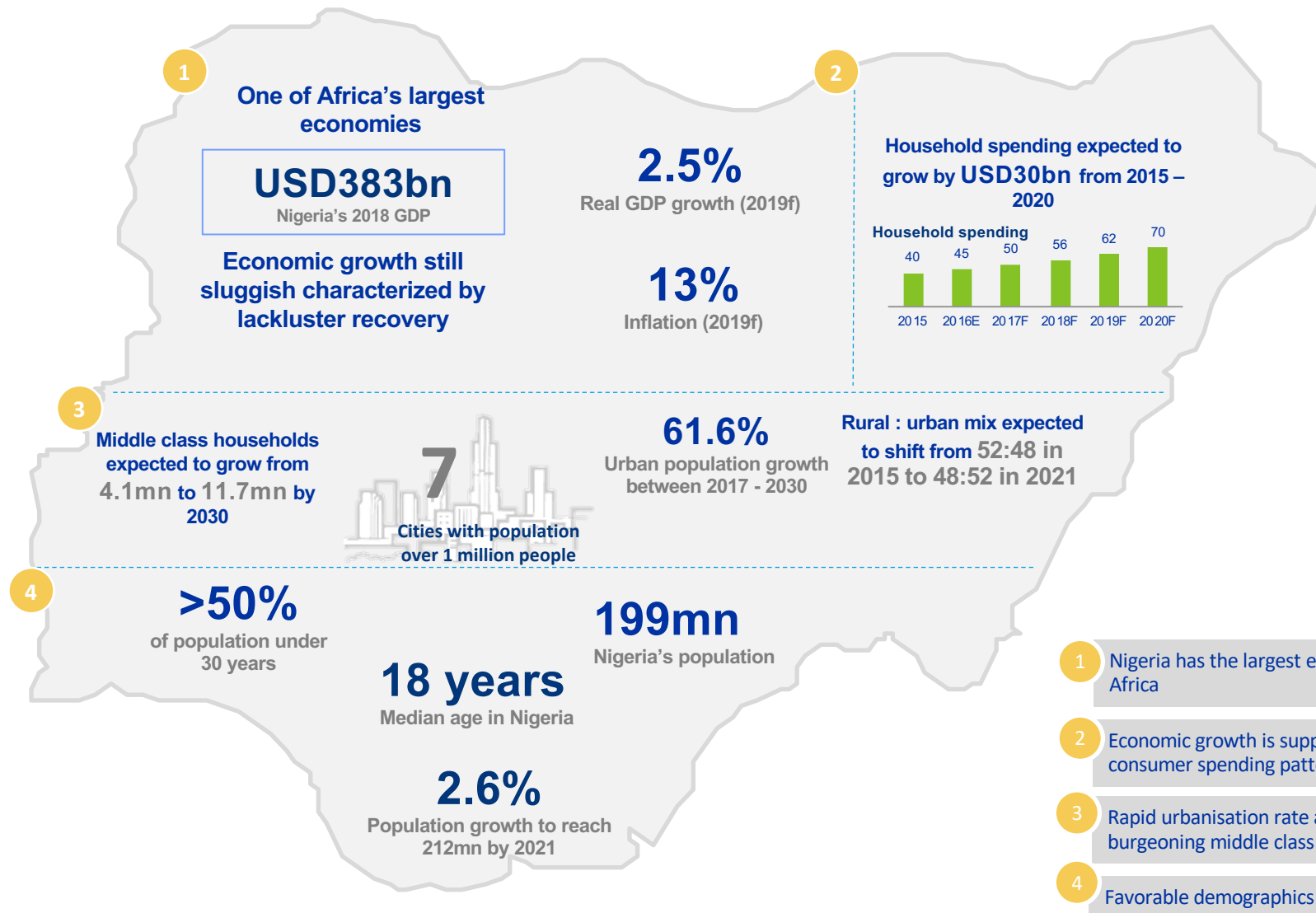# ROLE OF DATA IN QUANTIFYING CYBER RISK
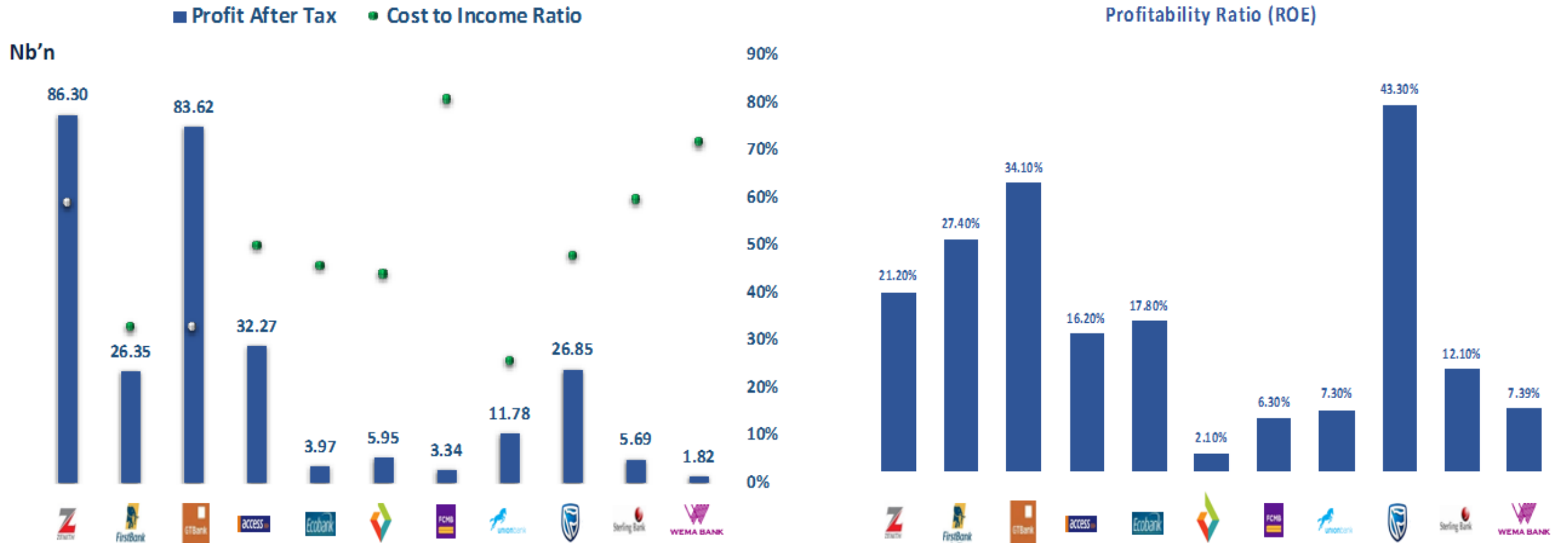## - The FAIR Approach

NIGERIA AT A GLANCE

Nigeria still remains one of Africa's largest economies

↗ *Growing population of ~ 199 million with median age of 18 to drive volumes*

↗ *Youth population expands rapidly with more than half of the population under 30*

↗ *Inflation increases marginally, driven mainly by base effects*

↗ *The Central Bank of Nigeria increased dollar injections into the foreign exchange market by 87% to $40bn in 2018*

↗ *A stable political environment key to sustaining Nigeria's economic recovery*

↗ *Mitigating key risks such as disruptions to crude oil production and political instability would enhance investment and funding climate*
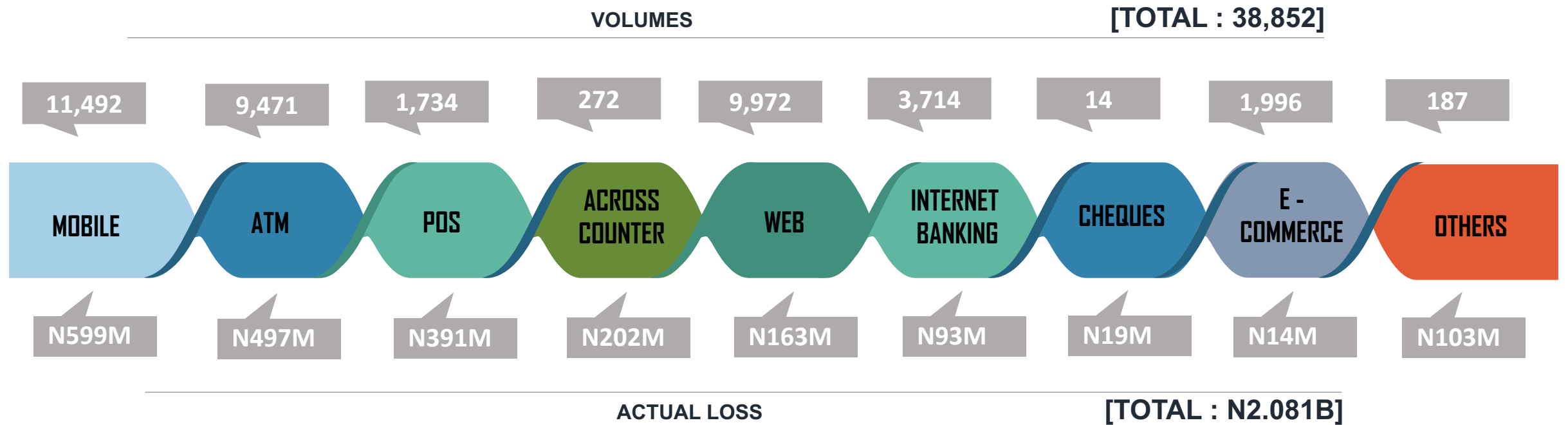
1 One of Africa's largest economies

USD383bn
Nigeria's 2018 GDP

Economic growth still sluggish characterized by lackluster recovery

2.5%
Real GDP growth (2019f)

13%
Inflation (2019f)

2 Household spending expected to grow by USD30bn from 2015 – 2020

Household spending

2015	2016E	2017F	2018F	2019F	2020F
40	45	50	56	62	70

3 Middle class households expected to grow from 4.1mn to 11.7mn by 2030

7
Cities with population over 1 million people

61.6%
Urban population growth between 2017 - 2030

Rural : urban mix expected to shift from 52:48 in 2015 to 48:52 in 2021

4

>50%
of population under 30 years

199mn
Nigeria's population

18 years
Median age in Nigeria

2.6%
Population growth to reach 212mn by 2021

1 Nigeria has the largest economy in Africa

2 Economic growth is supported by high consumer spending pattern

3 Rapid urbanisation rate and a burgeoning middle class

4 Favorable demographics

Sources: World Bank, EIU, AFDB Economic Outlook, PWC Estimates, National Bureau of Statistic, EuroMonitor

FINANCIAL INDUSTRY AT A GLANCE

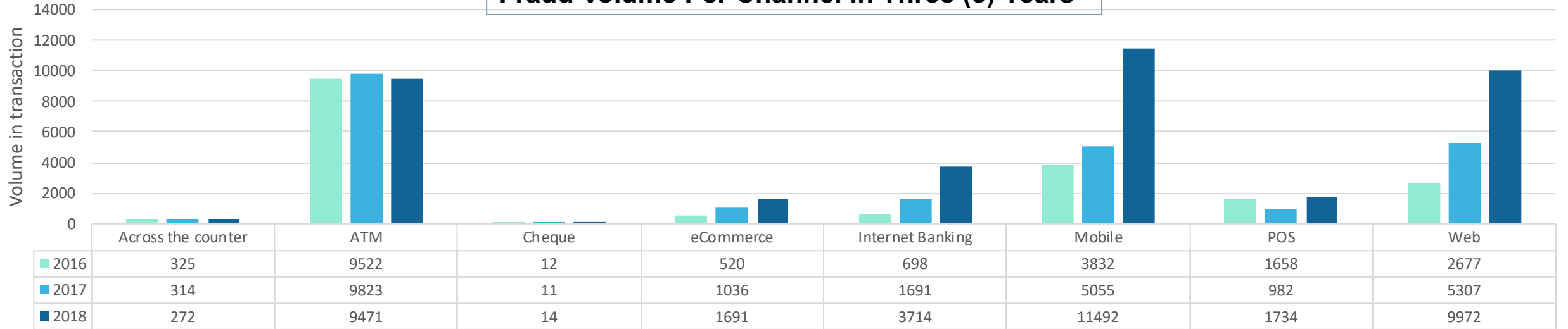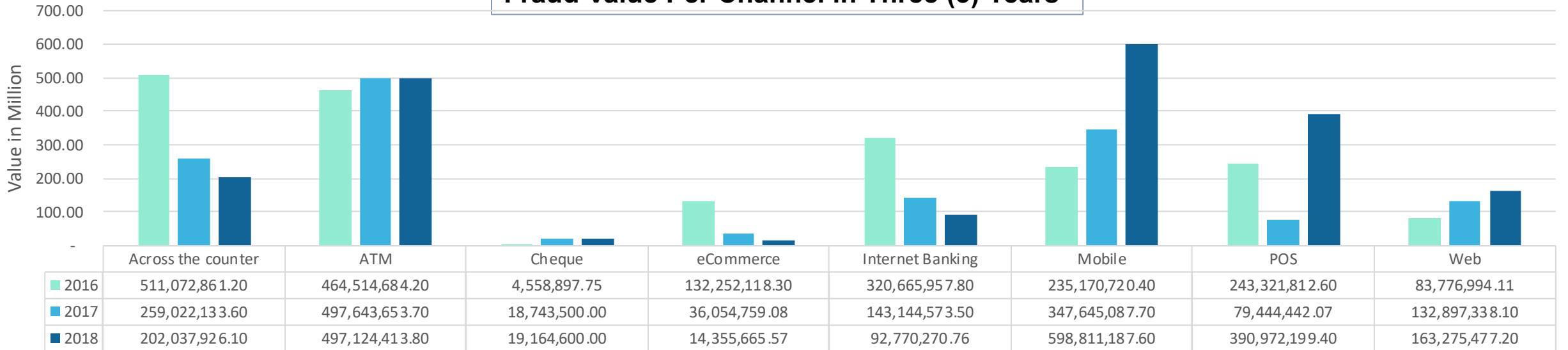*A cross section of the 2018 half year performance of some of the top Tier 1 and Tier 2 Deposit Money Banks*

Company financials: Half Year 2018

2018 FRAUD AT A GLANCE

VOLUMES   [TOTAL : 38,852]

| 11,492 | 9,471 | 1,734 | 272 | 9,972 | 3,714 | 14 | 1,996 | 187 |

| MOBILE | ATM | POS | ACROSS COUNTER | WEB | INTERNET BANKING | CHEQUES | E - COMMERCE | OTHERS |

| N599M | N497M | N391M | N202M | N163M | N93M | N19M | N14M | N103M |

ACTUAL LOSS   [TOTAL : N2.081B]

YEAR	FRAUD VOLUME	ATTEMPTED FRAUD VALUE (N)	ACTUAL LOSS VALUE (N)
2018	38,852	9,047,499,391.29	2,081,090,699.56
2017	25,043	4,034,258,639.07	1,631,680,256.85

FRAUD IN THE LAST 3 YEARS

Fraud Volume Per Channel in Three (3) Years

	Across the counter	ATM	Cheque	eCommerce	Internet Banking	Mobile	POS	Web
2016	325	9522	12	520	698	3832	1658	2677
2017	314	9823	11	1036	1691	5055	982	5307
2018	272	9471	14	1691	3714	11492	1734	9972

Fraud Value Per Channel in Three (3) Years

	Across the counter	ATM	Cheque	eCommerce	Internet Banking	Mobile	POS	Web
2016	511,072,861.20	464,514,684.20	4,558,897.75	132,252,118.30	320,665,957.80	235,170,720.40	243,321,812.60	83,776,994.11
2017	259,022,133.60	497,643,653.70	18,743,500.00	36,054,759.08	143,144,573.50	347,645,087.70	79,444,442.07	132,897,338.10
2018	202,037,926.10	497,124,413.80	19,164,600.00	14,355,665.57	92,770,270.76	598,811,187.60	390,972,199.40	163,275,477.20

NIBSS 2018 Fraud Landscape Report

QUANTITATIVE RISK ANALYSIS MODEL

FACTOR ANALYSIS OF INFORMATION RISK (FAIR)

A framework that help organizations understand, analyze, and measure information risk

International model for quantifying cyber risk

Allows organizations adopt a unified risk approach to assess information assets

Aids effective and efficient risk management decisions hence optimizing Return on Investment

"FAIR is the future of information security, as that's how we will bridge the gap and talk about risk in a common language"

- CISO Fred Reserve NY

ALIGNMENT WITH KEY RISK FACTORS

FAIR emphasizes that **risk** is an uncertain event and one should not focus on what is possible, but on how probable is a given event. This probabilistic approach is applied to every factor that is analyzed.

The risk is the probability of a loss tied to an asset, a failure or inadequacy in control and the magnitude of impact from the threat community

CASE STUDY FOR DISCUSSION

Unencrypted Internal Network Traffic

Purpose:- Determine the level of risk associated with unencrypted sensitive information flowing across your organization's internal network. The reason for this analysis is to inform a decision regarding whether to deploy encryption on your organization's internal network

Background:- The annual information security audit performed by a global security consulting firm identified that sensitive customer information is flowing unencrypted over the organization's internal network. They are recommending that network encryption be deployed internally

Thank You.