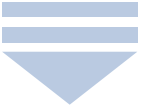


FOR 2018

# FINTECH OUTLOOK

TRENDS OPPORTUNITIES CHALLENGES



# OBJECTIVES OF THE REPORT

- 
- Synopsis
  - A Primer: The Current State of the FS Industry and Key Segments
  - Which Constellation?: The Emerging Technology and Market Forces
  - Snapshot of 2017
  - Incumbents and Startups: Opportunities & Challenges
  - A Game Theory View of Winners and the Residual Forces of Cooperation
  - Takeaways



## SECTION ONE

# Synopsis

# SNYOPSIS

This paper is intended for readers who want to better understand the dramatic changes as well as gradual shifts that have begun to take place in the global FinTech landscape. The key focus areas of this report are Payments, Remittance, Blockchain and Artificial Intelligence (AI). With the recent advances and implementations in aforementioned areas and collaboration between banks and FinTech startups there is some incredible technology development shaping new financial services experiences. A brief primer on each of these areas of focus is given below:

- **PAYMENTS** - 2017 has been the year of instant digital payments, aligned with the emergence of alternative payments. With mobile payments (P2P and merchant payments) reaching higher adoption levels in the mainstream, traditional payment methods are slowly taking the back seat. In 2018, global payments revenue are expected to reach \$2.3 trillion, representing 43% of banking revenues.
- **REMITTANCE** - In 2016, worldwide remittance flows were estimated at \$575.2 billion, which was significantly below the previous forecasts. Developing countries are estimated to receive about \$439 billion, which is nearly three times the amount of official development assistance. The titans (WU, UAE Exchange, Moneygram, Ria) of the “cross-border money transfer” market, with a ~24% worldwide market share, are being challenged by multiple well-capitalized upstart companies targeting the \$575B Remittance market.
- **BLOCKCHAIN** - 70% of banks have already initiated or in the process of initiating DLT projects in 2017. Blockchain in areas of Audit, Insurance, Capital Markets and cross border money transfer may see more production ready use cases.
- **AI** - Five AI technology systems: robotics and autonomous vehicles, computer vision, language, virtual agents, and machine learning, which includes deep learning underpins the recent advances in the other AI technologies. AI’s economic benefits are often disputed which is also visible in the large variance of current market forecasts, which range from \$644 million to \$126 billion by 2025.2



## SECTION TWO

# A Primer: The Current State of the FS Industry and Key Segments

- Payments
- Remittance
- Leading Drivers (e.g. Blockchain)

# CURRENT STATE

## PAYMENTS – 2017

- 2017 has been the year of instant digital payments, aligned with the emergence of alternative payments. With wallets, P2P and mobile payments reaching high adoption levels in the mainstream, traditional payment methods are slowly taking the back seat.
- In 2016-17, digital payments reached the market size of \$3.6 Trillion in terms of transactions. This saw an 20% YOY growth from 2015-16 and 60% of this growth can be attribute to the contactless cards segment.
- Key drivers for the growing adoption of alternative payments are financial inclusion, smartphone/internet penetration, cashless initiatives in large economies like India, and emergence of attractive digital payment solutions by FinTech.



Contactless cards are growing in adoption, with mature markets leading the way. Over the next five years, payment cards are expected to account for 90% of the overall contactless payments. Global value of contactless POS terminal payments is expected to be \$500bn in 2017, a 55% growth since 2016.



Smartphone penetration has disrupted the emerging markets by enabling financial inclusion at a large scale, through the mobile money services. In 20 countries of Sub-Saharan Africa and Asia, mobile money penetration is much higher than banking penetration.



APAC is leading in the mobile payments adoption race with the increasing ubiquity of smartphones. China is clearly the global leader in this space with a market size of \$5.5 Tn in 2016 and is expected to reach \$8 Tn in 2017. Alipay and WeChat are shaping the way payments are done in China, and thus are guiding the global trends.



Emerging markets lead the way in mobile/digital payments growth, with many countries adopting the mobile first payment strategy. E.g., India's groundbreaking payment system UPI that is opened to banks, fintech and even Google/whatsapp. Mature markets grew at a steady but subdued rate.

# DEVELOPMENTS

## IN THE PAYMENTS SPACE

- The space of digital payments has attracted a variety of third party players, including device manufacturers (Apple/Samsung pay), tech firms (Google, Alibaba, eBay, Facebook), Telecom players (Vodafone/Airtel) and FinTech startups (TransferWise, Square).
- Increasing tech-savvy millennial population, need for superior customer experience, ease-of-payment, downward pressure on interchange fees from card processors by merchants and the cheaper/faster alternative being offered by ubiquitous FinTech in major markets are driving the adoption of digital payments.

### APIs driving innovation

- APIs are enabling FinTech to provide easy to use front end solutions leveraging banking platform and infrastructure.
- Open APIs are gaining traction in Indian FinTech and banking space, fuelled by Aadhar, e-KYC, UPI and other such government initiatives.
- OCBC bank is leading the way in 2017 with the launch of transactional partner-APIs

### Lucrative Payment Start-ups attracting Global Investors

- In 2016, Payment startups contributed to 40% (\$13 Bn) of global FinTech funding.
- In Q1'17, five out of ten largest deals in FinTech funding was by payment startups.
- These payments start ups with huge investments in Q1'17 are: DirectCash Payments (\$310M), PayTM (\$200M), iZettle (\$175M), UniRush (\$147M) and TechProcess Payment Services (\$85M).

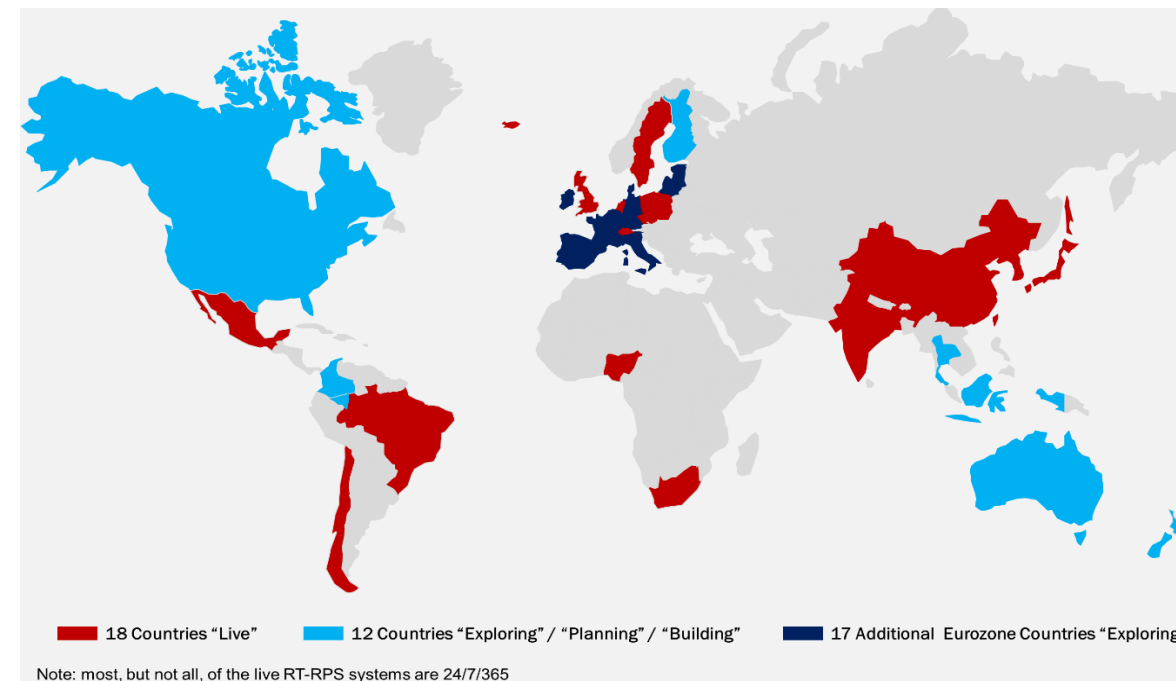
### Mobile / Digital Wallets

- The growing smartphone and internet adoption is enabling widespread use of mobile/e-wallets as a payment tool.
- India has seen a rise in mobile wallet adoption since the demonetization measures adopted on November 8, 2016. The market is forecast to reach USD \$4.4 billion by 2022, with a CAGR of over 148% during 2017-2022

# CURRENT STATE

## REAL-TIME PAYMENTS – 2017

- European Union leads the way with Denmark (Realtime 24/7), Norway and the UK (FPS) implementing such systems.
- New Payments Platform (NPP) is being implemented in Australia which introduce instant payments in the low-value arena. This will come into operation by the end of 2017.
- Pan European SEPA Instant Credit Transfer Scheme will go live in November 2017. SWIFT has announced implementation of a new European instant payment solution by November 2018.
- There are currently 18 countries 'live' with RTP systems, 12 countries that are 'exploring/planning/building,' and an additional block of 17 countries that are 'exploring' through a pan-Eurozone initiative.





# CURRENT STATE

## REMITTANCE – 2017

### Global Remittances

- In 2016, worldwide remittance flows were estimated at \$575.2 billion, which was significantly below the previous forecasts.
- Developing countries are estimated to receive about \$439 billion, which is nearly three times the amount of official development assistance.
- However, the true size of remittances, including unrecorded flows through formal and informal channels, is believed to be significantly larger. The recent developments like taxation of remittance flows and exchange controls in several countries are giving rise to the high premium black forex market.
- The cost of sending remittance (\$200) remained flat at 7.45% in Q1, 2017 which is well above the sustainable development goal (SGD) of 3%. However this is expected to go further down with the rise of modern FinTech players providing low cost online/mobile remittance service.
- Sub Saharan African region has the highest cost of remittance due to lack of infrastructure. However with the evolution of mobile money services, this scenario is changing dynamically.
- The emerging markets of India, China, Philippines, Mexico and Pakistan were the top five remittance receiving countries in 2016.

# CURRENT STATE

## REMITTANCE – 2017

### Vendor Landscape

- For long, the non-bank consumer remittance market has been dominated by agent driven cash transactions, facilitated by large incumbent money transfer operators like Western Union, Ria, MoneyGram etc. with their marked up FX rates and hefty transfer fee.
- Over the last few years, technology driven new age FinTech players have taken the online and mobile route to deliver low cost, high speed remittance service, thus bringing down the average cost of sending remittances and providing the increasingly digital-savvy customers a much better experience.
- Identifying a huge opportunity owing to heavy costs of remittances in emerging markets such as Sub Saharan Africa, increasing number of FinTech players have begun to operate in African corridors by partnering with Mobile Money services. E.g. WorldRemit has partnered with all four leading MNOs in Tanzania.
- 2017 has seen the focus increasing on SMEs and B2B remittances. Payoneer is one of the leaders in this space. Also, TransferWise launched their B2B offering in 2017.
- Many start ups (Abra, Veem, Tempo etc.) are moving towards leveraging the blockchain technology by partnering with platforms such as Stellar, Ripple etc. Large players like UAE Exchange is also joining the blockchain bandwagon and looking to extend their dominance over the global market by partnering with Ripple.
- So far, some of the leading remittance startups have received significant funding in 2017 – Veem (\$24M), CurrencyCloud (\$24.4M), InstaReM (\$13M),
-

# CURRENT STATE

## REMITTANCE – 2017

### Recent Developments

- The remittance flows to developing countries saw a dip for two consecutive years. In 2016, the remittance volumes declined by 2.4%, following the 1% dip in 2015.
- This decline can be attributed to a number of global economic factors which include but are not limited to – Low oil prices, weak economic growth in GCC, Russia and European region, weakening of Euro, Pound and Ruble against US etc.
- Remittance flows to the Europe and Central Asia (ECA) region registered a significant decline for the third consecutive year. On the other hand, Latin America and the Caribbean (LAC) was the only region to register an increase (6.9%) in remittance flows, supported by strengthening employment levels in the United States.
- **However, Recent indicators suggest that economic activity in high-income and developing economies has firmed up, supporting a positive outlook for 2017/18.**
- The de-risking/withdrawal of correspondent banking relationships due to regulatory stringencies arising from AML/CFT norms in high risk geographies is impacting the remittance services across the world as small banks and MTOs are struggling to hold on to their Nostro accounts. This may result in high cost of sending remittances, and thus might cause a slight dip in the remittance flow to these geographies.
- In 2015-16 there was a sudden increase in the number of undocumented migrants globally. (1.4 Million in 2015 to 16.5 Million in 2016).
- Labor market “nationalization” policies in the GCC countries and anti-immigration sentiments in many high-income nations discourage the hiring of foreign workers, and seem to have dampened remittance flows, especially through formal channels and increasing flow in parallel FX markets.
- Mobile money-based global remittances are growing at a fast pace, especially in East Africa and South Asia, with the proliferation of smartphones, which make online transfers more convenient and cheaper. In addition, mobile money services have partnered with traditional remittance providers and digital-first startups, providing an alternative to traditional cash-to-cash models and offering instant online money transfers to mobile accounts.

# CURRENT STATE

## REMITTANCE – 2017

The remittance market is highly fragmented, with incumbents holding the majority of market share.

However, new age dynamic FinTech start-ups are disrupting the market with their low cost digital services.

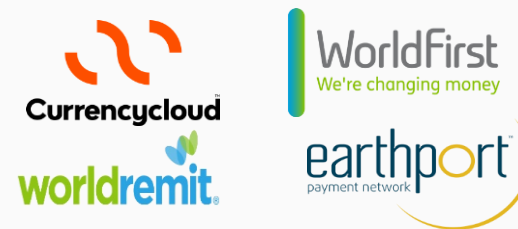
### The incumbents...

- Big cash-to-cash players wary of cannibalization
- Look to retain end-to-end control of the service, by venturing into the digital space



### ...Large FinTechs...

- Guiding the market trends for a number of years
- Remittance-as-a-service based B2B offerings.



### .Modern FinTech Start-ups.

- Market share increasing rapidly
- Providing low cost, high speed remittance across multiple countries.



Annual Remittance Market 2016:  
\$575 Billion

~ 85% Cash

~ 12% Bank

< 3% Other (mobile wallets, cards, etc.)

Remittance Companies Powered by  
Blockchain Technology



# CURRENT STATE

## BLOCKCHAIN – 2017

### PAYMENTS



### INFRASTRUCTURE



### REMITTANCES



### CAPITAL MARKETS



- Ripple expands to Japan in collaboration with SBI Holdings, it completes pilots welcoming Mistubishi to the board, 47 bank consortia implements cloud based payments pilot.
- Hyperledger gathers 130 financial and technology giants, multiple frameworks, numerous proofs of concept in finance and a healthcare working group.
- Enterprise Ethereum Alliance launches with impressive membership list and commitment to public-private interoperability.
- Enterprises, consortia and working groups continue to launch pilots, R&D labs, proof of concepts and dedicates staff.

### Areas of Focus

Remittance  
s

Trade  
Finance

Custodian  
services

Insurance

Prediction  
Markets

Digital  
Identity

Payments

Fiat Digital  
Currencies

Implementation of the blockchain technology as real business has been accelerated with the increase in demand for robust financial infrastructure to handle the growing volumes of blockchain transactions

# CURRENT STATE

## BLOCKCHAIN – 2017

### KNOW YOUR CUSTOMER

- According to a Goldman Sachs Report, Case Study 7, the banking sector can achieve 10% headcount reduction with the introduction of blockchain in the KYC procedures. This amounts to around \$160 million in cost-saving annually.
- Blockchain will also reduce the amount of budgetary resources allocated for employee training, there will be 30% headcount reduction amounting to \$420 million.
- Overall operational cost savings are estimated to be around \$2.5 billion dollars. AML penalties will also be reduced by estimated amount between \$0.5 to \$2 billion dollars

### TRADING PLATFORMS

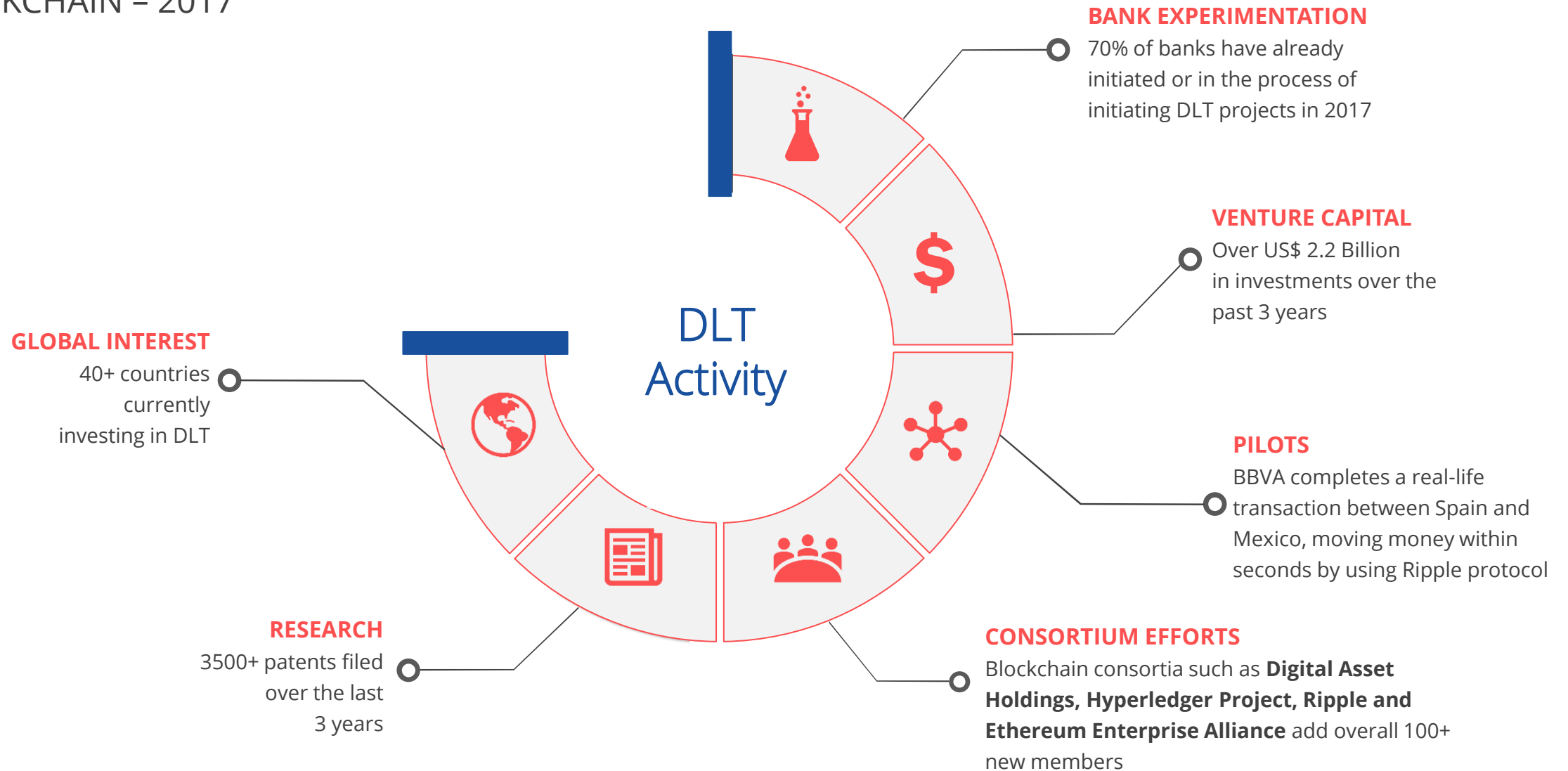
- Clearing and settlement costs billions and, according to Santander's 2015 report LINK, it is estimated that moving this into a digital record, near real-time and over the internet, will save the industry \$20 billion a year or more in overhead costs due to D+3. D+3, or T+3, is the three-day clearing and settlement cycle common to most investment markets today.
- On 30 December 2015 Nasdaq announced that it had made its first ever share trade using blockchain technology. Nasdaq used its proprietary **Linq** platform (developed in collaboration with Chain.com and global design firm IDEO) to sell shares

### PAYMENTS & REMITTANCE

- VISA Europe Collab and BTL Group are working on a separate concept to make cross-border payments between banks using distributed ledgers.
- In Estonia, LHV Bank is experimenting with blockchain through coloured coins called "Cuber" as a "cryptographically protected" certificate of deposit. The project would enable the bank's FinTech offshoot, Cuber Technology, to develop mobile apps using blockchain to provide free P2P fiat currency transfers

# CURRENT STATE

## BLOCKCHAIN – 2017



# CURRENT STATE

AI – 2017

## Artificial Intelligence

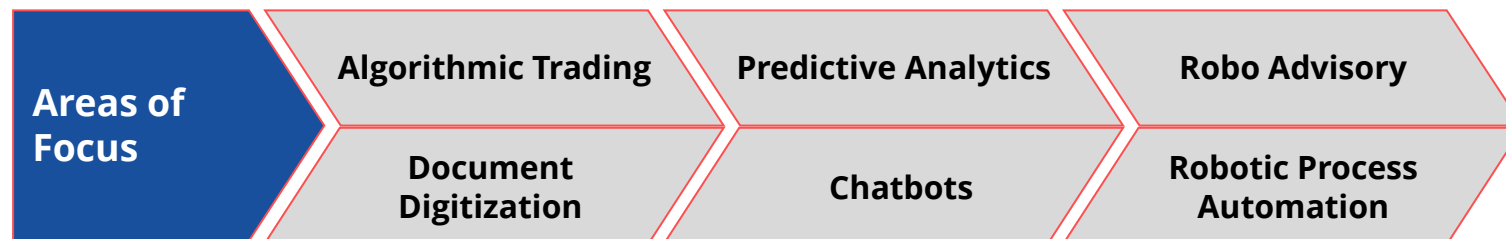
- Early AI adopters that combine strong digital capability with proactive strategies have higher profit margins and expect the performance gap with other firms to widen in the future.
- Adoption patterns illustrate a growing gap between digitized early AI adopters and others.
- AI adoption outside of the Tech sector is at an early, often experimental stage. Few firms have deployed it at scale.
- A review of more than 160 use cases shows that AI was deployed commercially in only 12 percent of cases.

## High AI adoption:

- Trading & Investments
- Card linked Marketing
- Consumer Behaviour Analytics
- Fraud & Risk Management

## Medium AI adoption:

- Virtual Assistants
- Process Automation

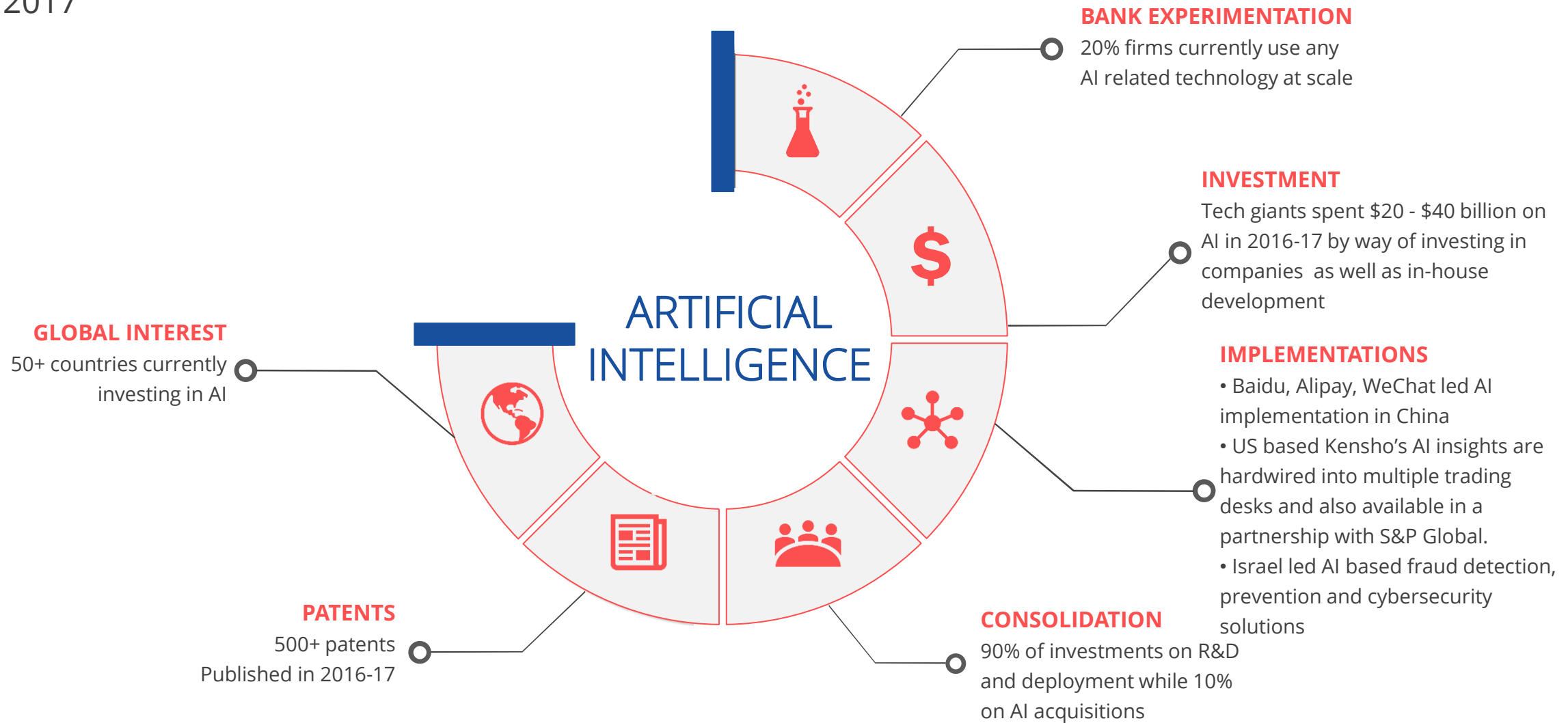


Five AI technology systems: robotics and autonomous vehicles, computer vision, language, virtual agents, and machine learning, which includes deep learning underpins the recent advances in the other AI technologies.



# CURRENT STATE

AI – 2017





## SECTION THREE

# Which Constellation?: The Emerging Technology and Market Forces

# KEY TECHNOLOGIES SHAPING FINTECH



## ■ BIG DATA & ANALYTICS

Financial Services Industry are focusing on transforming their archive systems with a strong focus on data analytics. Payments has witnessed increased use of consumer data to provide value-added services to customers. In Insurance we see increased use of advanced data techniques and analytics to identify and quantify risk.

## ■ MOBILITY

The so called challenger banks are focusing on digital and are engaging customers through mobile technology. For example, mobile telecoms giant, Orange launched Orange Bank with a unique mobile banking experience.

## ■ ARTIFICIAL INTELLIGENCE

Startups are using AI to improve and expand credit offerings, insurance options, personal finance services, and regulatory software. For example machine learning will have an impact on asset managers and investment banks where analysts leverage data and AI solutions to be more efficient.

## ■ BIOMETRICS

Biometric authentication is slowly infiltrating the financial system. Driving the movement to biometrics payments is Apple Pay, which paved the way for consumers to make payments in stores and on apps using fingerprints. Android Pay and Samsung Pay helped drive adoption further.

## ■ CYBERSECURITY

Increased digitisation and connectivity means cybercrime is rising by leaps and bounds. Recent cyber attacks on Tesco Bank and Lloyds Bank has made cybersecurity an top agenda for banks and other financial institutions.

## ■ INTERNET OF THINGS

In insurance, IOT has already been applied through telematics for instance, which allow for the monitoring of driver behavior for car insurance. In the UK, Neos claims to be the country's first connected home insurance company, providing customers with connected technologies to monitor potential threat in real-time.

## ■ CLOUD

The banking and capital markets sector is embracing cloud-based software and systems. Microservices, utility provider services and automatic upgrades are examples of FinTech innovation that is possible in the cloud.

# WHAT'S NEXT

## FROM A FINTECH PERSPECTIVE?

‘Banks could be with their own "Kodak moment" by falling into irrelevance if they fail to keep up with the pace of rapidly developing fintech technologies’. — Antony Jenkins, Former CEO of Barclays

### ARTIFICIAL INTELLIGENCE

- Banks are focusing on leveraging data and AI to provide innovative experiences where things in customers financial life turn out the way they want it. Carlos Torres Villa, CEO of Spain BBVA calls AI a “self-driving bank experience.”
- BBVA a leading bank is investing in AI with an objective to digitize its operations, as customers come to expect more from mobile apps and the way they interact with lenders.

### OPEN DATA via APIs

- API-based financial services are on the rise. In fact, APIs are the main reason that startups are able to build their products faster.
- API standards have enabled different pieces of software from different financial players to interact and exchange data in a secure environment, enabling comparisons and more competition. This will feed into the trend for fintech cooperation and could encourage some more displacement of players.

### BIO- METRICS

- Biometric authentication will be deployed in different banking scenarios, including withdrawing cash from ATMs, proving identity when contacting their bank via telephone and authenticating mobile bank apps.
- Face recognition biometrics is becoming increasingly popular – Examples of startups include, Saffe which provides face recognition payments app that allows consumers to authenticate payments by taking a selfie, while TnViso’s online platform provides behavioral assessment profiles using AI and facial recognition technologies

### DATA LAKES

- Experts feel connecting the dots is the key and construction data lakes must be a priority.
- Data lakes add a new perspective on data warehousing which leverages cheaper tools to distribute storage and processing. They provide a scalable platform that can store wide range of data models for analysing both unstructured and structured data.
- For example, AI needs data to be effective and the rise of 'big' unstructured data from social media, news and other sources helps this, as does the cloud as a connecting layer.

# RETAIL PAYMENTS/REMITTANCE FUTURE

## MARKET FORCES AT WORK

- The world of payments remains in constant flux, reflecting an ongoing rebalancing of power among incumbent banks, digital giants, financial technology (FinTech) startups, card networks, and of course, consumers and merchants.
- The implementation of PSD2 in January 2018 will open the gates for front end innovation in payments, with many TPPs entering the payment market with their innovative solutions. Global digital payments volume is forecasted to reach 567.4bn transactions in 2018, with a CAGR of 10%.

01

Global payments using mobile and wearable will be worth \$95bn in 2018, up from \$35bn in 2015.

NEW METHODS

NEW PLAYERS

02

Technology driven new FinTech players are redefining customer experience by providing frictionless and easy to use front end.

03

The gradual shift towards digital payments will have huge impact on the revenues across markets.

REV IMPACT

MARKETS

04

In emerging markets, the focus of FinTech players will be on Financial inclusion and innovation in customer acquisition. In developed markets, the focus will be more on customer convenience and front-end innovation.

### MARKET FORCES

The global payment landscape is undergoing a crucial transformation with the evolution of Technology enabling banks to step up and counter the threat of disintermediation by FinTech.

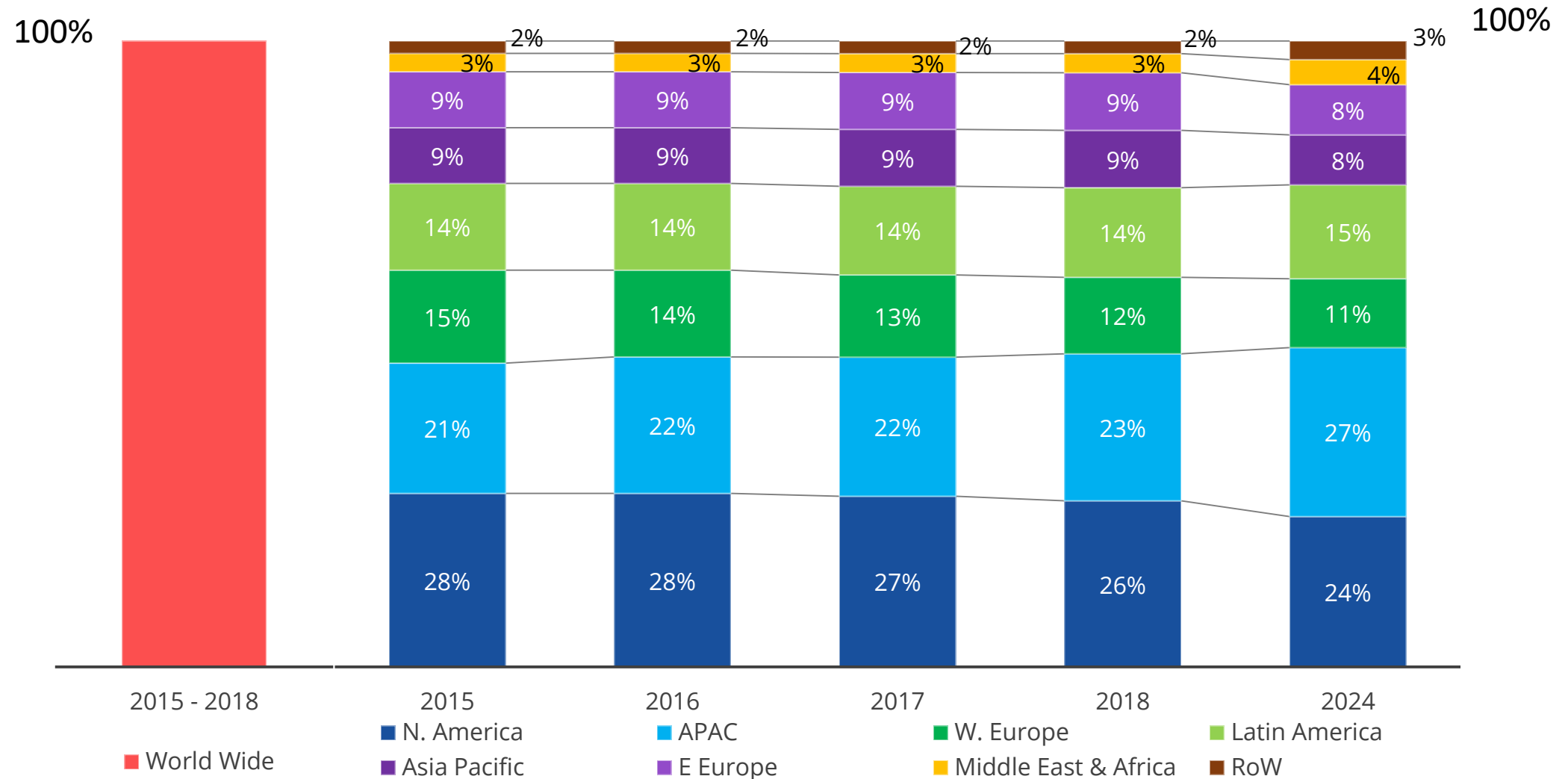


## SECTION FOUR

# Snapshot of 2017

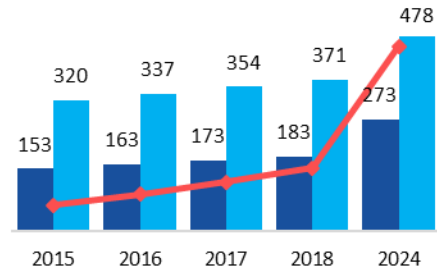
# SHARE OF GLOBAL PAYMENTS REVENUES

IN % TERMS IS GOING TO CHANGE QUITE A BIT BY 2024

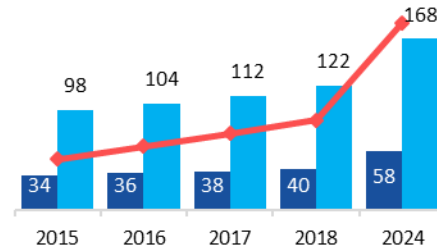


# VOLUME, VALUE AND TOTAL PAYMENTS REVENUE

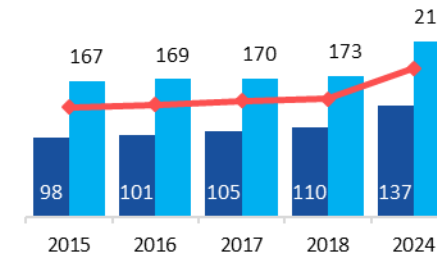
## NORTHAMERICA



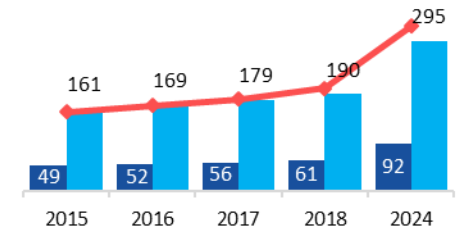
## EASTERN EUROPE



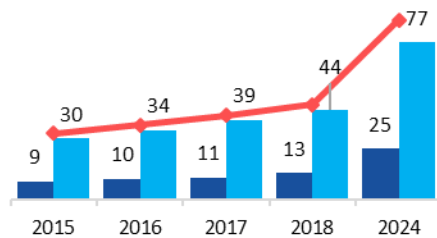
## WESTERN EUROPE



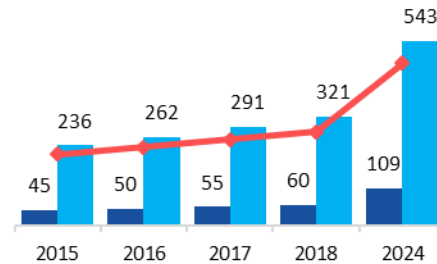
## LATINAMERICA



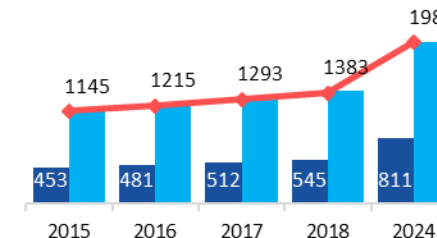
## MIDDLE EAST & AFRICA



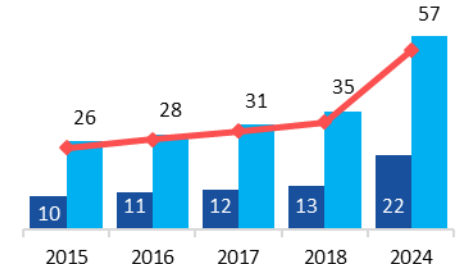
## ASIA PACIFIC



## WORLD WIDE



## REST OF THE WORLD



■ Volume (Bn)

■ Total Revenue (\$ Bn)

—◆— Value (\$ Bn)



# PAYMENTS

## 2018 OUTLOOK

### Mobile Payments

- Global mobile payments revenue is estimated to reach \$930bn in 2018, a 19% growth from 2017. China looks well placed continue to lead the global mobile payments market in terms of transaction volume.
- Mobile-first payment strategies gaining traction in many emerging regions. (e.g. Sub Saharan Africa, Nordic countries)
- Growing in-app payments, NFC payments and digital wallets by banks will boost the adoption for mobile payments in

### Revised Business Models by Incumbents

- With increasing pressure from customers, merchants, FinTech as well as regulators, banks and incumbent FIs will rethink their payment strategy and move towards digital payments as their core offering.
- Banking-as-a-service and data monetization will gain traction as API banking looks to grow in 2018.

### Focus on Cyber Security

- As digitization of payments increases, the threat of data theft, and cyber fraud and attacks will increase, thus increasing focus on cyber security.
- Big data and real time analytics will play a key role in developing fraud detection solutions at the application level.

### Culmination of Emerging Technologies

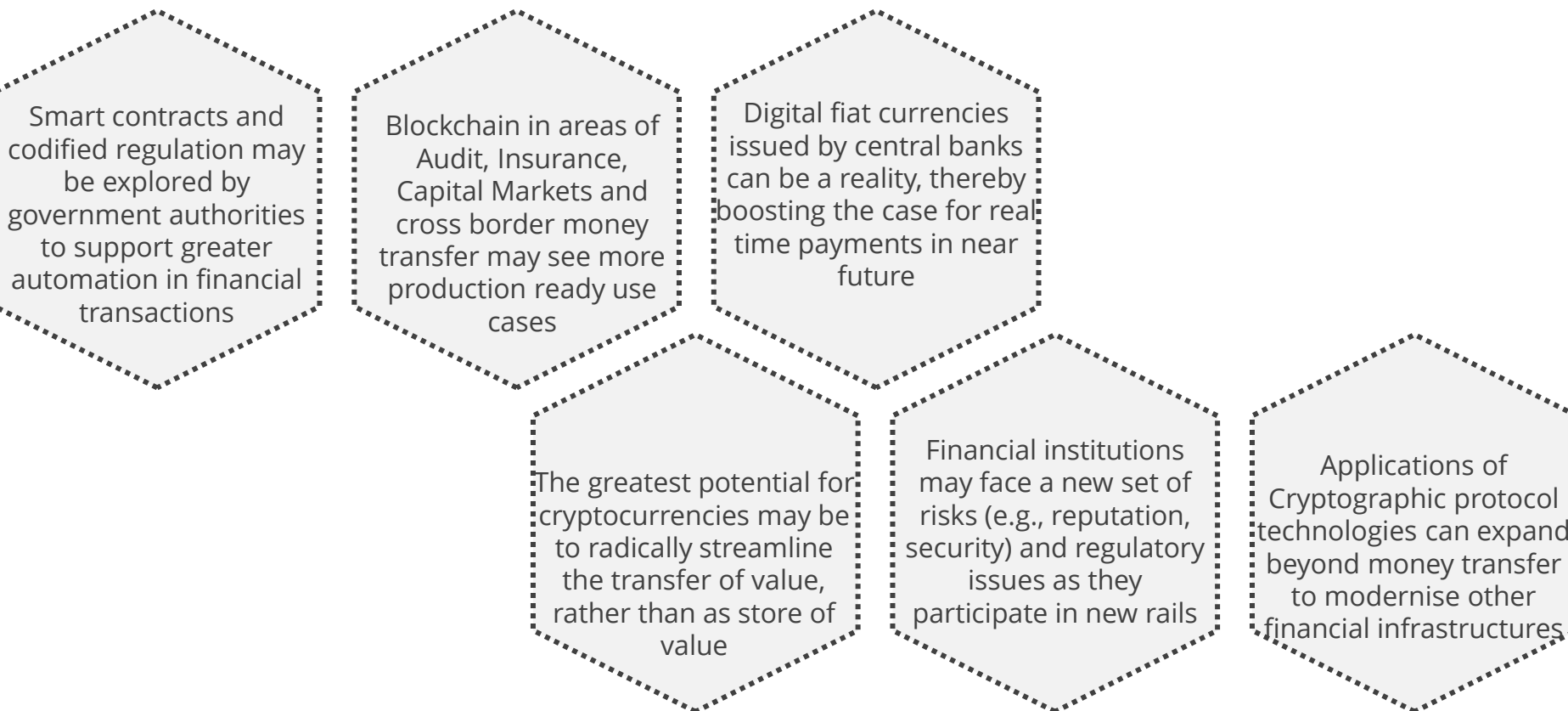
- Payments will see a culmination of several advanced technologies, which will create a number of new capabilities for PSPs.
- Predictive analytics, single view of customer, fraud prevention, customer journey management will become differentiating capabilities for payment providers.
- APIs will take center stage where as Blockchain will continue to be prototyped across many areas.

In 2018, global payments revenue are expected to reach **\$2.3 trillion**, representing **43% of banking revenues**.

# BLOCKCHAIN

## 2018 OUTLOOK

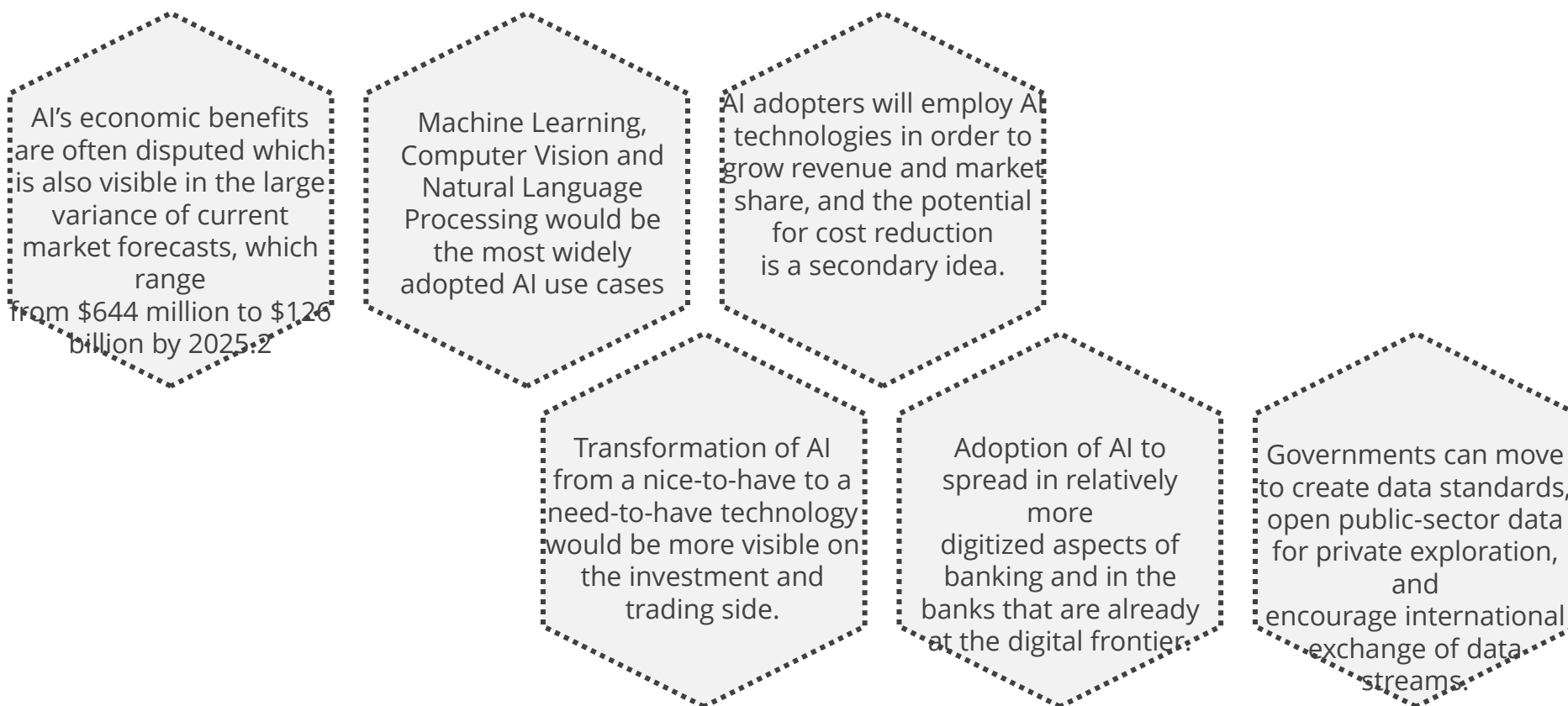
- About **25%** of banks and **20%** of financial market institutions intend to implement full-scale, commercial blockchain solutions in 2018.
- Central banks and regional consortia of banks are mulling digital fiat currencies.



# AI

## 2018 OUTLOOK

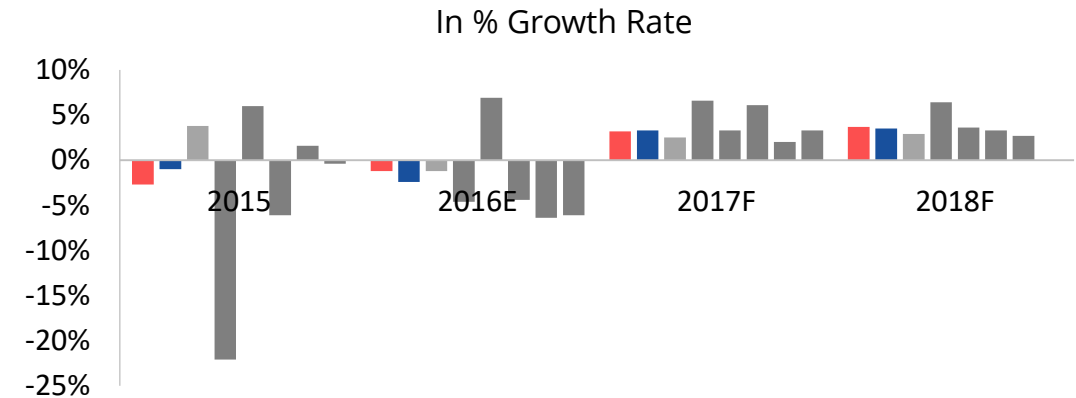
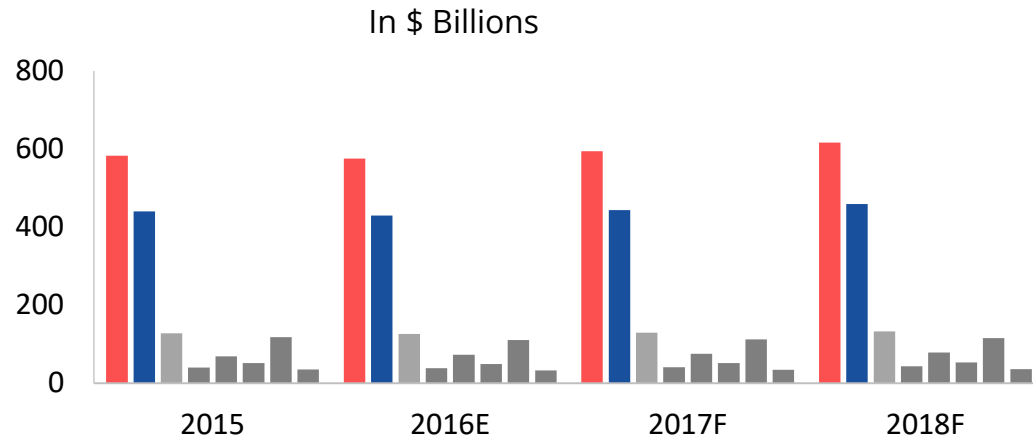
- About **35%** of financial institutions are expected to use AI on a significant scale in 2018
- Investment in AI R&D is expected to comprise a larger percentage share of total investment in 2018



# CROSS-BORDER REMITTANCES

## 2018 OUTLOOK

### Estimate and Projection for Remittance Flow to Developing Countries (\$ Billions)



Regions	2015	2016E	2017F	2018F
<b>World</b>	<b>582.4</b>	<b>575.2</b>	<b>593.8</b>	<b>615.9</b>
<b>Developing Countries</b>	<b>439.8</b>	<b>429.3</b>	<b>443.6</b>	<b>459.1</b>
East Asia and Pacific	127.3	125.8	129	132.7
Europe and Central Asia	40.3	38.4	41	43.6
Latin America and Caribbean	68.3	73.1	75.5	78.2
Middle East and North Africa	51.1	48.8	51.8	53.5
South Asia	117.6	110.1	112.3	115.3
Sub-Saharan Africa	35.1	33	34.1	35.7

Regions	2015	2016E	2017F	2018F
<b>World</b>	<b>-2.7%</b>	<b>-1.2%</b>	<b>3.2%</b>	<b>3.7%</b>
<b>Developing Countries</b>	<b>-1%</b>	<b>-2.4%</b>	<b>3.3%</b>	<b>3.5%</b>
East Asia and Pacific	3.8%	-1.2%	2.5%	2.9%
Europe and Central Asia	-22.1%	-4.6%	6.6%	6.4%
Latin America and Caribbean	6%	6.9%	3.3%	3.6%
Middle East and North Africa	-6.1%	-4.4%	6.1%	3.3%
South Asia	1.6%	-6.4%	2%	2.7%
Sub-Saharan Africa	-0.4%	-6.1%	3.3%	4.9%

# HOW WOULD 2018 LOOK LIKE

## FOR CROSS-BORDER REMITTANCES?

The growth rate of remittance flows to developing countries is projected...

to  
RISE



**3.3% a Year in 2017-18**

Remittances to developing countries are expected ...

to  
RISE



**\$ 459 Bn in 2018**

Cross-border remittance revenue...

will  
INCREASE



**In All Regions**

The non-banks FinTech startups using proprietary networks....

have  
CAPTURED



**Significant Market Share**

High penetration of mobile banking and last mile connectivity has led to surge of firms...

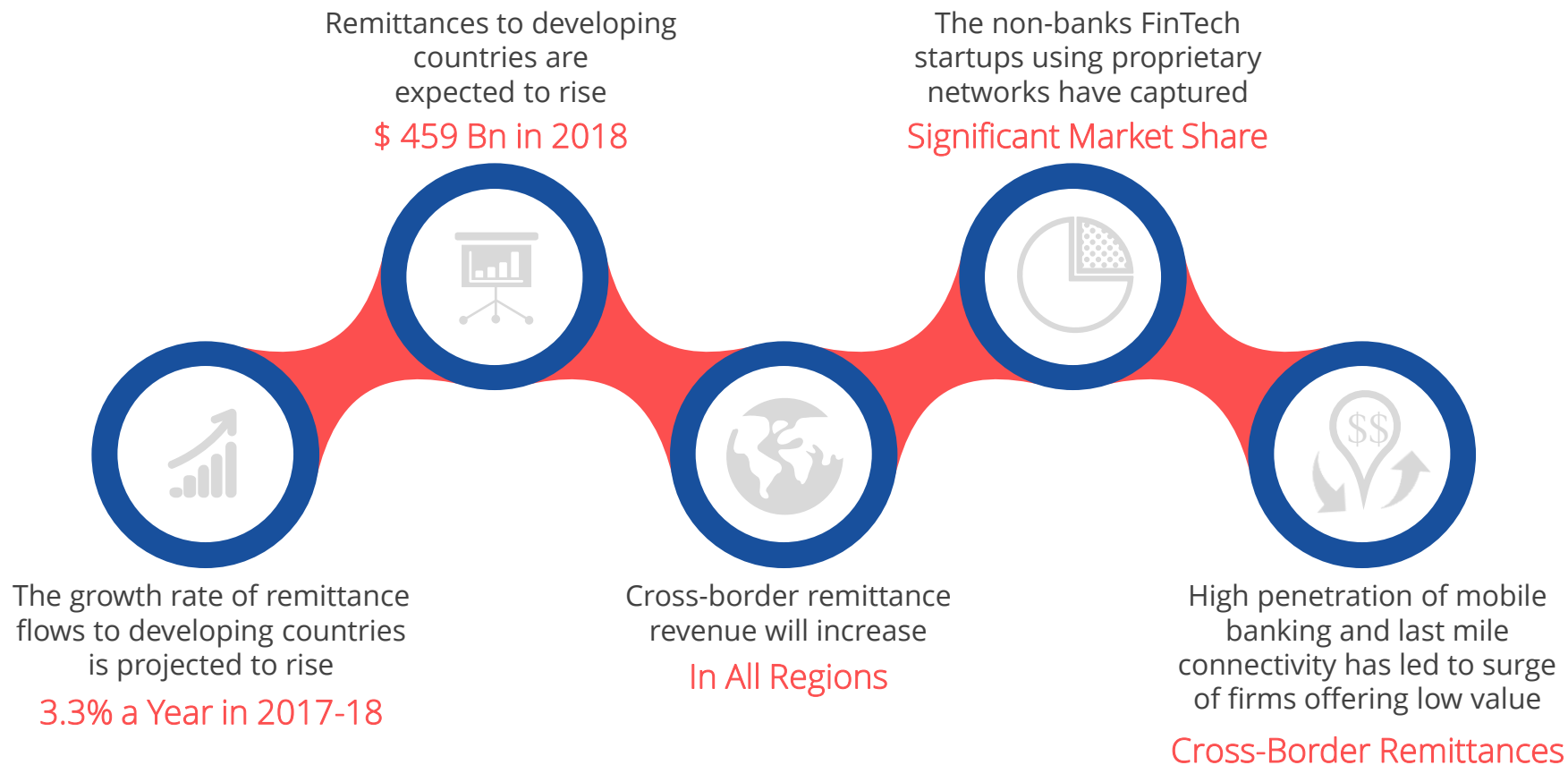
offering  
LOW VALUE



**Cross-Border Remittances**

# HOW WOULD 2018 LOOK LIKE

## FOR CROSS-BORDER REMITTANCES?



# HOW WOULD 2018 LOOK LIKE

## FOR CROSS-BORDER REMITTANCES?



- The dominance of incumbent MTOs will be challenged by the rise of FinTech players.
- Among these players, TransferWise looks best placed to disrupt the existing market share of these incumbents.
- Global investments in Remittance startups are likely to increase in 2018.



- The cost of sending remittance will decrease, mostly due to the rise of digital players offering low cost remittance.
- Global average fee is expected to reduce to 7.52%.
- FinTech start ups will look to provide Mobile money based remittance services in the costliest corridors involving emerging



- Despite a dip in remittance flow in 2016-17, the volumes are likely to increase in 2018 with a growth rate of 3.7%.
- This is due to stabilization of economic activities in high-income and developing economies.
- APAC will continue to lead the global remittance market with



- Social remittances are likely to see more traction with WeChat/Viber/Hike leading the way, and facebook/whatsapp to follow.
- Blockchain will continue to disrupt the market, as more and more start ups are likely to leverage the technology for cheap and quick remittance services.

The titans (WU, Moneygram, Ria, UAE Exchange) of the “cross-border money transfer” market, with a ~24% worldwide market share, are being challenged by multiple well-capitalized upstart companies targeting the

**\$575 BILLION REMITTANCE MARKET**

# REAL-TIME PAYMENTS

## 2018 OUTLOOK

- Over the past few years, real time payments have become the new mandate by the customers. The current initiatives in this space will pave way for a number of solutions by incumbents as well as FinTech players.
- Interoperability and efficiency gains are key aspects for both FIs and regulators. Standardization of these payment system will be the focus going forward, as regulators will now look to establish a cross-border interoperability.
- Adoption of ISO 20022 would be a trigger point for faster adoption of real-time payments
- Blockchain will play a major role in development of real time payment systems across the world. It has already seen traction in the cross border payment space where Ripple and Stellar are enabling a number of PSPs to provide instant cross border payment

### UNITED STATES

The clearing house has launched industrial testing of RTP in Apr, 2017. The new payment system is expected to go live by the end of 2017 and by 2018, real time payment services are expected to be available across much of the US by middle of 2018. The big banks in US will leverage the instant payment capability of this new system to strengthen their market and counter the threat of FinTech.

### EUROPE

Pan European SEPA Instant Credit Transfer Scheme will go live in November 2017. SWIFT has announced implementation of a new European instant payment solution by November 2018.

**Real Time Payments will be the most crucial step towards the digital transformation of merchant and SME payments, opening access to untapped revenue pools.**





## SECTION FIVE

# Incumbents and Startups: Opportunities & Challenges

# KEY OPPORTUNITIES

## FOR STARTUPS

- ✓ Upto 10% of FS business is at risk to FinTechs by 2020
- ✓ Consumer banking, funds transfer & payments, investment & wealth management are likely to be the top 3 areas that will be disrupted by FinTech
- ✓ FinTech companies focus is moving beyond customer facing experiences to B2B market - examples include offerings to improve mid and back office efficiency

## TRENDS TO LOOK OUT FOR



Startups will try to focus on proving that Blockchain can create value by transforming different organizational functions



Many startups have emerged to transform the insurance, digital challenger insurers for example an app that allows customers to purchase as-needed coverage for everything from personal items to car insurance.



Significant traction is can be seen in front office transactions, such as the use of AI chatbots to provide initial layer of customer interaction



Startups will focus on partnering with incumbent players and tech giants in the areas of payments and cross border remittances in Asia



There is abundant opportunity for FinTech to assist banks to develop API offerings and platforms

# KEY OPPORTUNITIES




































## FOR STARTUPS

SEGMENT	KEY POINTS	RECENT EXAMPLES
<b>InsurTech</b>	<ul style="list-style-type: none"> <li>An increasing number of InsurTech start-ups are building their business models around <b>support for, or partnership with, incumbent insurers and brokers</b></li> <li><b>AI, big data and automation</b> will transform the insurance processes</li> </ul>	<ul style="list-style-type: none"> <li>In 2017 Swedish mobile micro-insurance firm, BIMA raised \$55.2 million in Series C funding</li> <li>In 2017 UK-based challenger insurer, Gryphon Group Holdings, attracted \$229 million in PE funding</li> </ul>
<b>Blockchain</b>	<ul style="list-style-type: none"> <li>In the recent years there has been a rush by start-ups to prove their technical capabilities of blockchain prototypes but they have failed to demonstrate how blockchain can create value</li> <li>For start-ups to succeed, they must focus on solutions that can bring transformative change to the clients such as <b>lowering costs and capital or improving the customer experience</b></li> </ul>	<ul style="list-style-type: none"> <li>In 2017, Luxembourg based Blockchain (the company) raised \$40 million Series B</li> <li>It manages more than 14 million Bitcoin wallets</li> </ul>
<b>Artificial Intelligence (AI)</b>	<ul style="list-style-type: none"> <li>FinTech start-ups are already <b>leveraging AI platforms to assist investors to make complex, data-driven investment decisions</b></li> <li>Experts also feel that there will be <b>no market segment in FinTech that will be untouched by AI</b></li> </ul>	<ul style="list-style-type: none"> <li>SoFi, a privately-held Fintech startup currently valued at over \$4 billion, is using AI to analyze the data from non-credit sources such as educational pedigrees to provide student loan refinancing</li> </ul>
<b>On a overall basis, AI, Blockchain and InsurTech are expected to provide plenty of opportunities for start-ups to develop innovative solutions.</b>		

# KEY CHALLENGES

## FACED BY STARTUPS

- While FinTechs have been quick to move ahead on the technology innovation and customer relationship, they have huge disadvantages in terms of retail presence (channels) and regulation/compliances. The other key handicap would be brand/trust and data which is critical for scaling up.

Bank/FI Profile	Retail Presence	Organizational Knowledge of Money Movement Infrastructure	Loyalty/ Customer Relationships	Regulatory Infrastructure including Legislative Influence & Compliance	Brand	Operational Infrastructure	Technology /UX/UI
<b>Top 10</b> BofA, Wells, Citi							
<b>Regional Banks</b> Suntrust, BB&T							
<b>Credit Unions/ Community Banks</b>							
<b>Online/ mobile only Banks</b> CBW, MetaBank, Ally Bank, Synchrony							
<b>FinTech</b>			 ?			 ?	

# KEY CHALLENGES

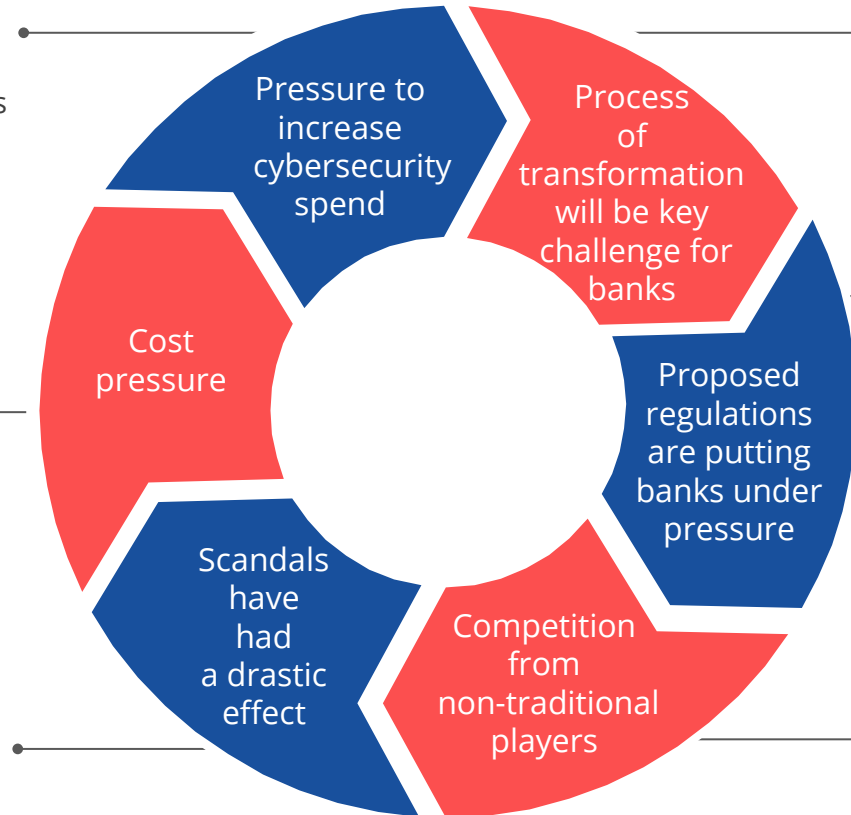
## FACED BY BANKS (US)

### Phishing, Ransomware, DDoS attacks become very common in banking industry

- The above cyber attacks has resulted in banks to show a strong inclination to spend more on security in the mobile channel

### There are many factors driving cost pressure

- New market entrants are providing better user experience at a lower cost
  - Customers are increasing pressure on banks to innovate which involves cost
- Regulations have been a significant cost burden across the industry
- Wells Fargo's debacle – involving creation of millions of accounts without customer's permission
- Experts feel that many banks have spent millions researching their culture and updating ethics handbooks with little impact



### Under increased competitive pressure from FinTech startups the process of transformation will be challenging

- They need to address issues such as legacy systems and processes to build platform for the future

### Office of the Comptroller of the Currency (OCC) is offering national charter to FinTech firms allowing them to compete with banks

- Conference of State Bank Supervisors (CSBS), have come out in support of the New York banking regulator's lawsuit against the federal Office of the Comptroller of the Currency

### Startups are taking on banks with skills, funding and attitude

- More than 20% of FI's business could be at risk of FinTech
- FinTech or InsurTech are changing the attitudes of the people to save, pay, borrow and invest

# KEY OPPORTUNITIES

## FOR INCUMBENTS (BANKS)

Rise of FinTech is an opportunity to expand products and services. Bankers are increasingly turning to FinTech companies to engage in partnerships.

EXPANSION OF  
PRODUCTS & SERVICES

Improve customer experience by focusing on improvements digital solutions and develop solutions to empower customers

FOCUSING ON  
CUSTOMER EXPERIENCE

Banks are exploring innovation, such as Blockchain and are keen to evaluate their strategy and potential partnerships.

EXPLORING NEW  
TECHNOLOGIES

Different banks react differently to disruption. Support incubation, leverage their size and assets to buy out companies and partnering with different players.

DEPLOY DIFFERENT  
STRATEGIES



## SECTION SIX

# A Game Theory View of Winners and the Residual Forces of Cooperation

# WINNERS (AND WAR) OR COOPETITION (AND COOPERATION)

**BANKS &  
FINTECHS  
ARE COMING  
TOGETHER**



Surveys prove that **partnering with FinTech startups have gone up**. For example banks outsource part of their R&D and bring solutions to the market quickly

**The FinTech threat is very real.** The most profitable services for banks such as personal finance/loans are being targeted. Banks are looking to partner as they need to improve their operations through digital solutions.

Many banks have already realized that they need to act and are planning their future actions to partner or compete with startups.

**DISRUPTION IS ON TOP OF THEIR STRATEGY**

- **In terms of importance, Banks are focusing on empowering customers by giving control of financial matters.**
- **Open Innovation and Open APIs are the underlying drivers for the next phase of growth** that banks are set to explore. This is seen as a natural step forward to embrace the growing need for co-development, reusability and agile/rapid application development requirements.
- **Collaboration** will be the key as FinTech aim for scale and traditional financial institutions seek digital expertise.



# WHAT ARE THE WAYS FOR CO-OPERATION

## Focusing on various Innovation strategies

Banks have set up their own innovation labs, incubation hubs and accelerators that provide critical links between banks and FinTech

## Investing in Partnership arrangements

New technologies of start-ups are integrated into bank's application and also in the form of "white label" arrangement.

## Digital M&A and Direct Investments

Almost one in three banks and asset managers have plans to buy a FinTech firm in the next 12 months. JP Morgan for example spent \$9.5bn on FinTech during 2016

# WIN FOR ALL

## GAME THEORY APPROACH FOR BANKS & FINTECH STARTUPS

		BANKS	
		Compete	Collaborate
FINTECH STARTUPS	Compete	<ul style="list-style-type: none"> <li>• Siloed efforts</li> <li>• More investments</li> <li>• Innovation loss</li> <li>• No result competition</li> <li>• Lack of speed and agility</li> </ul>	<ul style="list-style-type: none"> <li>• One sided innovation model</li> <li>• Un- sustainable</li> <li>• Industry distrust</li> <li>• Distress industry consolidation</li> </ul>
	Collaborate	<ul style="list-style-type: none"> <li>• Innovation loss</li> <li>• Longer GTM timelines</li> <li>• Legacy overrule</li> </ul>	<ul style="list-style-type: none"> <li>• More accurate decisions</li> <li>• Solves specific industry problem</li> <li>• Win-Win model: Scale, Digital Expertise, Data and Regulatory Support</li> <li>• Legacy &amp; innovation alignment</li> <li>• Shorter GTM</li> </ul>

# EXAMPLES

## WORKING TOGETHER

- JPMorgan Chase has now partnered with more than 100 FinTech companies. It's partnership with FinTech firm On Deck Capital to help offer quicker approvals and same-or-next-day funding to some of its four million small-business customers.
- Bank of America, Citigroup, Goldman Sachs, Morgan Stanley and Wells Fargo, have invested in fintech start-ups.

**Collaborate**

**Compete**

**Co-Exist**

## CREATING CAPABILITIES

- Societe Generale aim was to compete with mobile money providers in West Africa. It decided it needed an interoperable platform that would work on feature phones—the most prevalent handset type in the region. It selected TagPay, a French software company that could help translate their banking systems onto a limited mobile menu.

## FINDING NICHE

- Demyst Data allows its customers integrate new data sources more rapidly, navigating through the complex data landscape in a compliant way, and transforming unstructured data into something that is easily usable to bank in real-time. One of its clients is a major bank in the Philippines that values financial inclusion



## SECTION SEVEN

# Takeaways

# TAKEAWAYS



- The role of data would become ever more important in world where revenue margins are significantly affected by predictive analytics & AI driven business strategies and enterprise data management is poised to undergo a transformation with advent of Blockchain Technology.
- Enabling Technologies such as AI, Blockchain and IoT would present tremendous scope in transforming the traditional financial services technology.



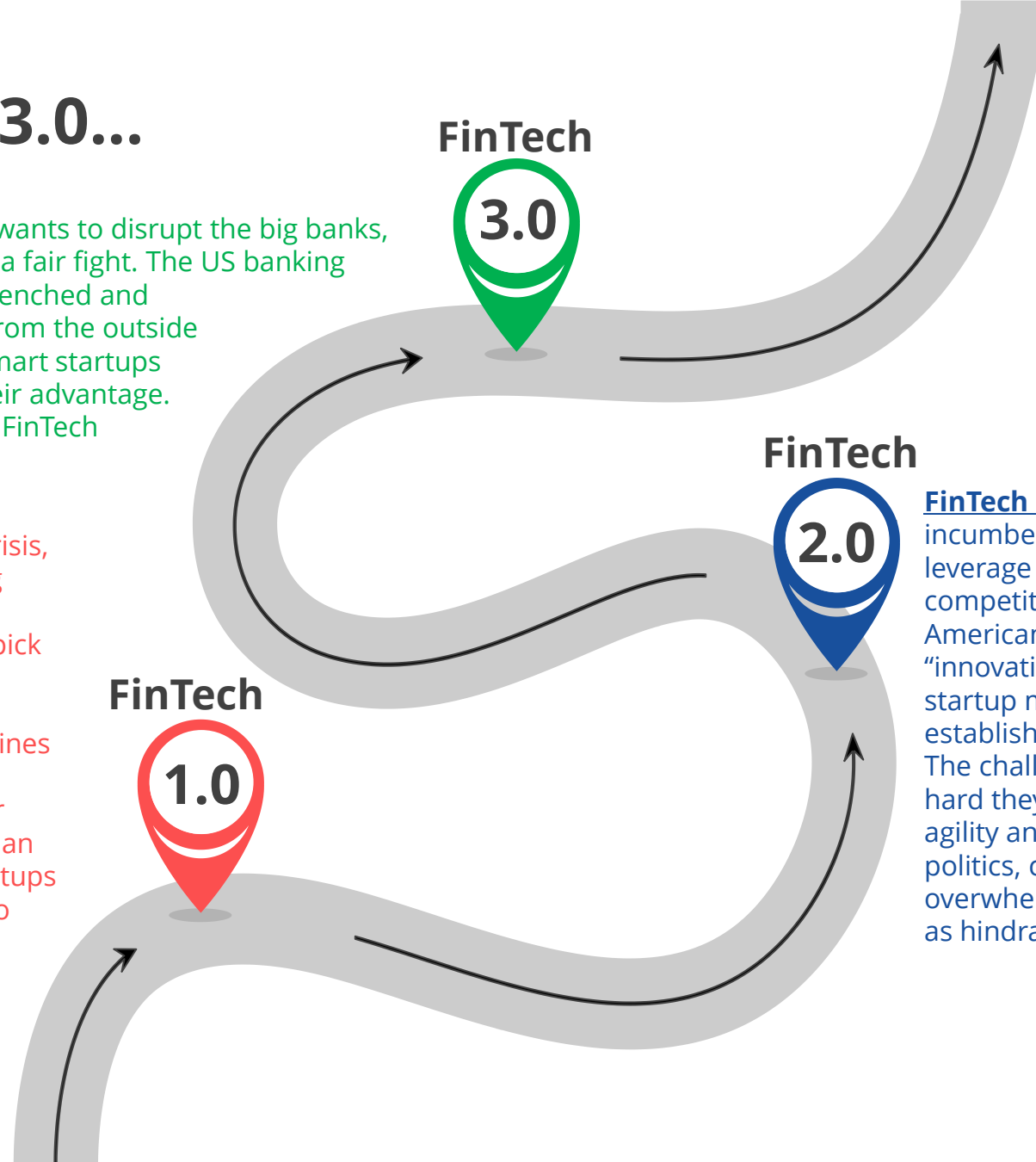
- Over the next 5–10 years, we might witness the disintermediation of financial services delivery enabled by open APIs, PSD2, real time payments with an edge to incumbents able to monetize on this opportunity by leveraging their legacy strengths.
- The aforementioned factors would create an entirely new range of financial services offerings within Payments and Remittances domains.

# FINTECH 1.0 TO 3.0...

Almost every FinTech startup wants to disrupt the big banks, but the problem is that it isn't a fair fight. The US banking sector (and globally) is so entrenched and protected that challenging it from the outside is an exercise in futility. The smart startups know this and will use it to their advantage. In this coming of **FinTech 3.0**, FinTech startups will partner.

At the end of 2008 financial crisis, new regulations and changing consumer demands began to emerge as the world tried to pick up the pieces of the "great recession."

These changes made certain lines of business significantly less profitable for banks and other financial institutions, creating an opening for tech-enabled startups and brought up **FinTech 1.0** to step in and fill the void. This coupled with the changing demands of consumers and the democratization of big data, led to a FinTech renaissance of sorts.



**FinTech 2.0** based innovation starts when incumbent players in the market were trying to leverage their considerable resources to remain competitive amongst startups. Everyone from American Express to Bank of America now have "innovation centers" where they try to foster the startup mentality while leveraging their established brands and infrastructure. The challenge, of course, is that no matter how hard they try, incumbents can never match the agility and risk appetite of startups. Corporate politics, changing strategies, and an overwhelming desire to protect the brand serve as hindrances to innovation.



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