FinTech Landscape - APEC Presentation

February 24, 2016
Overview of Fintech
What is FinTech?

FS Institutions
- Barclays
- RBS
- Aberdeen
- AM
- Santander
- Westpac
- Western Union
- World Bank

Infrastructure Players
- Visa
- SWIFT
- FIS

Investors, Incubators & Accelerators

Consumers & Users

Start Ups
- FS and tech related to FS (e.g. payments, big data)

Large Technology Companies and Mobile Telcos
- PayPal
- Google
- Apple
- Facebook
- Amazon
- Alibaba
- Vodafone
- Telefónica

Regulators & Government
What are the forces driving FinTech?

FinTech start-up activity is unprecedented, well-funded, pervasive, and solution oriented. The result is a new competitive landscape and playing field.

- **Innovation**
  New tech-enabled disruptive start-ups bring innovative business models

- **Funding**
  Heavily invested by VCs & PEs given low interest rate environment

- **Market Penetration**
  Pervasive in almost every part of incumbents existing value chain

- **Product lifecycle**
  Short time interval from concept to product MVP

- **Customer Impact**
  Leads to completely new customer expectation focused on experience

- **Regulatory impact**
  Not clearly owned within regulatory structures

Customers expect:

- **Individual Accessibility**
  (Anywhere, Anytime, Right Now)

- **Customised On-Demand Products/Services**

- **Customer Experience and Loyalty-Based Relationship**

Omni-channel strategies that revolve around mobile

Personalised experience based on data

Refinement of the frontlines
The funding of FinTech startups is booming, representing over 12x increase in less than 5 years

Source: CB Insights
This disruption is expected to be felt most by banking and payments incumbents

Most disrupted sectors
- Consumer banking (73%)
- Fund transfer and payment (55%)
- A majority of AM firms and insurance undertakings also see their respective sectors as the most disrupted ones

Will financial institutions be disrupted?

Yes 83%

of survey participants believe that part of their business is at risk of being lost to stand-alone FinTech companies

Source: PwC Global FinTech Survey 2016
Innovation is being enabled by technologies on the front- and back-end of the FinTech innovation stacks.
Within FinTech, each FS sector is generating its own trends around disruption

APAC countries are specifically impacted by certain trends in the financial services industry

1. Banks
- Emergence of alternative credit
- Rise of marketplace lending
- Enhanced credit underwriting and decisioning
- Integrated platforms for consumer financial empowerment

2. Fund Transfers & Payments
- Rise of mobile payments for the unbanked
- Faster payments initiatives
- Rise of virtual commerce globally
- Advanced fraud & security methods
- Rise of P2P and cross-border transfer platforms

3. Asset & Wealth Management

4. Insurance
- Rise of insurance for unbanked through mobile access
- Use of new technologies to drive down operational costs
- Ecosystem partnerships and new business models
- Enhanced analytics for better risk decisioning

Source: PwC Analysis
Alternative Credit: New entrants have gained funding and captured a portion of the lending market

Sources: Tracxn
PwC
Payments investments have increased over 500% in 4 years with innovation occurring on the front- and back-end of the payments stack

Global Payments Investments from 2010 - 2015

Front End:
Mobile wallets and mPoS investments grew at a CAGR of 131% and 26%, respectively, between 2011 and 2015

Backend:
Block Chain
Faster Payments
Mobile Money

Source: PwC Analysis based on Finovate, PwC DeNovo, and Tracxn
PwC
Blockchain investments have risen to nearly $1 Bn in 3 years, and 57% of surveyed executives are unsure what to do about it.

83% are not very familiar with the blockchain technology.

Source: Magister Advisors, PwC FinTech Survey 2016
Virtual commerce, driven by large tech titans in APAC, is expected to drive global sales and foreign cross-border payments by over 200% in four years.
Financial Inclusion
APAC countries comprise a significant portion of the world’s unbanked population

The world's unbanked by region
Adults (15+) without an account (%), 2014

- Sub-Saharan Africa: 17%
- Latin American & Caribbean: 10%
- Europe & Central Asia: 5%
- Other economies: 4%
- Middle East: 4%
- High-income OECD economies: 3%
- East Asia & Pacific*: 25%
- South Asia*: 32%

55% of the world’s unbanked population resides in APAC countries

*APAC is comprised of countries from both East Asia & Pacific and South Asia regions

Source:
PwC

APAC's unbanked by key country
Adults (15+) without an account (%), 2014

- China: 21%
- India: 47%
- Indonesia: 64%
- Philippines: 69%
- Thailand: 22%
Mobile Money and inclusive banking policies have increased financial services access for the poor, but the opportunity is still enormous.

Number of APAC registered and active mobile money accounts, 2014

South Asia:
76.9MM registered accounts
22.1MM active accounts

East Asia & Pacific:
21.8MM registered accounts
4.7MM active accounts

APAC Countries:
1.1 BN unbanked

Number of global registered and active mobile accounts (MM)

Source: GSMA and the World Bank
Payments are the foundation toward a more inclusive financial environment

1. Account Access
2. Send and Receive
3. Digital Financial History
4. Access to existing services such as credit
5. New business models enable previously cost-prohibitive services for remote users such as off-grid energy and crop insurance
6. Shift from saving for disaster to investing for the future

Source: PwC Analysis
Creating this entry point is important, given the success that other countries have had with similar initiatives...

1. M-PESA is a mobile money services that reaches ~18MM people with wallets

2. Stores enable people exchange cash for electronic value to remit money and pay bills

3. Creates a platform where each person with a wallet has the means to reach millions of people with a new service

4. M-KESHO accounts pay interest and are linked to limited emergency credit and insurance facilities using M PESA rails

5. Mobisol combines solar energy with affordable payment plans via mobile phone

6. Kilimo Salama crop insurance enables small holder farmers to invest rather than save for disaster

Source: CGAP, PwC Analysis
Opportunity: By moving 25% of paper-based transactions for five use cases to digital payment, 350-$400Bn in annual benefits could be realized

Size of Markets

- **Government Disbursement**: $9Tn
- **Cross-border remittances**: $580Bn
- **SME collections**: $10.8Tn
- **Consumer Retail Payments**: $23Tn
- **eCommerce**: $1.3Tn

**Retail Payments**

- **Retail Payments**: $23Tn

**G2P Payments**

- **G2P Payments**: $150Bn

**SME Collections**

- **SME Collections**: $80Bn

**Savings**

- **Retail Payments**
  - $150Bn
  - In benefits that merchants stand to realize by adopting digital payments

- **eCommerce**
  - 20% more
  - Profit per order that eTailers stand to gain by moving to digital payments in emerging markets relying on cash on delivery

- **Cross Border Remittances**
  - 50% less
  - The potential reduction in cost for sending cross border remittances

- **SME Collections**
  - $80Bn
  - In savings accruals to target business that digitize SME collections

Source: Citi-Imperial College Digital Money Index

PwC
Regulatory Perspective
**Policy makers in APEC countries are taking different approaches to encourage financial inclusion**

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<tr>
<th>Theme</th>
<th>Defining e-Money and Virtual Currency</th>
<th>Access</th>
<th>Adoption and Usage</th>
<th>Data Privacy and Consumer Protection</th>
<th>Fraud Security and Cyber-Crime</th>
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<tbody>
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<td>Country</td>
<td></td>
<td>Indonesia’s three leading mobile operators agreed to allow interoperability between their mobile wallets</td>
<td>An India-US partnership is focused on helping over 10 million merchants accept electronic payments</td>
<td>The Philippines enacted The Data Privacy Act, which limits access to customer data, and imposes penalties for unlawful use or disclosure of information</td>
<td>South Korea: The National Anti-Cyberterrorism Act proposed the establishment of a comprehensive pre-emptive line of defense to detect attacks in advance and address the threats early</td>
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<td>The central bank hopes to launch its own virtual currency</td>
<td>India: Payment bank licenses granted</td>
<td>China: An agency banking model provides access to services to the unbanked in rural areas</td>
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Source: News articles, Reports
**Ultimately, there are a number of future considerations as we move forward in the digital world**

### Future Developments

#### Banking
- Emergence of alternative credit
- Rise of marketplace lending
- Enhanced credit underwriting
- Integrated platforms for consumer financial empowerment

#### Payments
- Cash to Electronic for unbanked
- Faster Payments
- Mobile First
- Rise of Virtual Commerce
- Advanced Fraud & Security
- Rise of blockchain
- Rise of P2P and cross-border transfer platforms

#### Insurance
- Rise of insurance for unbanked
- Automated claims adjudication and payout through use of new technologies
- Ecosystem partnerships and new business models
- Mobile access
- Enhanced analytics

### Implications to Key Players

#### Government
- Technology, such as blockchain, lacks global regulatory body
- Rise of pace and complexity associated with innovation
- Consumer privacy, data, and fraud protection needed
- Regulatory agencies’ jurisdictions often does not support convergence

#### FS Incumbents
- New entrants challenging existing services and models
- Cross-border virtual commerce challenging existing fraud and security payment and credit systems

#### Consumers
- Mobile-first access to anyone, anywhere, at any time
- Changing expectations driven by non-Financial Services apps
- Adoption of smart phones globally driving access to new FinTech apps

Source: PwC Analysis, DeNovo
Contact Information

Menekse Gencer
Director, Payments Leader FinTech Practice
PwC
Mob: +1 415-565-1796
Email: Menekse.Gencer@PwC.com