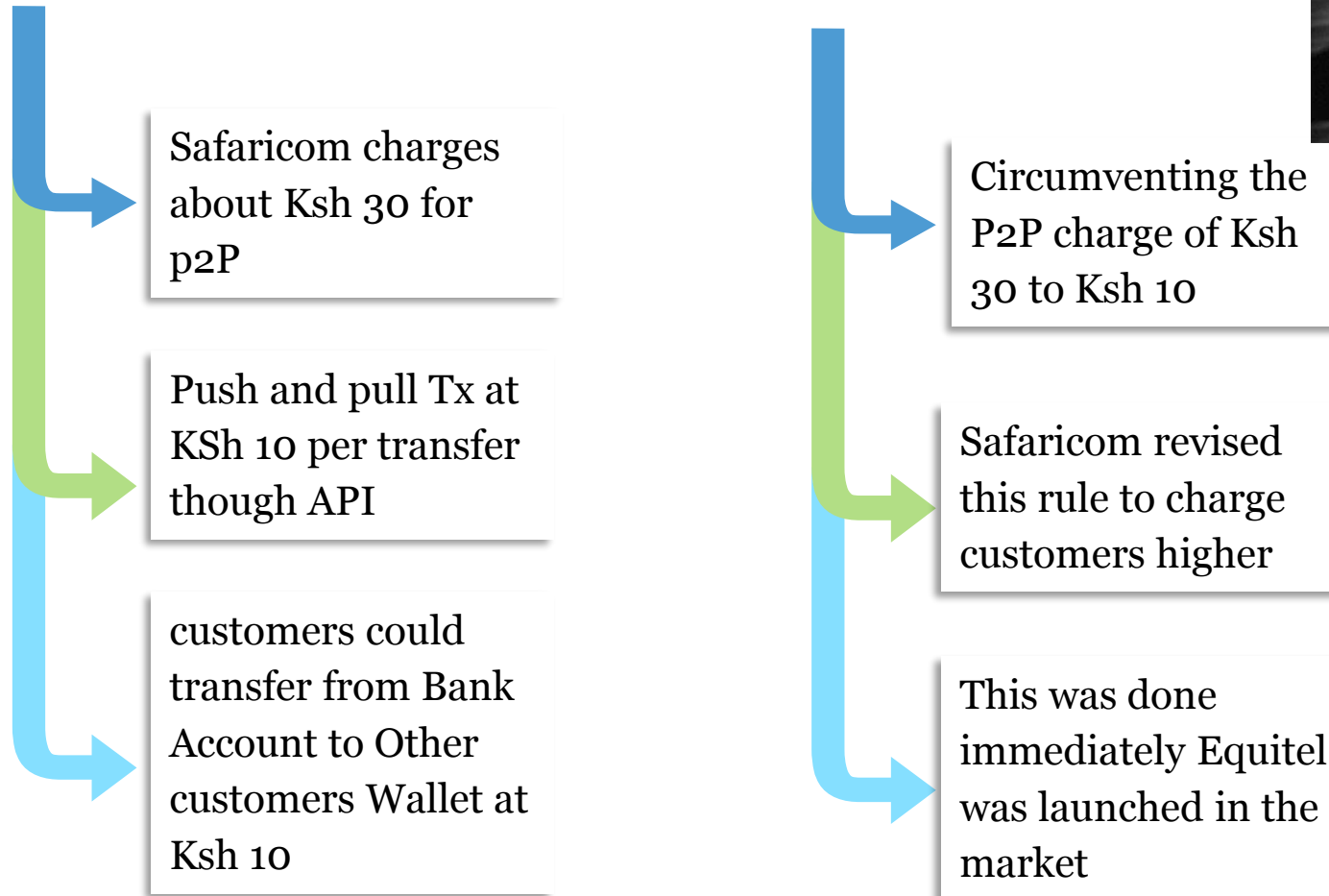


Deficient  
Cognitive  
Mechanisms

Framing  
susceptibility

Overconfident  
in assessing  
probabilities

# Safaricom hits Banks with New M-Pesa Fees (Exploit Risk Areas)

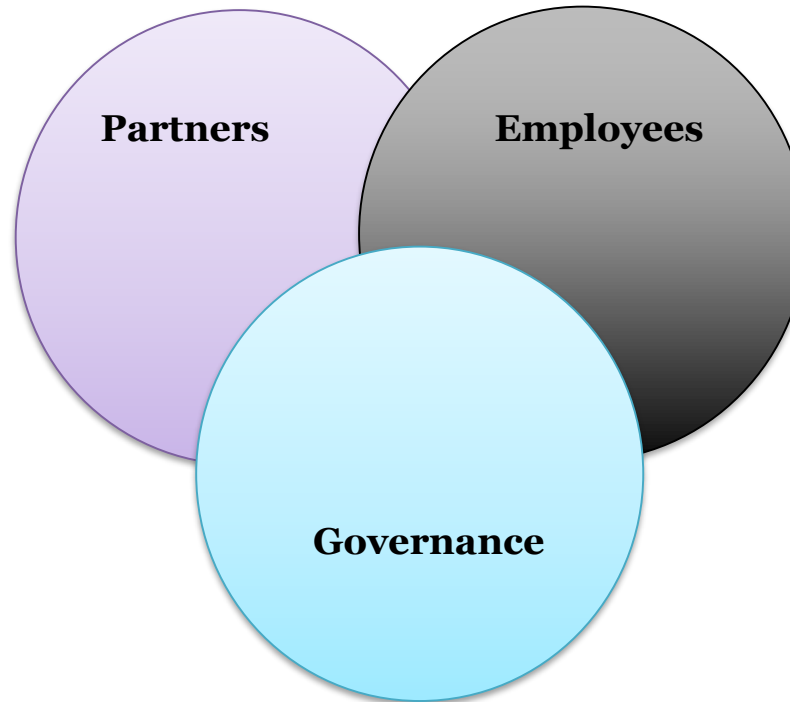


**Do you have any example of a provider using exploit strategy to manage medium to long term risk?**

# Finally.....Successful Risk Management DFS Results In

## Better Customer/Partner Experience

- ✓ The institution should assess new partners appropriately.
- ✓ The institution is a trusted partner itself & doing business with YOU is a good experience



## Better Employee Experience

- ✓ Decision-tree process makes risk assessment clear, consistent and simple.
- ✓ Roles and responsibilities are clear.
- ✓ New tools and support make life easier

Good risk governance - reducing risk by promoting accountability, integrity and transparency of top management.

# Q&A



# Thank You

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