

# NEW CYBER VULNERABILITIES PRESENT NEW OPPORTUNITIES FOR INSURERS: LESSONS LEARNT - *Simani Wadi – IIZ Winter School (August 2018)*



Exclusive Correspondent Office





Definition of Cyber Risks

Lessons Learnt

Opportunities

# Presentation Flow



# CYBER RISK

## DEFINITION OF CYBER RISK



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# What are Emerging Risks?

- Newly developing or changing risks which are difficult to quantify and whose potential business impact cannot yet be fully estimated with any certainty, but may have a major impact to the insurance industry and society.

## Technological & Environmental

- Climate change, natural disasters & pandemics
- **Cyber risk**
- Disruptive digital technologies (drones, driverless cars, telematics)

## Political

- Economic nationalism & protectionism
- Geopolitical instability – Political violence & terrorism
- Public sector moving risk to private sector

## Business

- Rising inflation
- Convergence of alternative & traditional capital
- Increasing digital customer interaction

## Societal

- Rising social inequality
- The future of work
- Mass migration & urbanization
- Longevity & radical medical innovation



# Top Four Emerging Global Risks



# Evolving Cyber Risk Definition

- **ISACA**

- *The business risk associated with the use, ownership, operation, involvement, influence and adoption of IT within an enterprise*

- **Institute of Risk Managers**

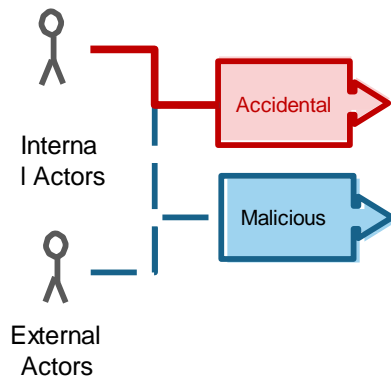
- *any **risk** of financial loss, disruption or damage to the reputation of an organisation from some sort of failure of its information technology systems.*

- **ISO**

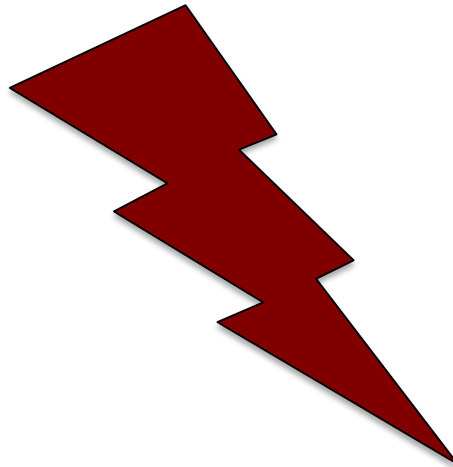
- *The potential that a given threat will exploit vulnerabilities of an asset or group of assets and thereby cause harm to the organization. It is measured in terms of a combination of the probability of occurrence of an event and its consequence.*

# Cyber Environment - Inherent Risks

## Who?

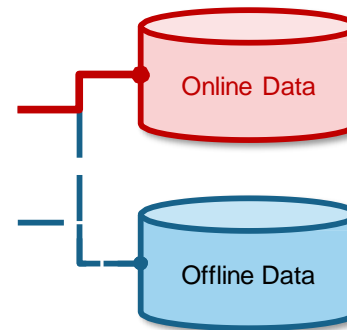


## How?

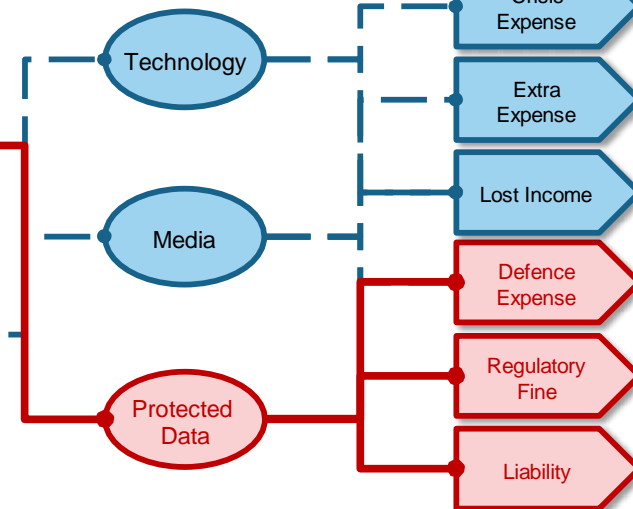


- Ransomware
- Cloud services
- Hackers
- Social engineering
- Mobile threats
- Rogue employees

## Where?



## What?



## Financial Impact?

# Cyber Risks

- Cyber risks is a growing threat worldwide, the growth of internet has resulted in the ballooning of the crime.
- It is estimated that proceeds from cyber attacks constitute 3-5% of the global GDP
- In the UK, the cost of cyber is estimated at 27 Billion Pounds per year whilst global cyber crime is estimated at US\$ 1 trillion per year and still growing (Tomson Reuters Accelus)
- Incidences of hacking into government and private corporations data bases have also exposed the vulnerability of both public and private IT systems





# Cyber Targets

Public and Fiscal Authorities



Professional Hackers



Hacktivists



Espionage



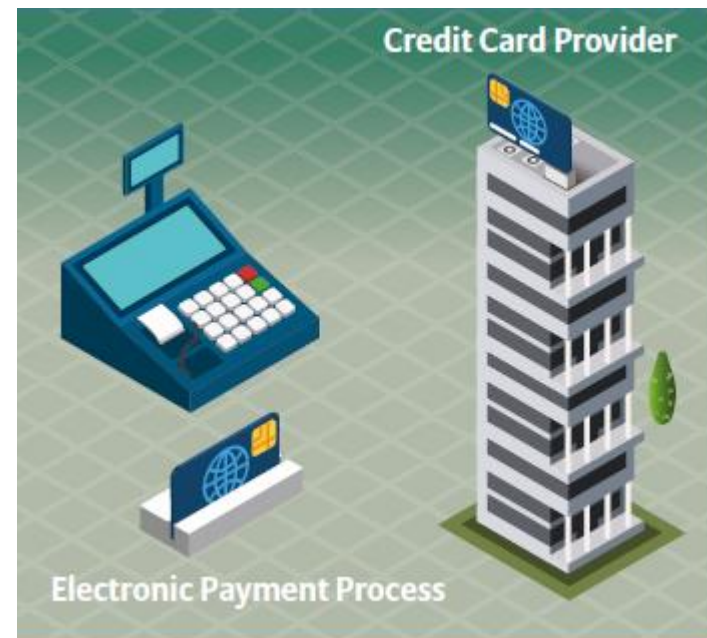
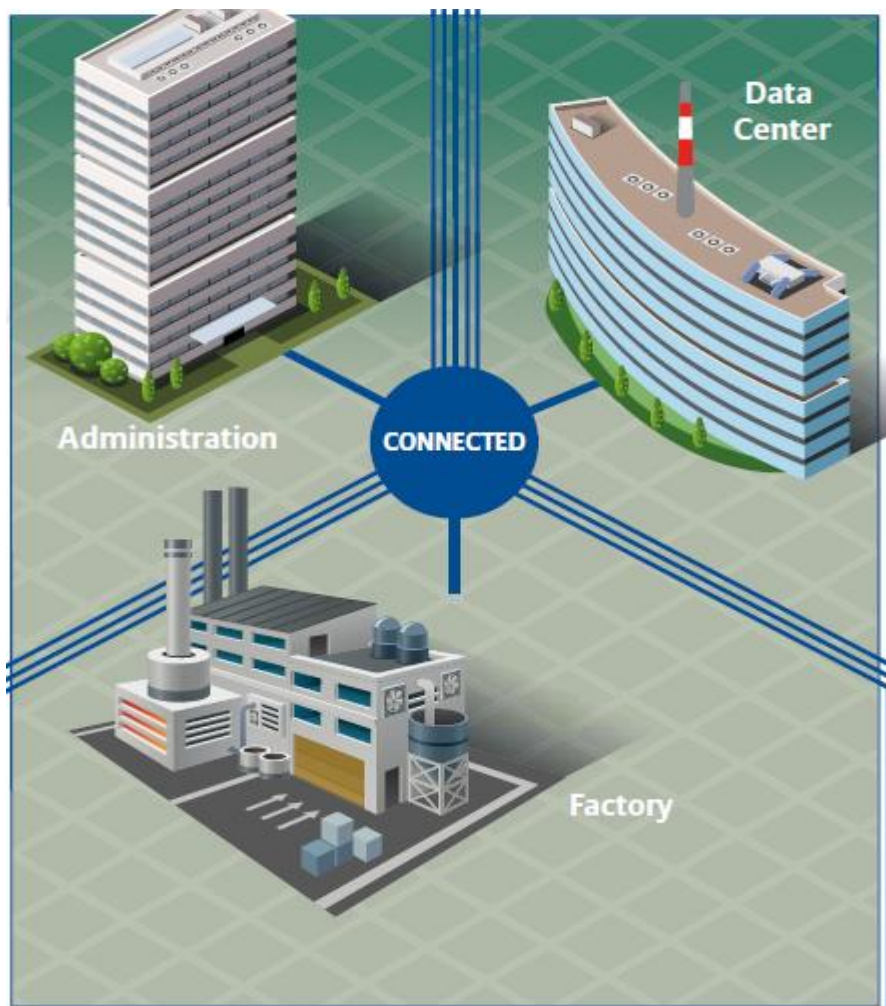
Telecommunications Service Provider



Banks and Insurers



# Cyber Targets



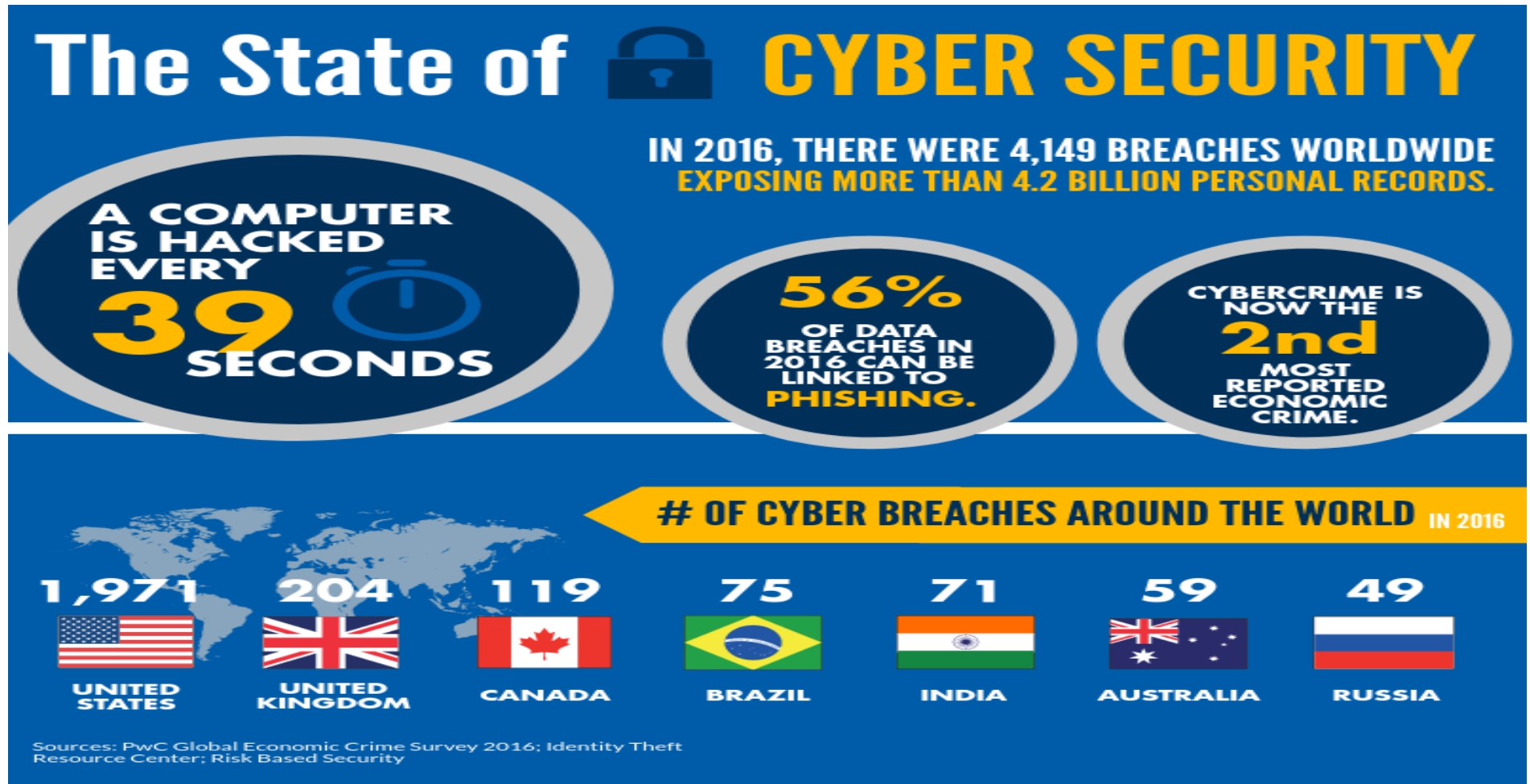


# Cyber Attacks

- The Wikileaks - **Julian Asange**
- The Whistle blower – **Edward Snowden**
- China is ranked the highest in quantum and value of cyber attacks
- **Bangladesh Central Bank Attack** – A cyber heist on the Bangladesh central bank in early 2016 where criminals got away with **US\$81 million**. Weaknesses in the Bangladesh bank's security were exploited to infiltrate its system and gain access to computers with access to the SWIFT network.
- **Standard Bank – USD 13 million** - On May 15th 2016, between 5am and 8am, more than 100 people withdrew \$13 million from 1400 ATMs across Japan in less than three hours.
- **Carbanak Breach – USD 1 billion+** a cybercrime ring called Carbanak managed to steal from over 100 banks across the globe using custom malware known as Carberp aimed at administrators and bank clerks



# Global Cyber Risk Stats





# Cyber Space in Zimbabwe

Below are the figures of cyber crimes reported to ZRP

	2011	2012	2013	2014	2015	Total
<b>Phishing</b>	8	4	3	5	0	<b>20</b>
<b>Credit Card Fraud</b>	4	2	0	2	5	<b>13</b>
<b>Identity Theft</b>	3	5	0	1	1	<b>10</b>
<b>Unauthorised Access</b>	10	9	2	1	2	<b>24</b>
<b>Hacking</b>	20	15	3	26	8	<b>72</b>
<b>Telecommunications Piracy</b>	0	0	0	0	1	<b>1</b>
<b>Total</b>	<b>45</b>	<b>35</b>	<b>8</b>	<b>35</b>	<b>17</b>	<b>140</b>

- In Zimbabwe reports indicate that Financial, health and educational Institutions are targets for cyber attacks
- Hacking, online scams and attacking computer systems are major cyber risks

# Risks and Vulnerabilities

**Risk** is defined as the potential for loss, damage or destruction of an asset as a result of a threat exploiting a **vulnerability**.

**Vulnerability** is a **cyber**-security term that refers to a flaw in a system that can leave it open to attack.

## Consequences of Cyber Vulnerabilities

- Financial loss or property loss
- Theft of intellectual property
- Loss of customer confidence
- In extreme cases loss of lives
- It compromises national security



# General Outline Of Cyber Risks Cover

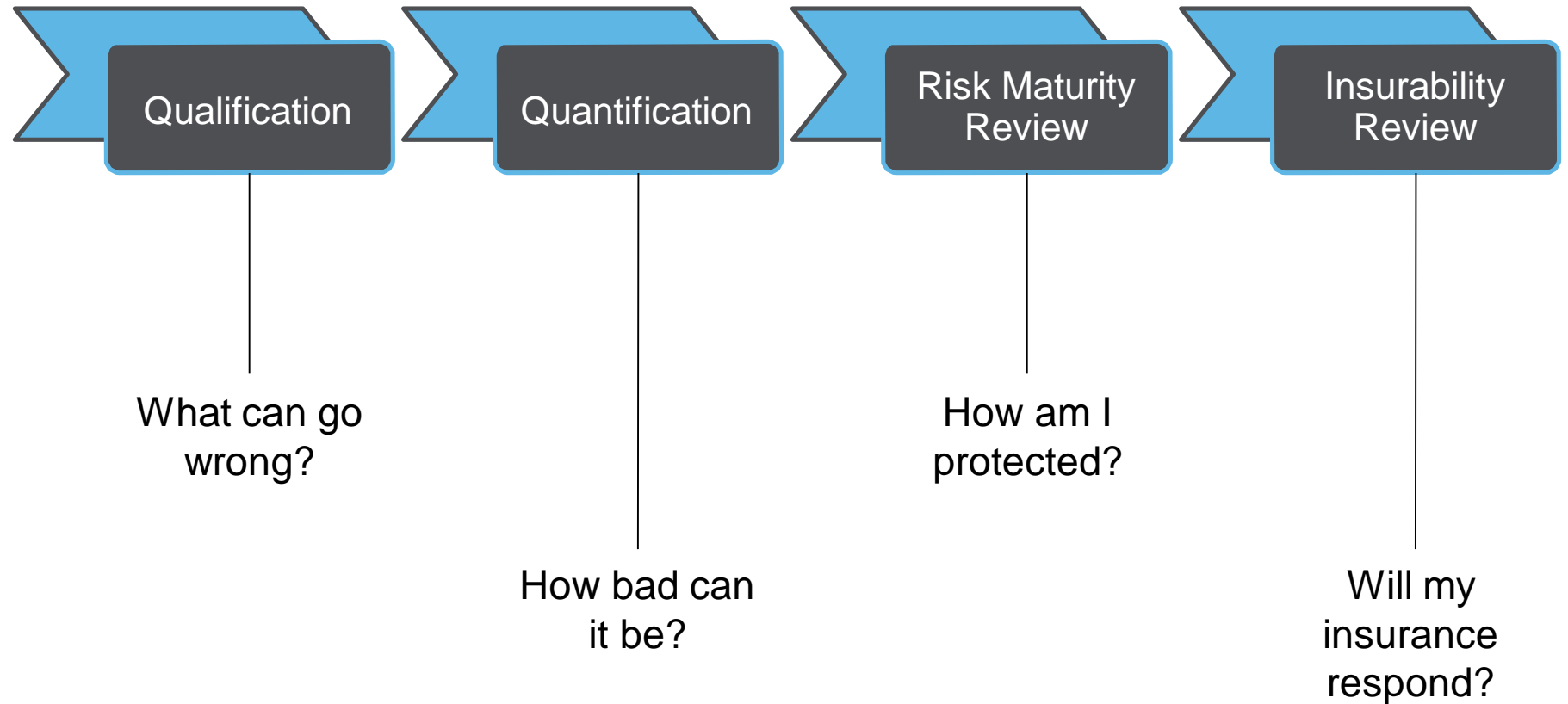
1st Party Coverage Part	Covers
Information Asset	Damage to or theft of the insured's information assets from its computer system.
Business Interruption	Lost income suffered as the result of a system outage or extended downtime due to negligence
Cyber Extortion	Extortion threats to commit an intentional computer hack against you.
Crisis Management/Identity Theft Expenses	Various costs resulting from a security/privacy breach.

# General Outline Of Cyber Risks Cover

3rd Party Coverage Part	Covers
Professional Services Coverage	Acts, errors or omissions in the course of providing professional services.
Content/ Media Liability	Personal and advertising injury and some intellectual property infringement arising out of media content created, produced or disseminated by the insured.
Network Security Liability	Breaches in network security or unauthorized access events.
Privacy Liability	Wrongful disclosure of confidential information.



# Before you buy...



# LESSONS LEARNT

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# Lessons Learnt

- **Anyone and Everyone is Susceptible.** Big box companies, small organizations, healthcare companies, government, private businesses, schools, you name it. If you have the internet, you're at risk
- **Don't Rely on Another Company to Safeguard Your Data** - the 2015 data breach that affected millions of T-Mobile customers where the breach did not directly attack T-Mobile but rather, T-Mobile's credit reporting agency Experian was hacked
- **Hackers Hail from All Over, Many From Overseas.** Historically, the profile of a hacker has changed and expanded. No longer are they simply "tech-geeks" hacking away in their basements, they've evolved and grown geographically..
- **Your Insiders Pose a Big Threat.** According to a Verizon data breach report, 20.6% of all attacks are due to insider misuse and an additional 15.3% of attacks stem from device loss or theft.
- **Internet of Things Means New Things to Attack.** Internet of Things (IoT) devices are now flooding the market. As more and more of our belongings (cars, toys, wearable devices, headphones, etc.) send and receive data electronically, connecting to the internet and/or each other, the threat against them grows.
- **BYOD has Added to the Problem.** Smartphones, tablets, laptops, personal devices in the workplace... this all means more vulnerabilities, more targets for hackers.
- **This isn't Going Away.** Once upon a time we thought the internet was a "fad" and that computers weren't going to change our workplace.
- **"The Board" is Now Demanding Attention.** Gone are the days when company leadership left everything in the hands of the "IT Guy;" now, they are asking more questions

# Lessons Learnt – Financial Losses

**\$ 8 billion**

## **WannaCry Ransomware**

- Infected over 300 000 computers in 150 countries in 3 days

**\$ 850 million**

## **Petya ransomware**

- Shutdown operations for shipping giant Maersk for 48 hrs
- Affected over 60 countries

Estimated economic losses due to cyber attack on U.S. Northeast electrical grid

**\$222 billion**

**\$6 trillion**

Global losses due to cyber attack could reach that number according former FBI Head of Cyber, 2017

Global losses due disruption or an attack on the cloud could result in economic losses from \*

**\$15.6 billion to \$121 billion**



# Cyber Risk Stats

**2.1**

trillion dollars expected to be  
lost to cyber crime in 2021  
(up 5x from 2016)

**43%**

percentage of all cyber attacks  
targeted at small and mid-sized  
businesses

**55%**

percentage of small and mid-sized  
businesses with no access to  
cybersecurity professional

**60%**

percent of small businesses fail  
within six months of a cyber  
attack

Source: Cyber Risk Opportunities



# OPPORTUNITIES



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# Opportunities- Where are we as risk advisors

**NewsDay** News Business Sport Opinion **AMTV**

**Breaking** Chamisa was sloppy – ED

Japan willing to invest in Zim cyber security

By **Newsday** - December 14, 2017

#PATCHTUESDAY

## Zimbabwe Still Regarded A High-Risk Nation For Cyber-Attacks



By **Elizabeth Ncube**

Published on November 27, 2017

**Breaking**

Malaba sets ground rules on Chamisa case



## Cyber risk on the rise in Zimbabwe

Published on 22 September 2015

By **Tawanda Karombo**

## Businesses need protection from cyber-attacks

By **Newsday** - November 20, 2017

We underestimated Cybercrime in Zimbabwe, it's time to be woke now...

## Cyber security now a major concern

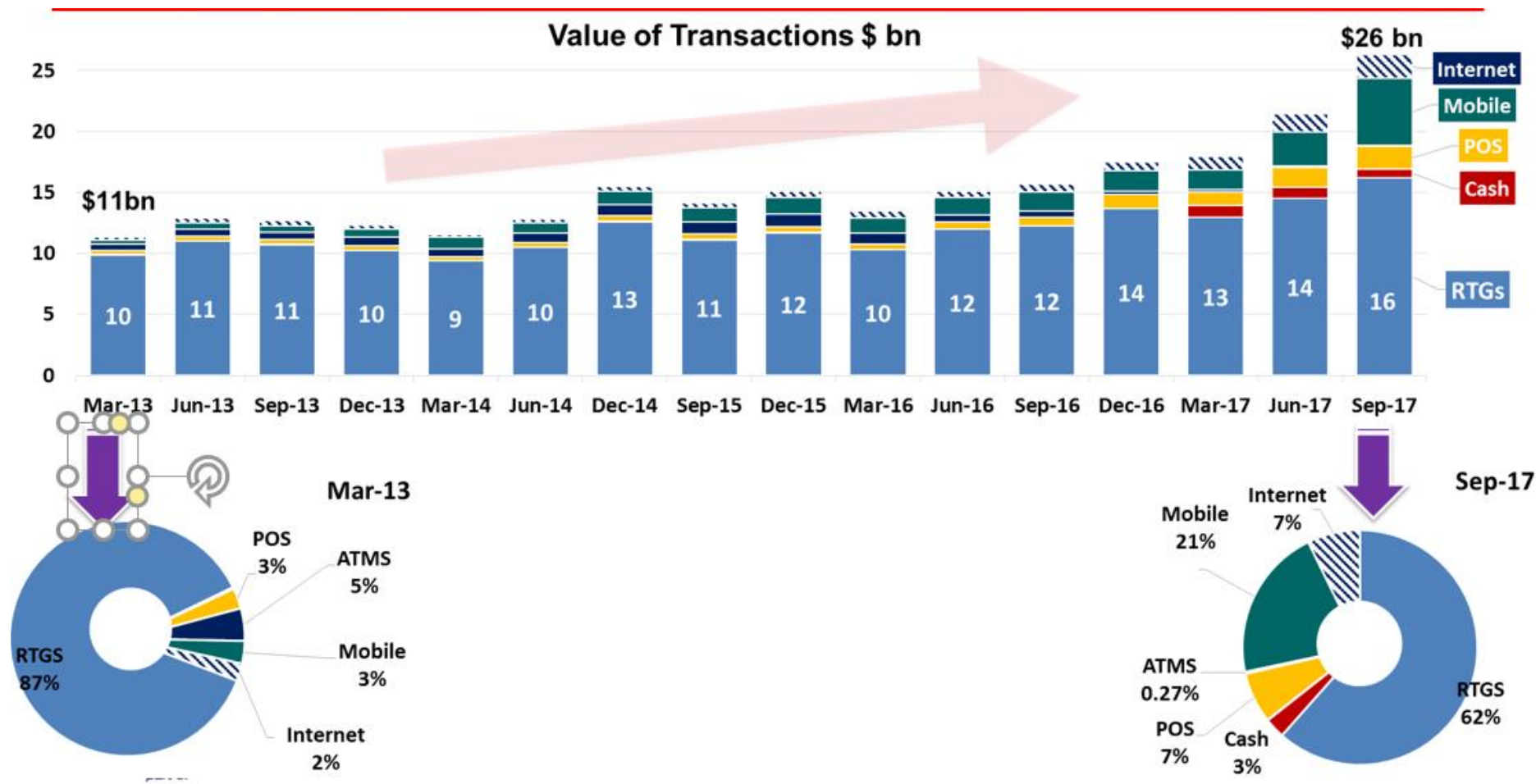
October 19, 2017 Opinion & Analysis

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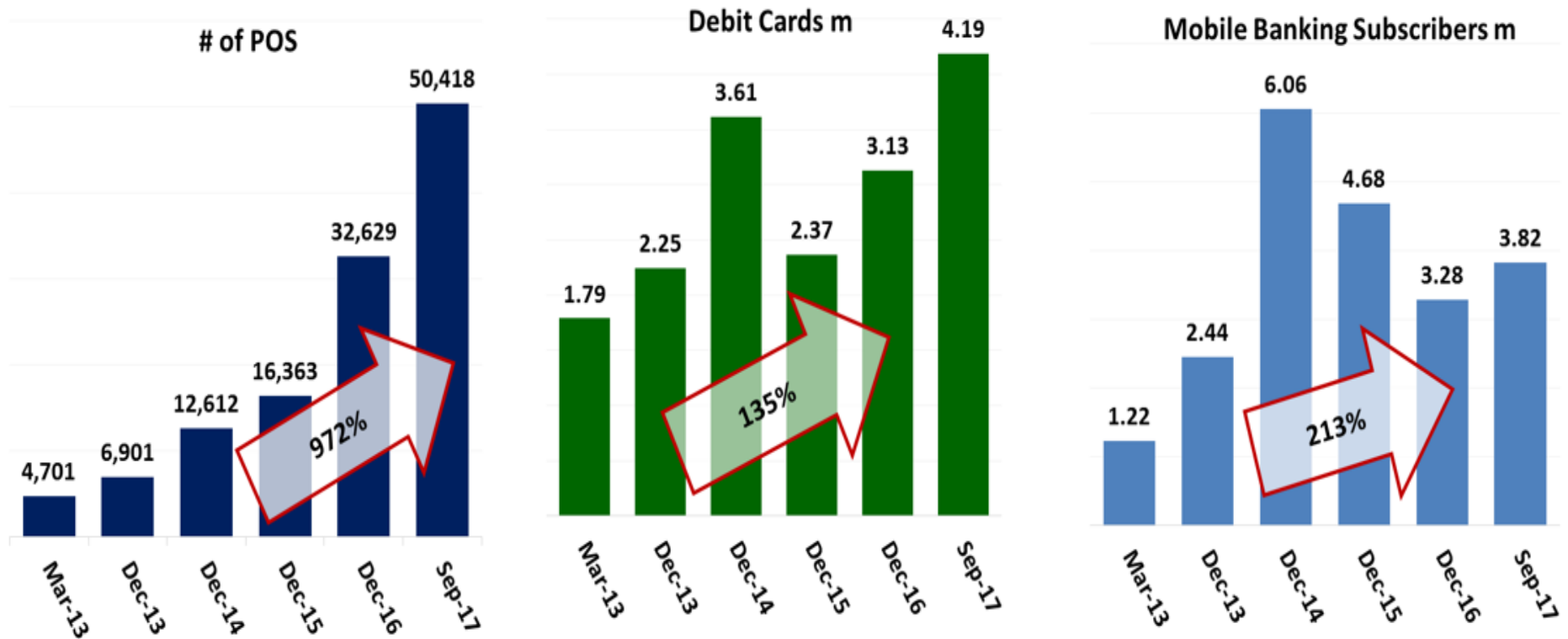
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# Opportunities





# Opportunities



Source : (James Wadi (BancABC presentation to CZI 2018))

# Opportunities

- RTGs is the biggest platform for transactions followed by mobile banking
- Mobile penetration above 90% and Internet Penetration is around 50%
- Cash shortages have led to rapid growth in Payment Systems & penetration to the unbanked
- POS transactions costs range from 10cents to 50cents making it an affordable means of transacting

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