



THE IMPACT OF SMARTPHONES ON FINANCIAL INCLUSION

Photo: Supratim Bhattachargee, 2017 CGAP Photo Contest

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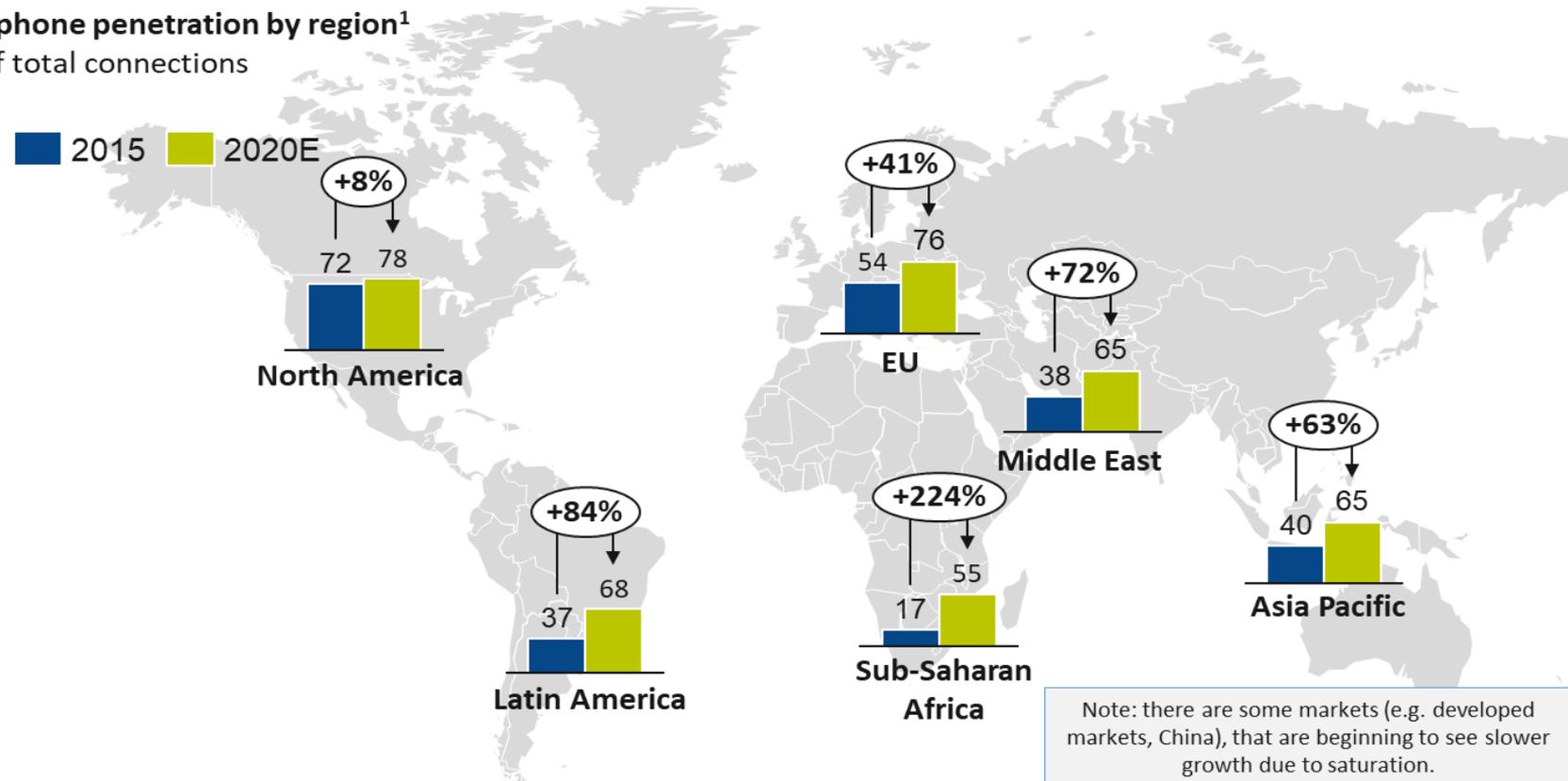
The smartphone opportunity

Smartphones are on the rise globally

Smartphone penetration is growing rapidly across both developed and developing countries, creating opportunities for financial services providers (FSPs) to reach low-income customers with digital financial services (DFS).

Smartphone penetration by region¹

In % of total connections



1. Smartphone connections expressed as a percentage share of total connections.
Source: GSMA, Statista, Pew Global, expert interviews, Dalberg analysis, CGAP Analysis

Consumer benefits of financial services apps are driving increased usage



Easy

- **Intuitive and comfortable** user friendly channel with option for rich process and explanation. Smartphones are extensions of owners' lives, so people are comfortable interacting with this channel.

Available

- **24/7 availability**
- Accessible everywhere

Attractive

- Potential for **rich and attractive product offering** leveraging digital channel
- Efficient communication potential

Personalized

- Usage and personal data enables **personalization of product offer and interaction** (e.g. credit scoring)

Enabling financial services providers to upgrade offers and new players to enter



Distribution

- **Significant cost reduction potential** of distributing services via apps instead of traditional brick and mortar branches

Marketing and communication

- Potential to **integrate with daily life** of the consumer who interacts with their smartphone frequently
- Efficient channel for general and personalized communication to customers

Agility

- Increased agility to **respond to market changes** by ability to quickly make changes in interface, product and process.

Data collection

- Ability to **collect and leverage rich user/behavioral data** for product development, service, and product personalization

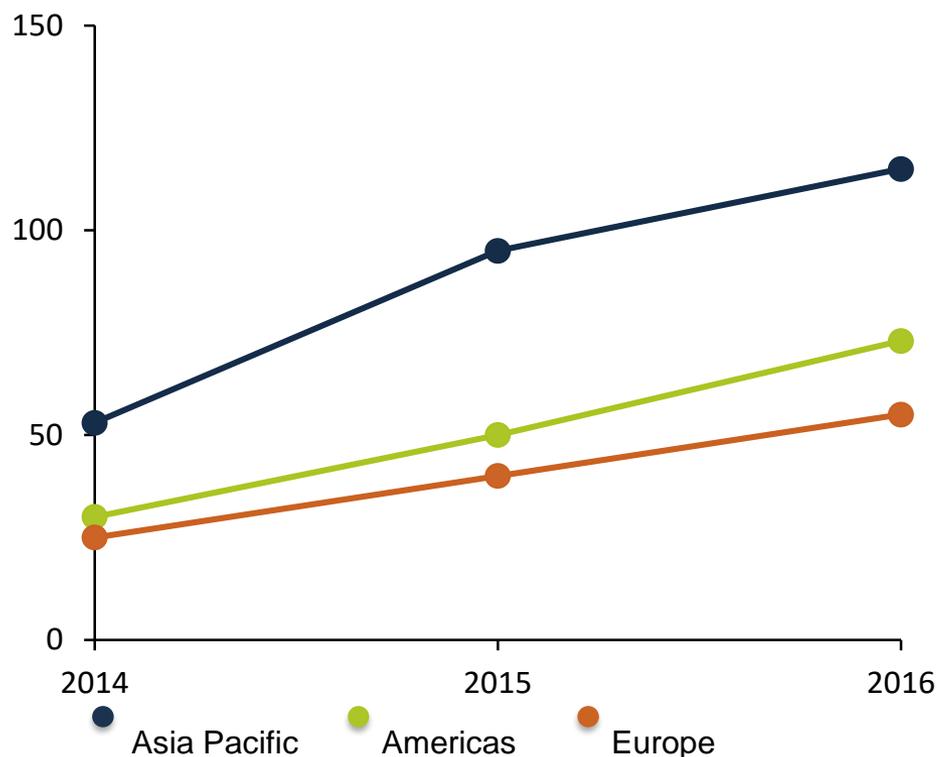
Innovation

- Lower barriers for entry enabling new players to enter the **market and push innovation**
- Potential to **integrate** to other services (e.g. split the bill) and improve service offering

Financial services app usage is increasing quickly worldwide

Total number of interactions with financial services apps¹

Sessions (in billions)

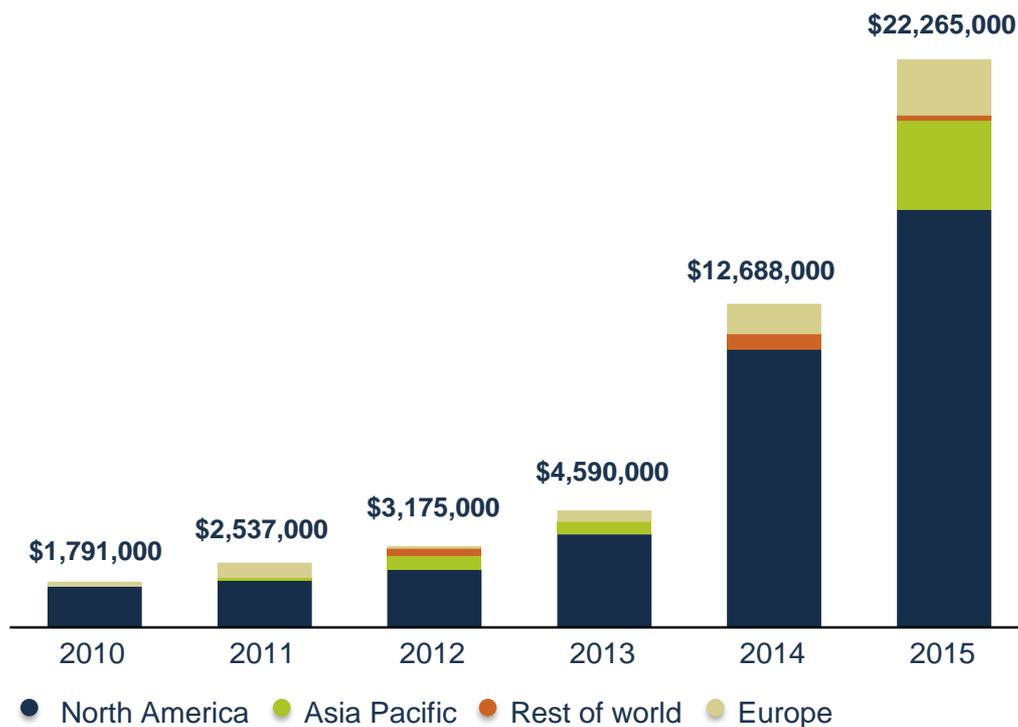


- Interactions with financial service apps have increased by more than 100% across all regions.
- Over 110 billion financial app sessions took place in Asia Pacific in 2016.
- Customers are using the growing number of apps available from banks and others, including mobile money, peer-to-peer transfers, personal budgeting, and investing apps.

¹ Android Phone apps on Finance store category; Asia Pacific excludes China
Source: AppAnnie, Bain

FinTech is attracting large investments

Total global FinTech financing activity



Source: Accenture, CB Insights Data

- Investors have collectively poured ~\$50 billion into the global FinTech market.
- FinTech investments have increased quickly, but 2015 and 2016 saw signs of maturity and more realistic investor expectations.
- Tech giants like Google and Facebook are increasingly playing in the financial services industry alongside smaller start-ups.
- These developments are challenging traditional banks to drive stickier, more profitable relationships with their customers and create more compelling customer journeys.

How can smartphones influence financial inclusion?

Financial inclusion by the numbers



40%

of the world's
population is
financially
excluded

80%

are financially
underserved

27%

of the world's
population
saves formally

11%

borrow formally

Source: Global Findex Database, Oliver Wyman
Photo: Francis Minien, 2013 CGAP Photo Contest

Main barriers to financial inclusion

Barriers

Examples

Lack of access

- Challenges in distribution, especially last-mile delivery to the poorest regions
- Lack of connectivity, access to and cost of devices to access digital financial services

Lack of product offering that fit needs

- Products offered do not fit the needs of financially excluded
- Regulatory environment not in place for industry to develop

Lack of understanding

- Lack of awareness, including digital and financial literacy, to understand offering and channel use

Smartphones could be a game-changer

Internet access is bringing users online for the first time and enabling them to access and compare financial services in the palm of their hands. More than 50% of India's internet users are mobile-only users.

Rich consumer data is enabling providers to better understand consumer behavior and potentially making poor consumers an attractive segment to serve.



Innovative products and services can leverage vast amounts of data (e.g., biometric KYC using iris scans, automated investment advice, credit for unbanked SME based on payment behavior).

Potential for personalized services based on customers' behavioral data.

Potential for more user friendly interfaces with touch screens, graphics, and videos that make apps more intuitive, including for low-literacy populations. For example, in a focus group in Kenya, poor first-time users were able to learn independently how to navigate smartphones in 20 minutes.

Source: From Dalberg Smartphone report, GSMA, Sydney morning herald, Gizmodo, expert interviews; Dalberg analysis. Livemint, "Mobile internet users in India to double by 2017" (2015); ; Dalberg/GSMA, "The next frontier: addressing mobile literacy and digital skills barriers to increase mobile internet adoption among women" (2015); Expert interviews; Dalberg research and analysis

But there are challenges



Opportunities

- **Increasing access:** Global smartphone adoption rose from 9% in 2011 to ~45% in 2015.
- **Falling prices:** Providers are introducing \$50-100 phones with greater capabilities. Prices are as low as \$20 in second-hand markets.
- **Infrastructure:** Global 3G/mobile broadband population coverage is nearly 80%.
- **New connectivity models:** Google (Loon), Facebook (Aquila), and Microsoft (TV White Spaces) are exploring ways to connect the 4 billion who lack internet access.
- **Innovative competition:** Whatsapp, Apple, Alibaba, WeChat, Facebook, and others are expanding into financial services.
- **Niche products:** A 2015 study identified over 100 innovative DFS, many leveraging smartphones.

Challenges

- **Affordability:** Today's prices are still relatively high: a \$50 smartphone paid for over six months would represent ~15% of BoP monthly income.¹
- **Shared usage:** Many segments (e.g. female, rural, very poor) have infrequent access. While data is limited, nearly half a billion women in developing countries borrow mobile phones, suggesting shared smartphone use is also common.
- **Coverage:** Just 29% of the global rural population has 3G coverage. Widely used 2G networks could be threatened as MNOs optimize for 3G and 4G.
- **Affordability:** Data costs vary and remain out of reach for many. Average mobile broadband subscriptions are twice as expensive in developing countries (\$35 PPP/month).
- **Design for the poor:** Few apps target the poor, and there is too little data on whether products meet their needs.
- **Adapting apps:** There is a need for research on how apps could be adapted for underserved segments who could benefit, such as those lagging in financial or digital literacy.

¹ For someone earning less than \$2/day.

So where do smartphones have the greatest potential?

CGAP is currently researching the most promising ways to leverage smartphones to address these financial inclusion barriers.

We started by reviewing existing research and interviewing industry experts to develop hypotheses for testing with industry players.



Five drivers of financial inclusion

We looked at how various features of smartphones can impact five drivers of financial inclusion:

Access

Does it impact the level of access to financial services?

Understanding

Can it impact financial literacy, improve understanding of products and financial management?

Fit product

Can it enable the development of products that specifically fit bottom-of-the-pyramid segment?

Widen offering

Can it enrich the current product offer?

Change
behavior

Can it help improve behavior in managing one's finances?

Smartphone features mapped to drivers

Feature

Hypotheses

Impact on financial inclusion

App channel

- Financial services distributed by apps are more cost efficient, making it easier to reach rural populations.



Use case

- Use-case driven platforms can increase inclusion by addressing the needs of the poor and influencing their behavior.
- Community-driven use cases can drive inclusion by leveraging community behavior and trust.



Design

- Customer-centered UI/UX can improve inclusion by addressing literacy barriers.
- Customer-centric product design for the poor can increase inclusion by fitting needs of segment.
- Uniform interface can reduce barrier for customers to use other financial services.



Product

- Smartphone/app-based services can increase breadth and quality of services through enriched channel.



Smartphone features mapped to drivers

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Hypotheses

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Use case- and product-based services influence the most drivers

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What is a use case-driven financial service?

A use-case driven financial service is a financial service that is integrated with an existing use case and behavior to drive uptake.

Example: PayTM's Digital Gold App

A golden business idea

Buying gold is a common savings behavior in India. Recognizing this, mobile payments and e-commerce app PayTM introduced gold coins as a savings option in 2017. In the Digital Gold app's first two months, 100,000 people transacted more than 300,000 kg of gold.

Impact on financial inclusion

Digital Gold's usefulness attracted a high number of financially excluded and underserved people to the PayTM platform. The company's goal is to bring 500 million people into the formal financial system.



Insights from use case- and product-driven financial services

- CGAP is interested to test use case- and product-driven apps/financial services, as these show the most potential to advance financial inclusion and improve services for poor customers.
- Partnering with companies that are already targeting or reaching the base of the pyramid with use case-driven financial products (such as ride hailing, e-commerce, and gaming platforms) and onboarding clients who are using financial services for the first time, we want to provide insights on how to drive financial inclusion.
- The goal is to develop case studies and leverage qualitative and quantitative data to size impact and provide insights on potential improvements.



Photo: Rabin Chakrabarti

Stay tuned for the case study publications
and learn how to leverage our insights!

Annexes

Recommended resources

- **Smartphones**

- [The Power of Smartphone Interfaces for Mobile Money](#) (CGAP, 2016-2017)
- [The Mobile Economy](#) (GSMA, 2017)
- Smartphones and Financial Inclusion (Dalberg, 2016) – contact Vered Konijnendijk (Vered@sakalconsulting.com)

- **Innovation**

- [Digital Inclusion](#) (GSMA, 2014)
- [Disruption and Connection: Cracking the Myths of China Internet Finance Innovation](#) (McKinsey, 2016)
- [Digitizing Merchant Payments: What Will It Take?](#) (CGAP, 2017)
- [Digital Payments 2020](#) (Boston Consulting Group with Google, 2016)

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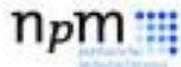


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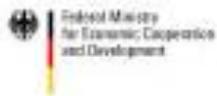
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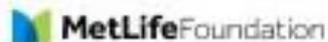
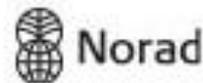
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