

THE OPPORTUNITY FOR FINTECH

Addressing gaps in the traditional Banking model in SEA

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Problem: The size of the financial inclusion gap

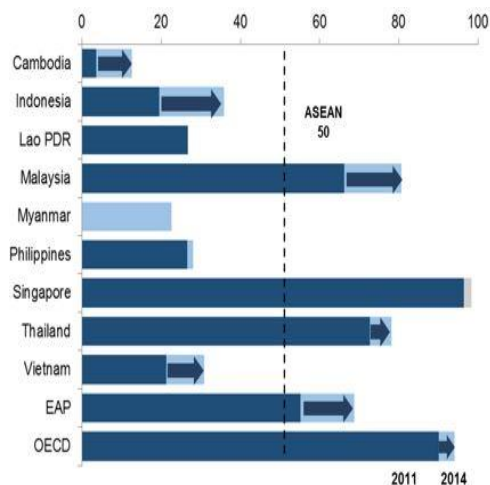
Solutions: Mobile & digital finance offers new hope

Examples: Simple, innovative solutions from around the world

Enablers: What is needed for sustainable provision

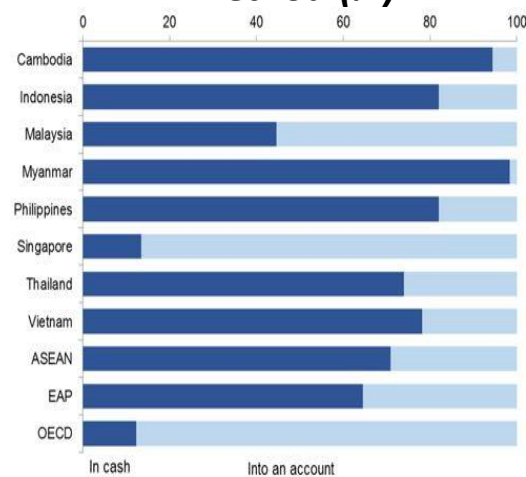
South East Asia by the Numbers

Adults with account (%)



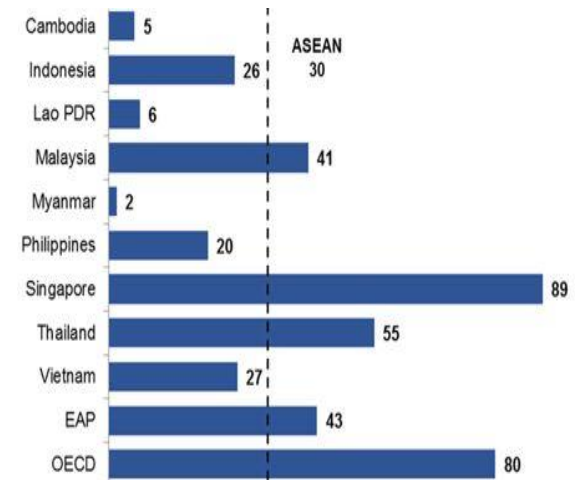
<50% of adults have bank accounts

Adult wage payment by method (%)



~71% are paid in cash by employer

Adults with debit card (%)



~30% of adults have a debit card

“Unbanked” individuals lack a credit history and a verifiable economic identity – stay disenfranchised and excluded from the global economy

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Mobile First can convert the Problem... into an Opportunity

< 5%

*Credit card
penetration in
Indonesia*

30 M

*SMEs underserved by
financial system*

266 M

*Financially excluded
people*

480 M

Internet Users by 2020

90%

*Internet users on their
smartphones*



“Banking As A Platform” movement

...and many stakeholders gain from Digital/ Finance

Consumers

- Lower Cost
- Increase Convenience
- Increase Access
- Increase Choice
- +1.6B people to FS network

Firms

- Increase Efficiency
- Better understand consumer preference and behavior
- +\$2.1T new lending and +\$4.2T new deposits

Economy

- Increased growth - productivity
- Better capital deployment into financial system
- More tax revenue
- +GDP by \$3.7B, +95 M new jobs

Many stakeholders stand to gain from digital financial services

2014¹

XX

Emerging economy total

South Asia

Africa and Middle East

Southeast Asia

Latin America

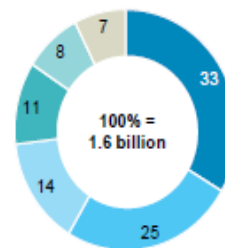
China²

Eastern Europe and Central Asia

Individuals

Newly included in financial system %

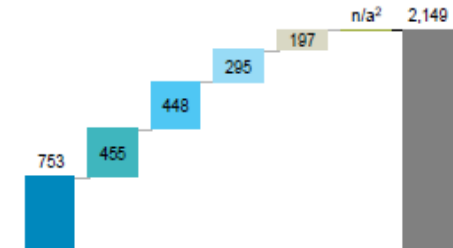
1.6 billion



MSMEs and individuals

New credit \$ billion

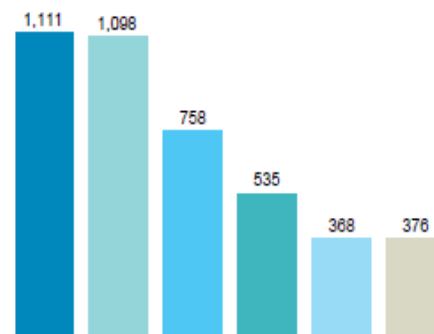
2.1 trillion



Financial-service providers

New deposits \$ billion

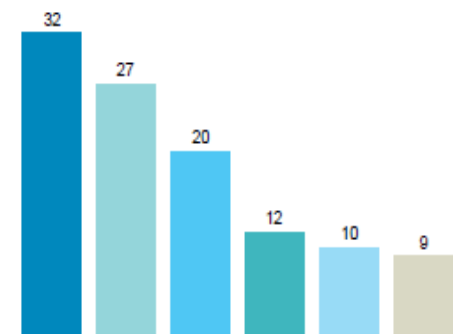
4.2 trillion



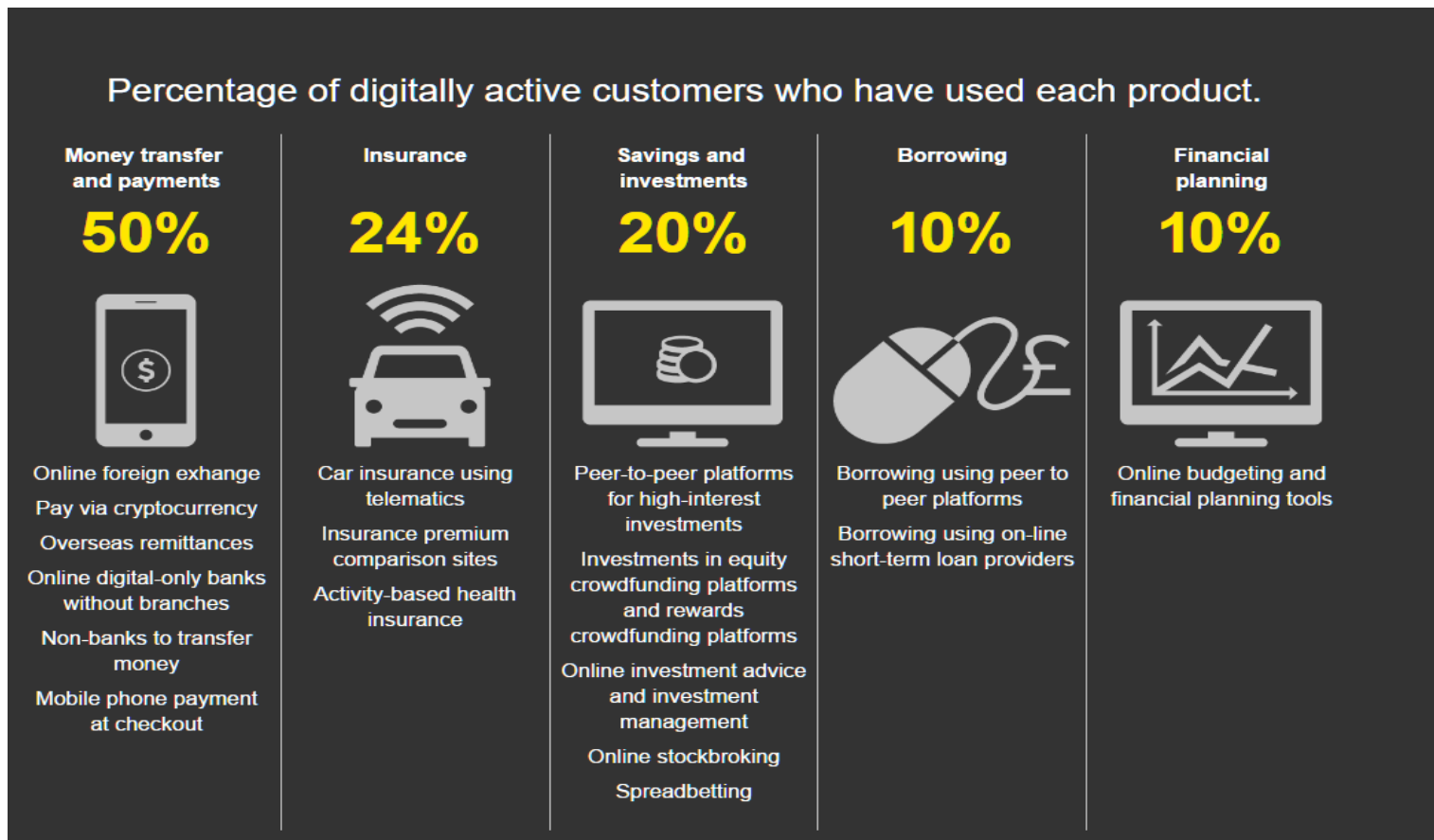
Government

Leakage reduction per annum \$ billion

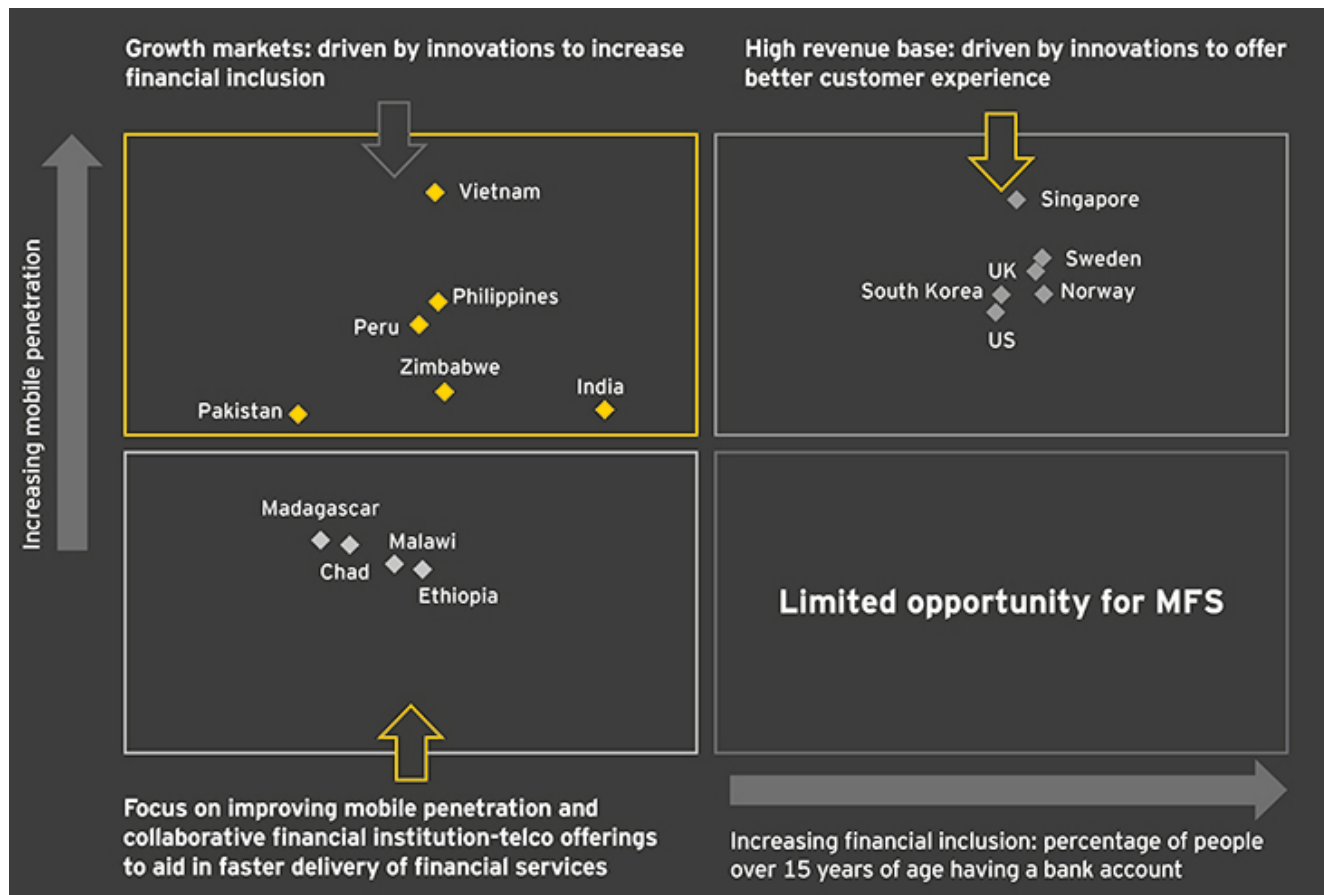
110 billion



... across entire spectrum of financial services



Opportunities for Digital & Mobile Finance



2018 trends reinforcing the “Banking As a Platform” movement...

- Rapidly escalating smart phone **mobility**
- Accelerating shift towards **smart cities**
- Greater demand for **security** and trust
- More National ID and eID programs
- More calls for **public** supervision of digital identification systems
- Regulatory push for unbundling of banks towards open architecture

...and Digital Finance on Open API

Enables a broad range of providers to offer new solutions on payment rails to the mass market.

Features:

- Interoperability
- Digital Delivery Models
- Smartphone UX
- Data Analytics
- P2G, Merchant payments, Digital Finance+

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Unique ID infrastructure



Identity is the link that connects an individual to his or her community. Digital biometric enabled ID within a mobile-first, smart city world is the key that unlocks individual's access to a rich array of services and support.

Benefits

- Guaranteed security: Private data, public framework of Trust.
- Verify online at low cost, eliminate duplicate / fake identities.
- Consumer friendly; e-Gov, m-Gov



Case study: Aadhaar

- 2009: world's largest biometric ID system - \$1.1B project - 1.1B unique IDs
- Secure cloud based infrastructure & database
- Use of Digital ID for banking, voting, medical records, tax returns, Government transfers
- Usability, Security, Interoperability
- Software rather than hardware based

2

Digital payments infrastructure



Enables to think national but act local, spurring creative local solutions to local problems- so extend crucial services to underserved communities

Benefits

- Interoperability & easy P2M, P2P, B2B, G2P payments on common network
- Instant transfer @ Lower cost
- local services (like Pay As You Go Solar systems) become even more feasible and relevant.



Case study: UPI & BHIM

- In India, BHIM Started with P2P and G2P -
- Now P2M enabled: merchants can use BharatQR for transactions in lieu of card swiping machine
- Mobile in-store Payment & Apps
- Digital Currencies
- eWallets & Mobile Payment Applications (Google Wallet, Apple Pay)
- Social Media Payment Options

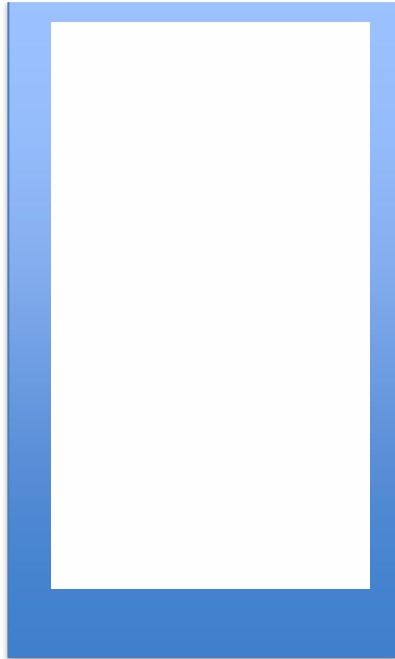
3

Rise of technology layer connecting... Consumers – Finco – Apps



Aiding the Banking As a Platform movement

Benefits



Case study: Plaid

- New technology layers can offer a suite of API tools ...
- Allows developers to integrate with bank infrastructure, access and authorize user bank accounts at multiple financial institutions.
- Further enabling differentiated local , to national and global scale

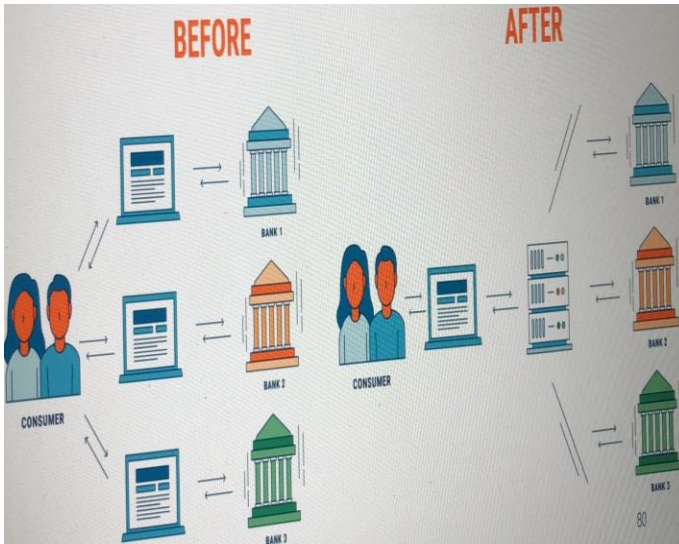
4



Open architecture to lower cost of delivering financial services to customers

Enables a broad range of providers to offer new solutions on existing payment rails to the mass market

Revised Payment Services Directive (PSD2)



Case study: RailsBank

- An open banking and compliance platform targeting developers and banks
- Enabling banks to streamline back office systems & replace legacy infrastructure
- Enabling developers to leverage cloud computing and newer programming languages to reduce development costs
- Offering tools to help fintechs/ banks to centralize customer data and services

5



Telco – Finco- Regulator Collaboration

Nurture for scale, so multiple local initiatives can create a coherent and interoperable spectrum of solutions; so that wherever they go, mobile citizens will need to find similar modes of service.

Benefits

Enables testing of creative solutions in an open API world- in a regulatory sandbox (within controlled environment)

Then local transformations can be effectively understood, and then scaled nationally



Case study: MShwari

“M-PESA” (payments) – evolved into Mshwari (lending) - JV of CBA+ Safaricom
Now 25% of GNP flows through M-Pesa, and used by 1/3 of population

Machine learning algorithms process data – handset details; SMS log; GPS data; Call logs; Contacts; Social network data- to create composite credit profile. L

Then leverage KYC – UID, airtime payment data; distribution of telco + lending of finco

PAYMENTS, LENDING

6



Crowd funding & Micro-SME lending

From theory, to proof of concept, to pilot to implementation- many hitherto high-transaction cost interventions now rapidly reach tipping point

Benefits

- Improves access to credit
- Rewards good credit history
- Creates investment opportunities for social investors
- Makes small loan sizes economical



Case study: Rang De

- Launched in 2008 in India
- Social investors choose borrowers seeking funds for small business or education
- Loans administered and disbursed by NGO partners. Borrowers repay as per a schedule
- Many investors can fund one project. One investor can fund many projects

PAYMENTS, LENDING



Open Banking: Finco - Data partnership

Customers permit banks to share access to their financial data with 3rd party developers of apps/ services - reach new customers/ better experience

Benefits

- API-fication – fincos open standards
- Platformification & leverage data - for frictionless customer journey.
- Banks generate new fees - bringing in partners, new plug-and-play financial apps, or collective solutions to create and market new industry-level solutions.



Case study: YES e-banking

- Farmers are immediately credited into their account the payment for milk purchased by dairy (Milk to Money).
- Farmers earn interest, avail of over-draft facility, while for banks,
- Payment records create credit history for business loans
- Banks Leverage data analytics on account behaviour to also ensure timely lending, avoid overfunding, and act upon default

PAYMENTS, LENDING

8

Platformization

Corporate – Finco- Data partnership



Blurring lines between fintech and commerce will enable new innovation

Benefits

Leverage corporate/ e-commerce – partnerships and data analytics to make less risky, cost effective loans to SMEs and vendors in the supply chain

Use mathematical modeling: to more easily analyze data/ predict default at a micro level



Case study: Alipay; Validus

Alipay 520M users p.a, >200 Finco partners & 10 m e-merchants. Targets merchants on Taobao to make small loans without collateral- using financial data for credit scoring from Alipay

Validus- a Peer 2 Business lending marketplace for SMEs leveraging corporate supply chain & with credit bureaus, mathematical prediction of default

Go_Jek- 50% of 18M users use payment gateway for transactions 3-4 #/day

LENDING, ANALYTICS

Blockchain



Secure, shared digital ledger for transfer of value

Benefits

- Eliminates need for trusted 3rd party
- Reduced cost and increased speed
- Increased security and transparency
- Smart contracts enabled - esp. useful in trade finance, land titling, and ownership of moveable assets.



Case study: Banqu

- Launched in 2015 in US
- BanQu creates personal digital profiles
- Profile recognized and accepted by DFIs
- targets the world's poorest (incl refugees)
- Acquires and validates info, distributes encrypted updates to clients in real time
- Keeps historical records of all docs/ compliance activities, providing evidence that bank has acted per reqts

PAYMENTS, LENDING

Fintech in Islamic Finance

Niche services for an underserved but growing market

Benefits

Getting more people to use Digital Islamic finance can help move them from government dependence to self-reliance



Case study: Wahed

- Robo-advisory for ethical investing adhering to Islamic principles
- Islamic Finance also suited for asset finance ex: aircraft leasing etc.
- Enhanced access to finance – for SMEs and Micro enterprises
- Sustainable Responsible Investment criteria and ESG principles are aligned with this

ADVISORY, LENDING

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Financial Literacy



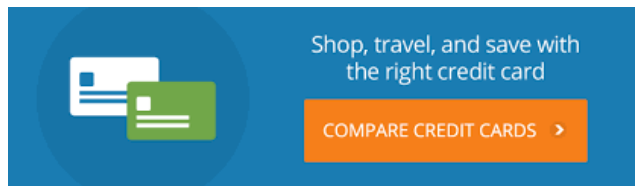
Financial Comparison Sites can promote responsible money management

Benefits

Personal Finance comparison websites can help individuals get fairly priced quotes from fincos and investors-

Home loans, credit cards, insurance quotes on real time basis

Guides on responsible money management



Case study: SingSaver

Hybrid of Cost Per Click, Cost Per Action, and Free - an advertising funded business model to provide better user experience.

SingSaver combines all the sources (from its banking partners) to provide a large selection to the consumer, and meanwhile promoting advertisers for an equivalent set of results.

More effective than courses teaching responsible money management

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Summary: Need the full ecosystem to participate to unlock the capability of digital

Digital finance & mobile infrastructure

- Universal national ID
- Robust, high-speed and widespread mobile infrastructure
- Efficient & fast settlement with Universal Payment Interface
- Affordable data plans, smartphones
- Effective technology layer for interface

Enabling regulatory environment

- Risk proportionate regulation
- Interoperable networks between telcos and fincos
- Open architecture and room to innovate
- Facilitate trust, transparency, safety and privacy for consumers

Sector readiness

- Financial Literacy
- Initiatives to improve sophistication of financial sector
- Assessment of which sectors could make optimal use of digital financial services

New business models and partnerships

- Scalable acquisition of merchants into network
- Efficiencies unlocked through digital currency, Blockchain
- Compelling value propositions focused on lowering barriers / meeting needs
- G2P payments to stimulate usage

"The Dawn of a New Age"

