

26 May 2019

TF2-TF7 Joint Panel Discussion

Fintech : Building the Future of Financial Systems /
Promoting Digital Financial Literacy for the Digital Age

Keynote Speech

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T^{THINK}20
JAPAN 2019



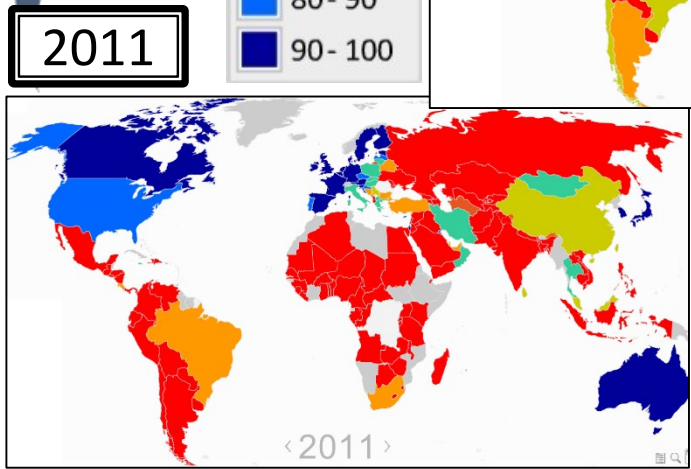
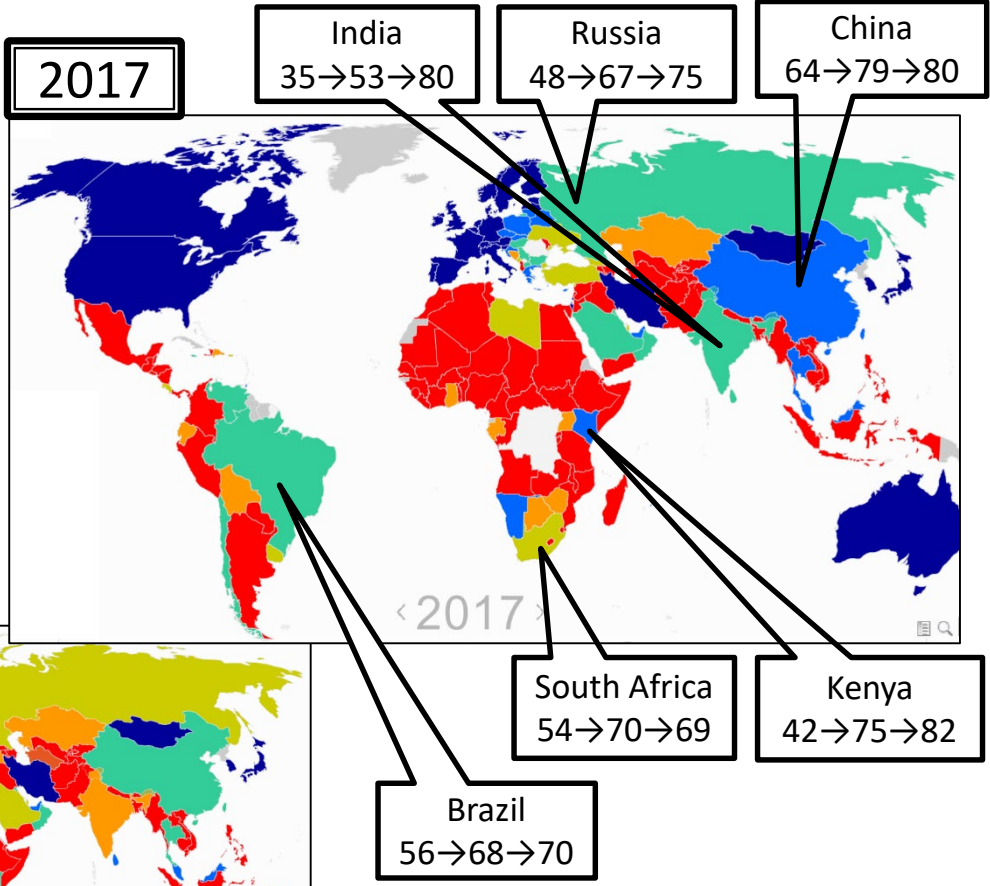
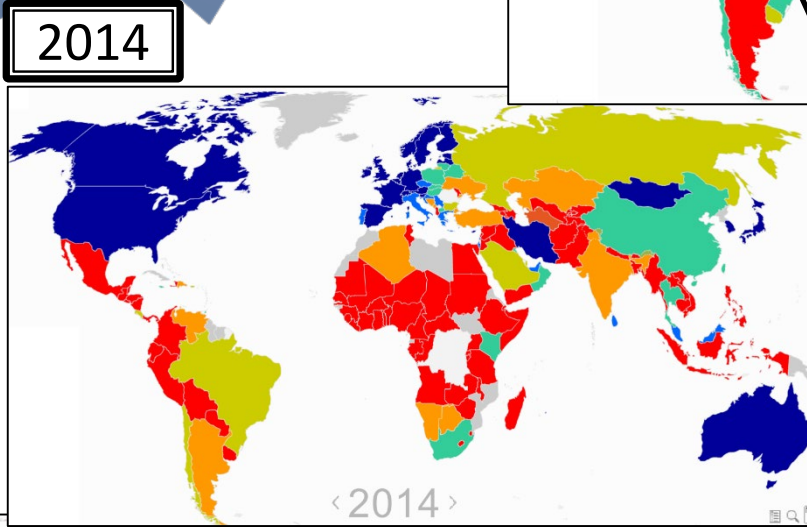
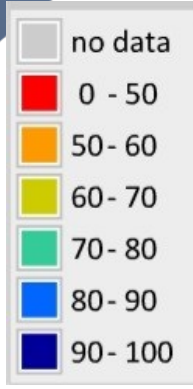
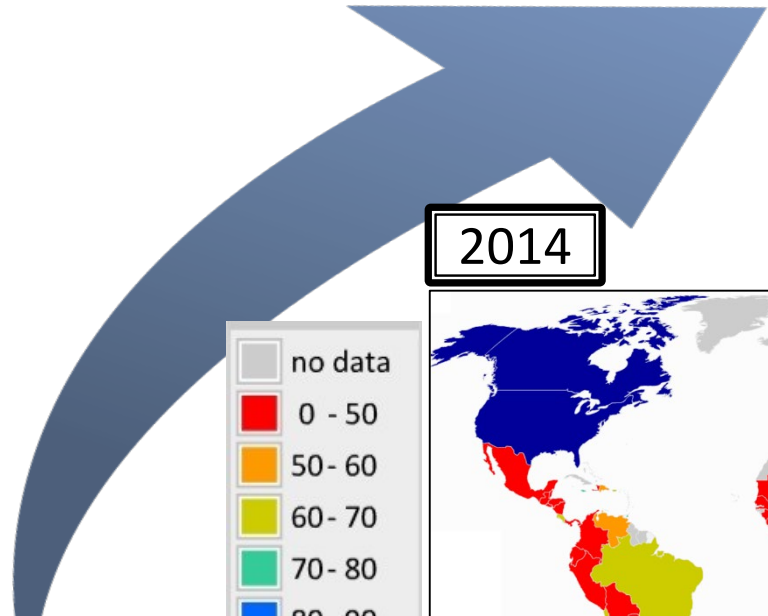
T20 Summit 2019

I. FinTech and Financial Inclusion



Remarkable Progress of Financial Inclusion

% of account holders (age 15+) 2011, 2014, and 2017



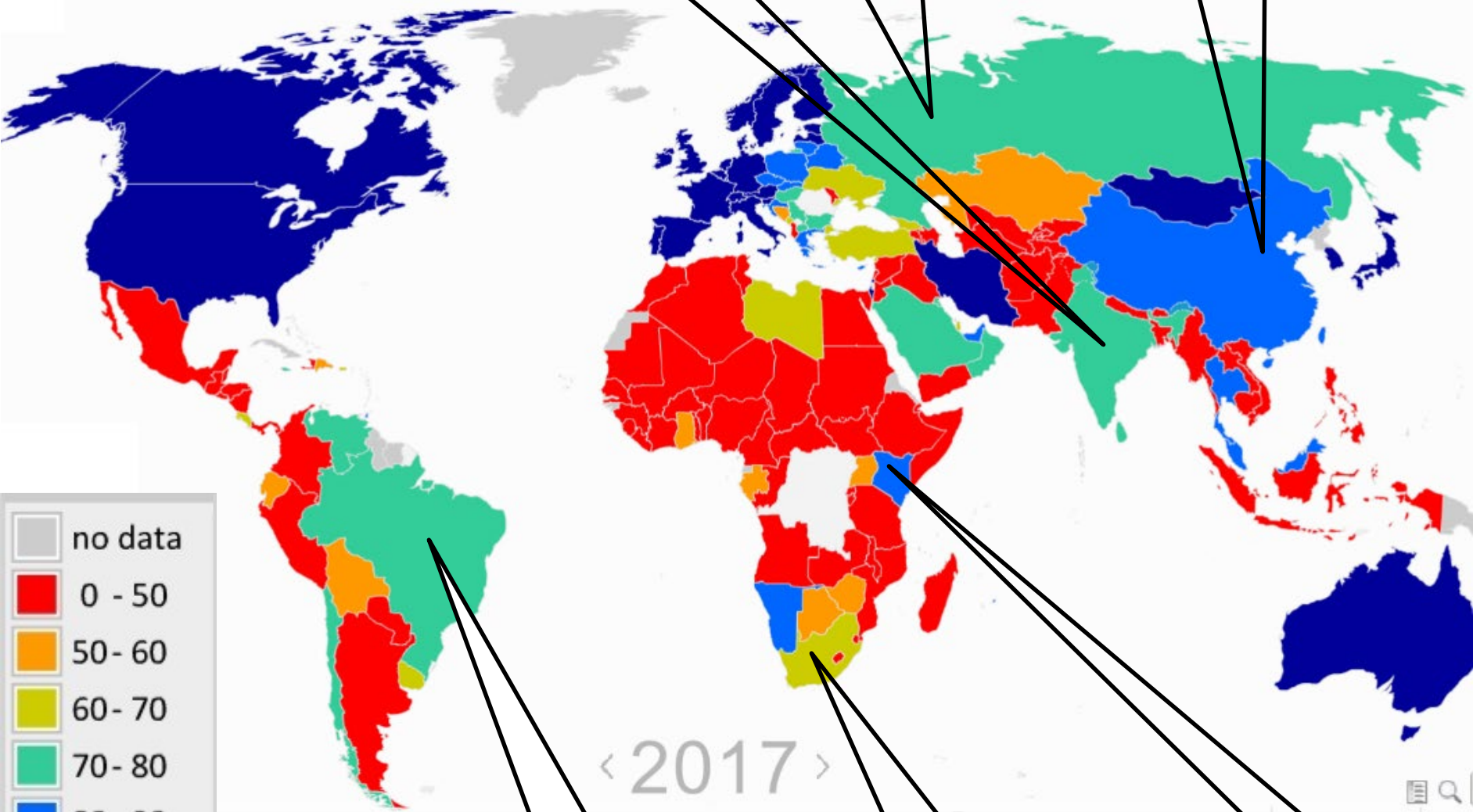
2017

% of account holders (age 15+)

India
35 → 53 → 80

Russia
48 → 67 → 75

China
64 → 79 → 80



Brazil
56 → 68 → 70

South Africa
54 → 70 → 69

Kenya
42 → 75 → 82

Source: The World Bank

FinTech is disruptive innovation of financial services by the Internet

Reinventing banking business..

Ant Financial is now worth more than Goldman Sachs, Morgan Stanley or Amex.



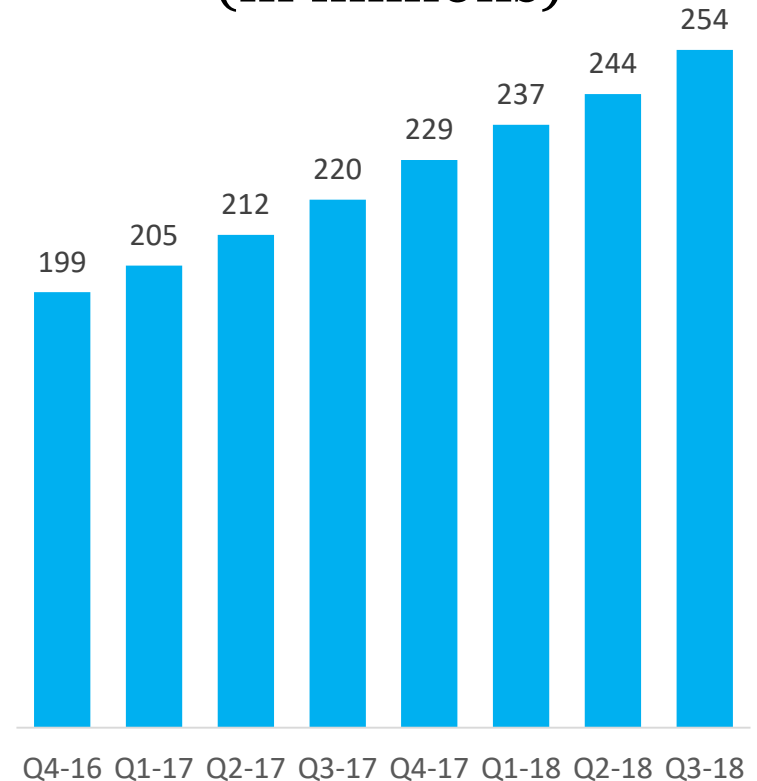
Mobile payment platform with

>870 million*
active users
globally

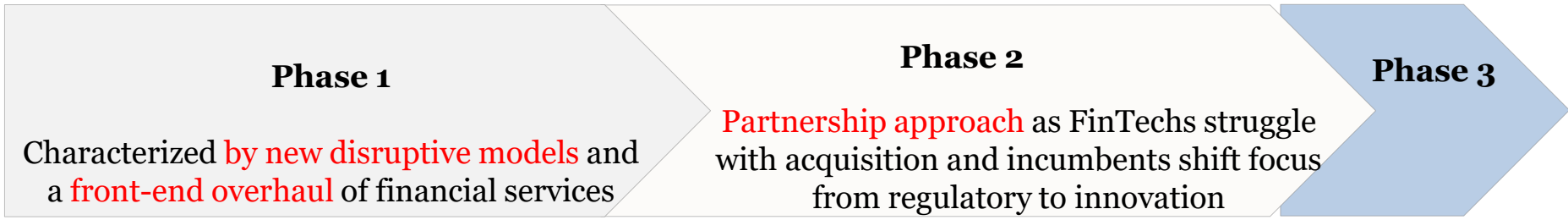
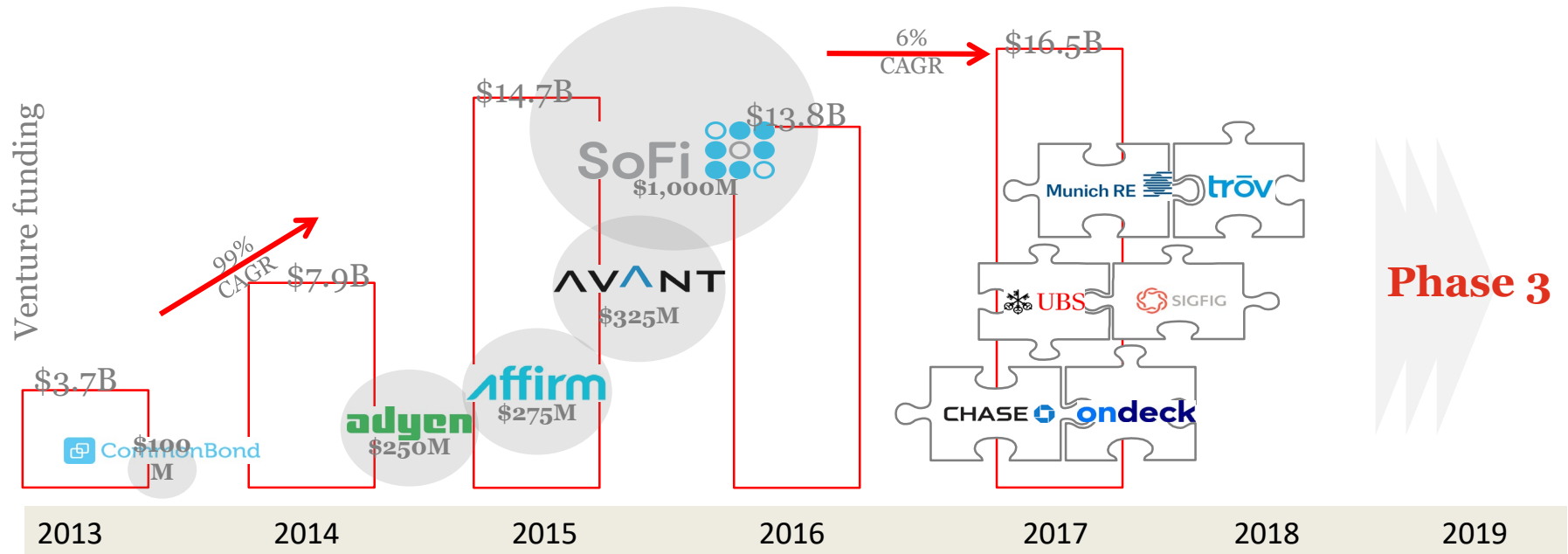
More than a half of market share in

\$15.5bn
payments market
in China

PayPal active accounts
(in millions)



FinTech innovation and evolution: a third phase is underway



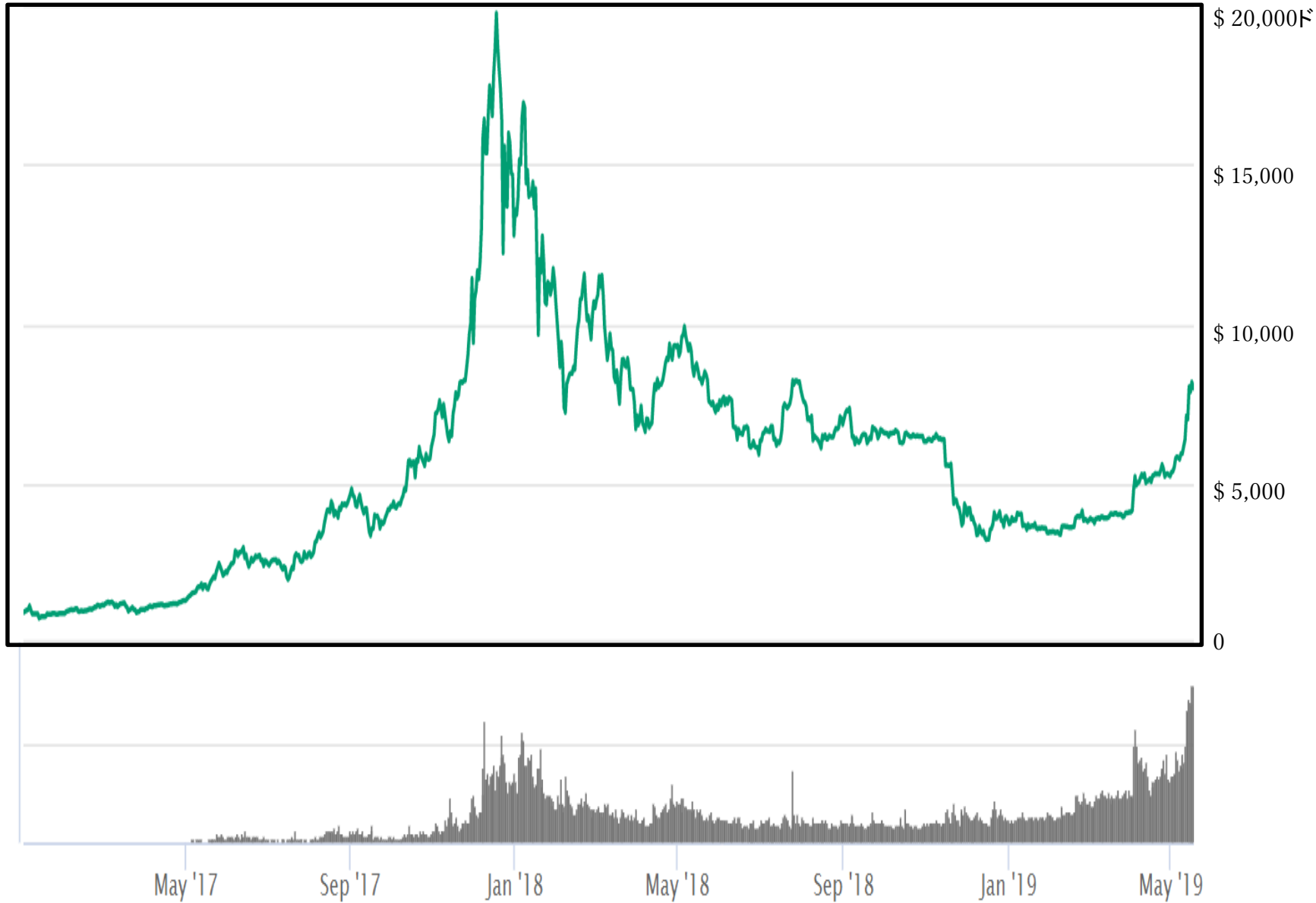
Proposal

1. G20 should lead on developing principals in policy and regulation to ensure an adequate level of **cybersecurity** and **data privacy** while encouraging innovation.
2. G20 should promote to **update the regulatory structures** to sustain “trust” in the future of global financial systems.
3. G20 should champion a coordinated effort by governments to support in **improving financial inclusion** through bridging technology, innovation, and policies.

II. Regulation of Crypto-assets



Price and Trade Volume of Bitcoin (2017~2019)



Pros /Cons of on-chain and off-chain transaction

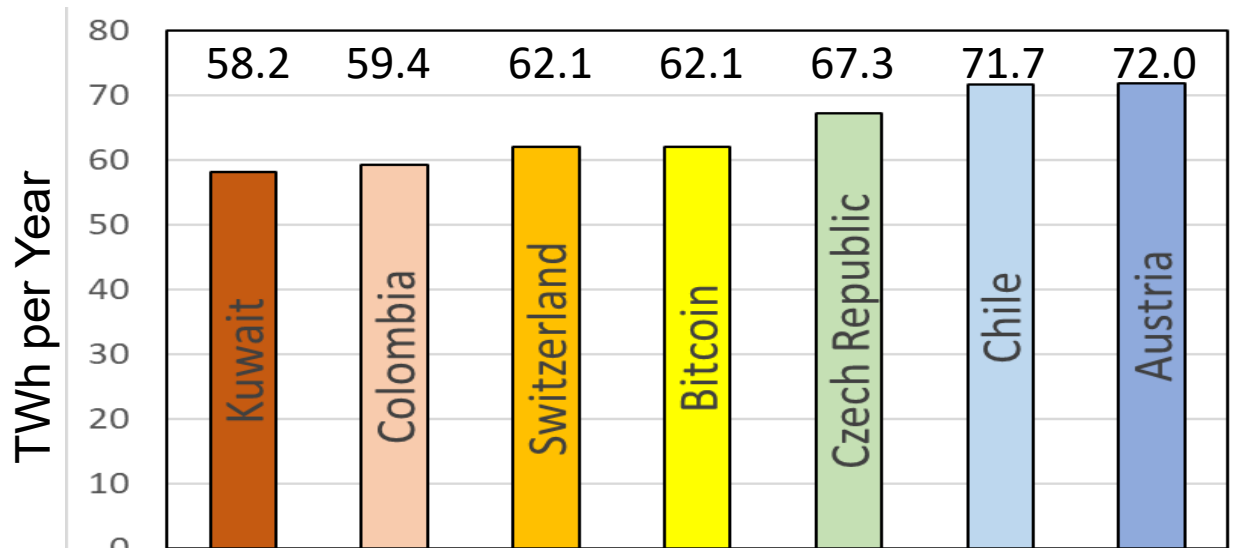
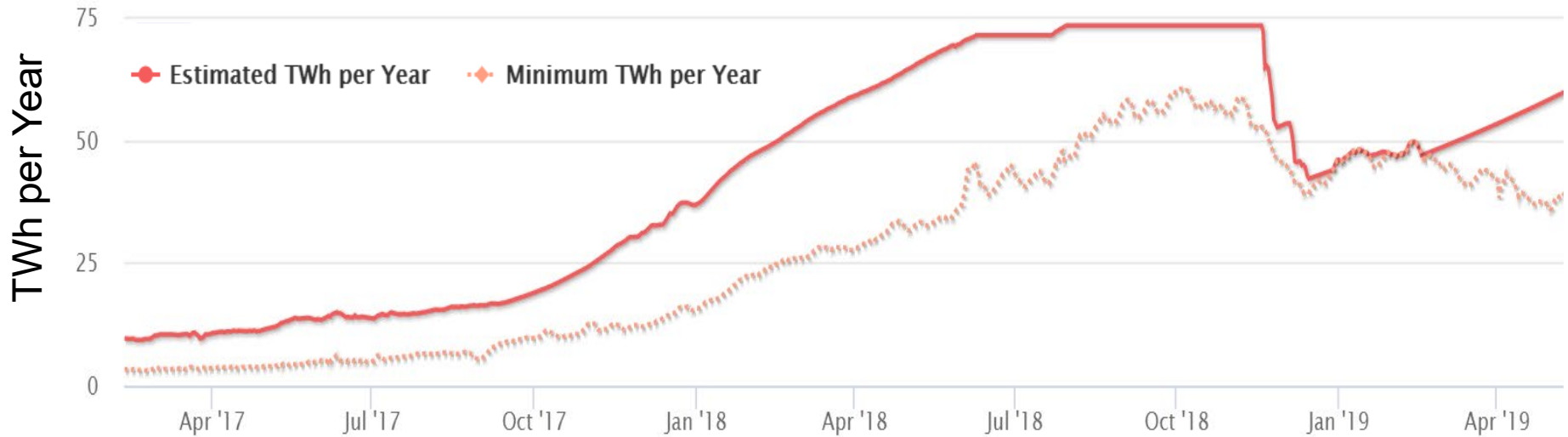
Type	On-chain Transaction	Off-chain Transaction
In brief	Transaction method that has been used since the dawn of Bitcoin. A digital signature is generated with a secret key managed by the user himself, and a transaction record including his own address is recorded on the blockchain.	Transaction method whose settlement completes within the RDB of a crypto-asset exchange. Users authenticate with ID and password, instead of a secret key.
Who use it?	<ul style="list-style-type: none"> ● Geeks who have been using Bitcoin from its dawn, ● Users who want anonymous transactions, ● Users who remit or pay across borders, ● Inter-exchange transactions, ● Mining companies. 	<ul style="list-style-type: none"> ● Individual investors who are laypersons about crypto-asset transactions, ● Customers of crypto-asset exchanges.
Pros	<ul style="list-style-type: none"> ● Transactions recorded on the blockchain are immutable. ● Transactions can be almost anonymous. ● Even if there are troubles in the exchange, the crypto-assets recorded on the blockchain are safe. 	<ul style="list-style-type: none"> ● Nontechnical investors can make transactions with simple authentication such as passwords, and their crypto-assets are at no risk of loss or leakage of secret keys.
Cons	<ul style="list-style-type: none"> ● Each user needs to be technologically skilled in managing his secret key of the digital signature securely. ● Loss or unauthorized use of user's secret key would result in the total loss of his crypto-assets. 	<ul style="list-style-type: none"> ● Risk of losing crypto-assets if a cyber-attack damages an exchange.

Major cyber-attack incidents to crypto-asset exchanges

Attacked Exchange	Nationality	Month / Year	Estimated Loss (\$ in millions)	Stolen crypto-assets
Mt.GOX(1)	Japan	June, 2011	9	-
Bitfloor	U.S.	September,2012	0.25	24,000 BTC
Mt.GOX(2)	Japan	February, 2014	480	850,000 BTC
Poloniex	U.S.	March, 2014	0.55	-
BitStamp	U.K.	January,2015	5	19,000 BTC
Bitfinex	Hong Kong	August, 2016	66	119,756 BTC
CoinCheck	Japan	January, 2018	530	526,300,010XEM
BitGrail	Italia	February, 2018	170	1,700 XRB
Coinrail	Korea	June, 2018	40	NXPS,ATC,NPER
Bithumb	Korea	June, 2018	31	XRP ?
Zaif	Japan	September, 2018	62	BTC,MONA,BCH
Cryptopia	New Zealand	January, 2019	3	ETH ?
QuadrigaCX	Canada	January, 2019	137	inaccessible cold wallets

Bitcoin Mining and Global Environmental Problem

Bitcoin Energy Consumption Index



Proposal

1. G20 countries should comply with **FATF guidance on AML / CFT of crypto-asset** and introduce the regulation to the crypto-asset exchanges.

2. G20 countries should supervise crypto-asset exchanges to manage their risk appropriately, including **cybercrime risk** from the viewpoint of **investor protection**.

Japan has already introduced the regulation to crypto-asset exchanges, investing a lot of human resources, conducted on-site inspections. The experiences of Japan's FSA would be valuable for G20 countries.

3. G20 countries should **carefully monitor** the prices of crypto-assets and **mining business** if they have an impact on the **global environmental problem**.

Thank you.

