

China's Digital Payment Revolution

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Payment Systems are Critical Components of an Economy

“An efficient payments system provides the infrastructure needed to transfer money in low-cost and convenient ways. Efficient systems are innovative in improving the quality of services in response to changing technology and changing demand.”

Federal Reserve Chairman Jerome Powell, 2017

Understanding the Chinese system: Starting point is universal banking but merchant refusal to accept Western card based system



China has the largest card network in the world with **8.2 billion cards**.



But there are only about **32 million point-of-sale terminals**

Developing an alternative to cards and accounts: QR Codes and Digital Wallets



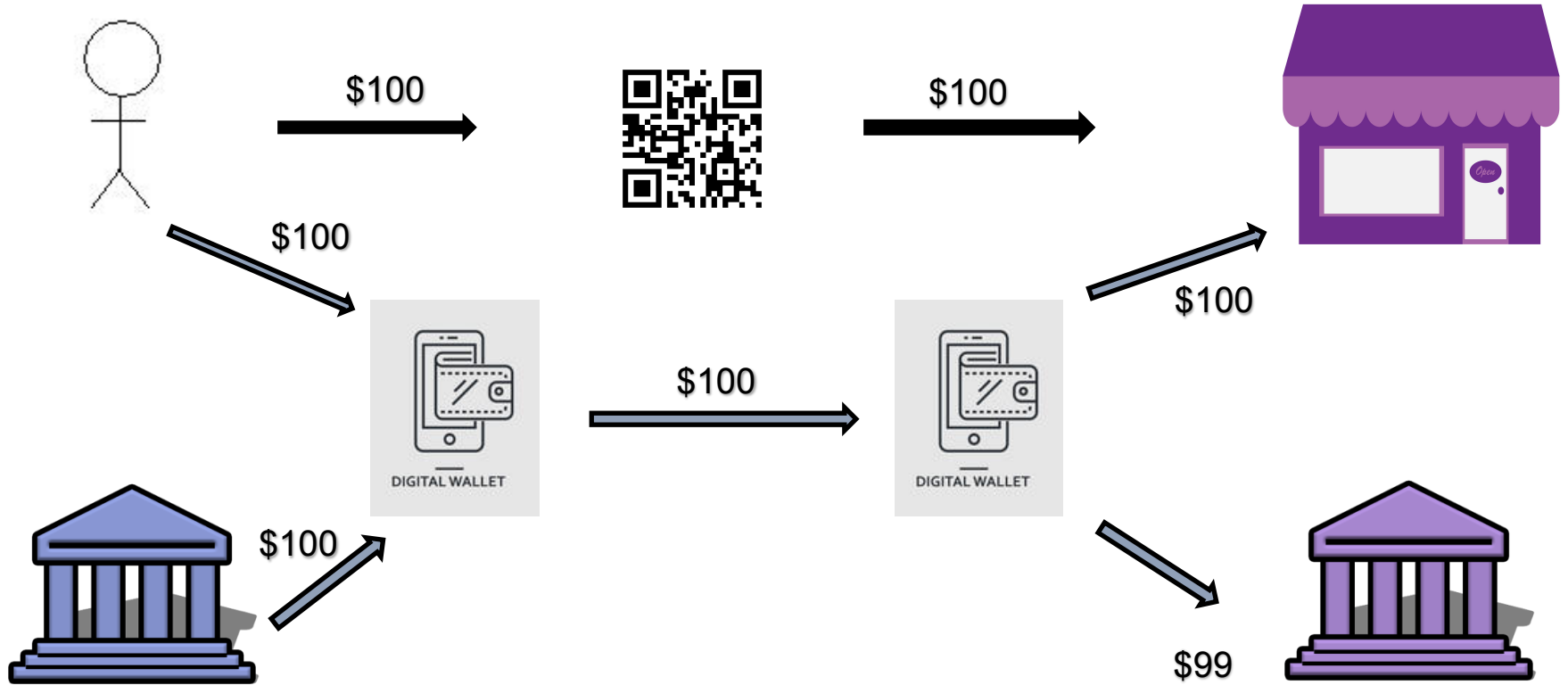
Sources: Shutterstock

Example of a better system: Parking Garage

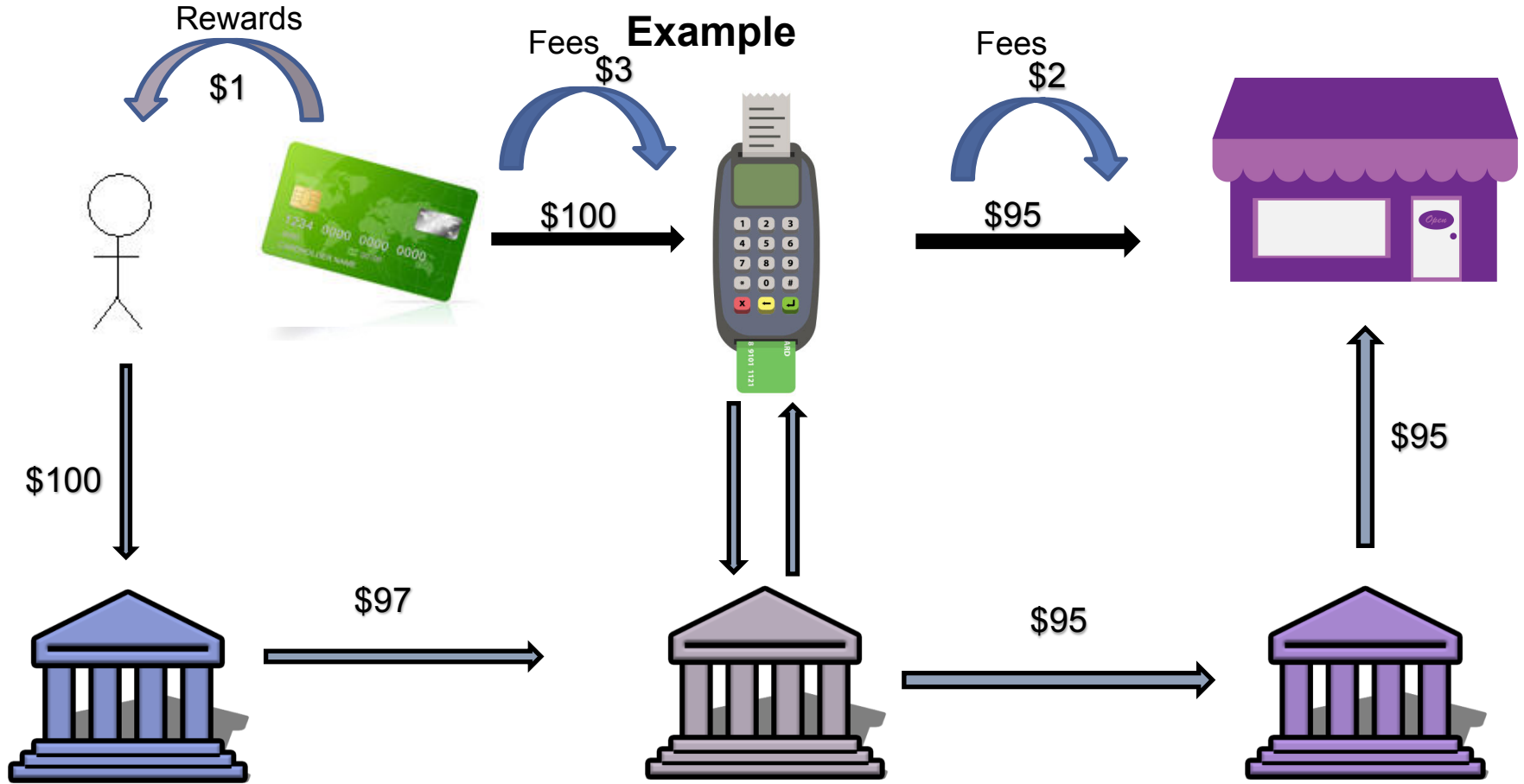


Chinese system: scanning QR code upon entry and exit:
Unlocks efficiencies: eliminates multiple card readers,
card swipe costs, and extra time needed to inserting
cards/tickets.

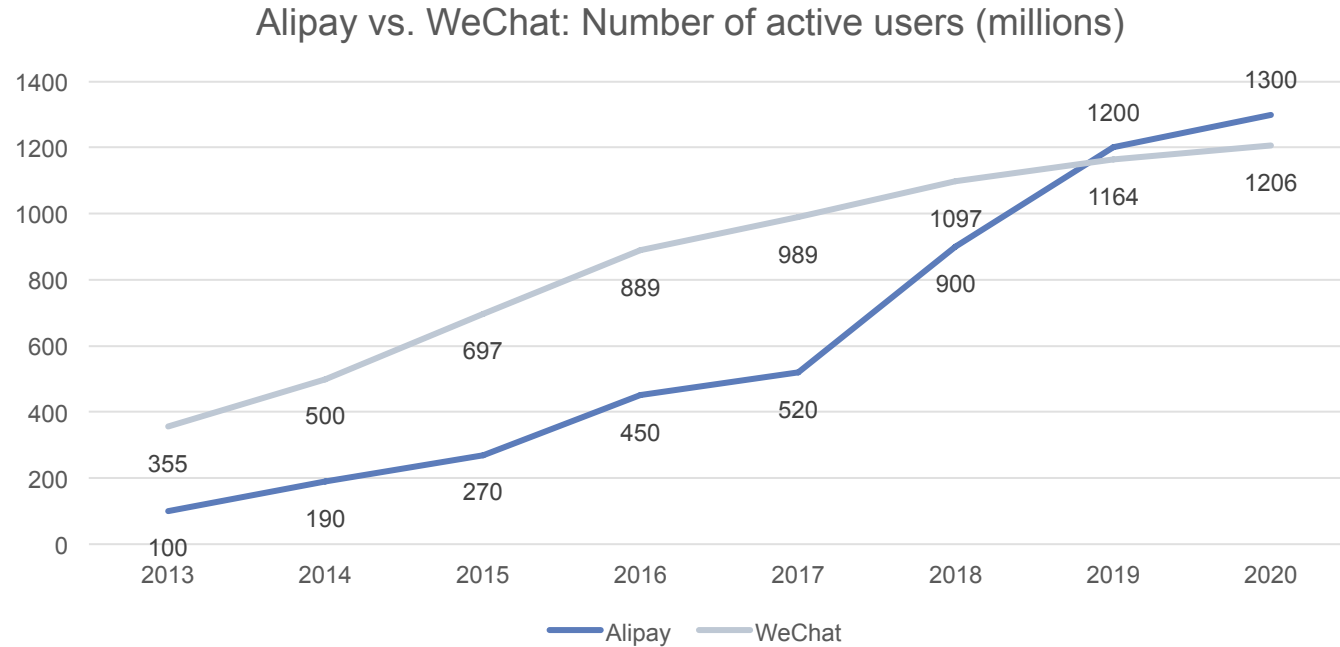
China Payments



Credit Card Example



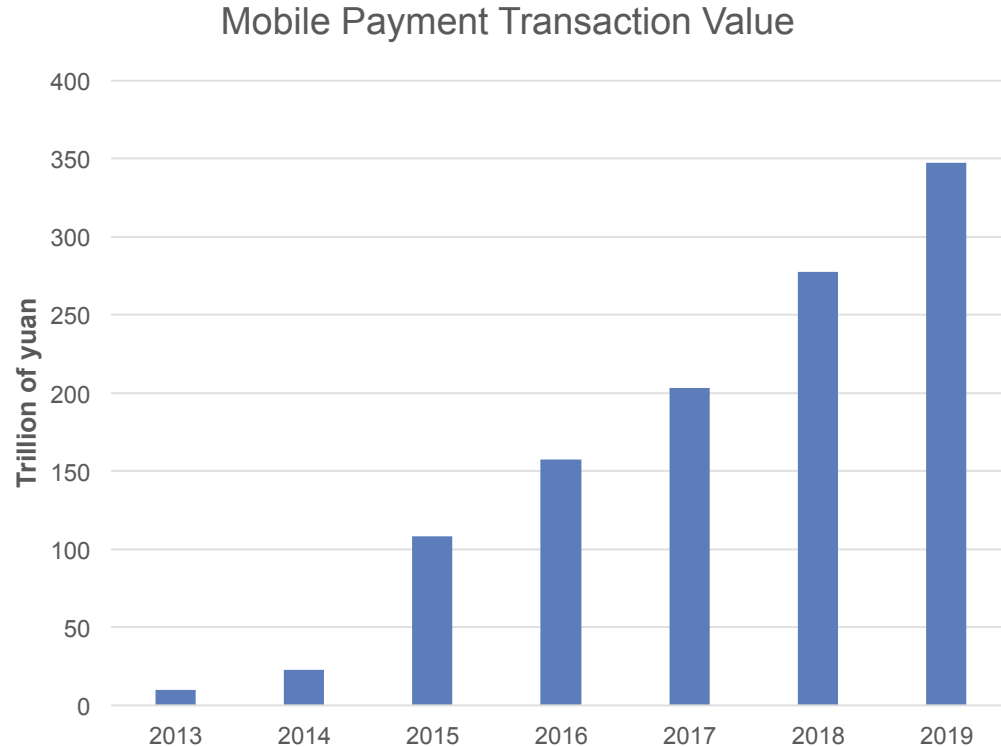
Explosive Growth: China's Two Dominant Firms, Alipay and WeChat



Sources: Statista, China.org.cn, XinhuaNet, Technisia

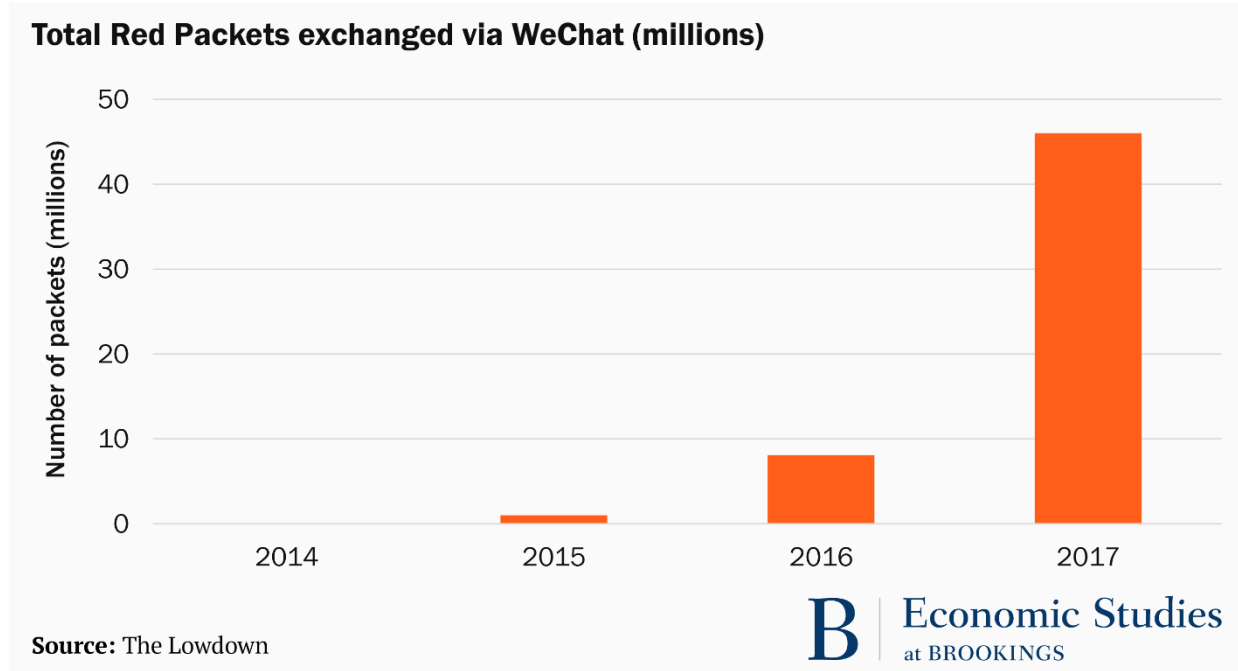
Mobile Payments Rise to Dominance Continues: China in a different league than US:

- China: over \$50 Trillion USD in transaction value in 2019
- US: Under \$100 Billion in transaction value in 2019



Source: Statista

China's Transformation: WeChat's Origin Story is P2P.



Source: The Lowdown

China's Transformation: Alipay's Origin Story is P2B and B2B



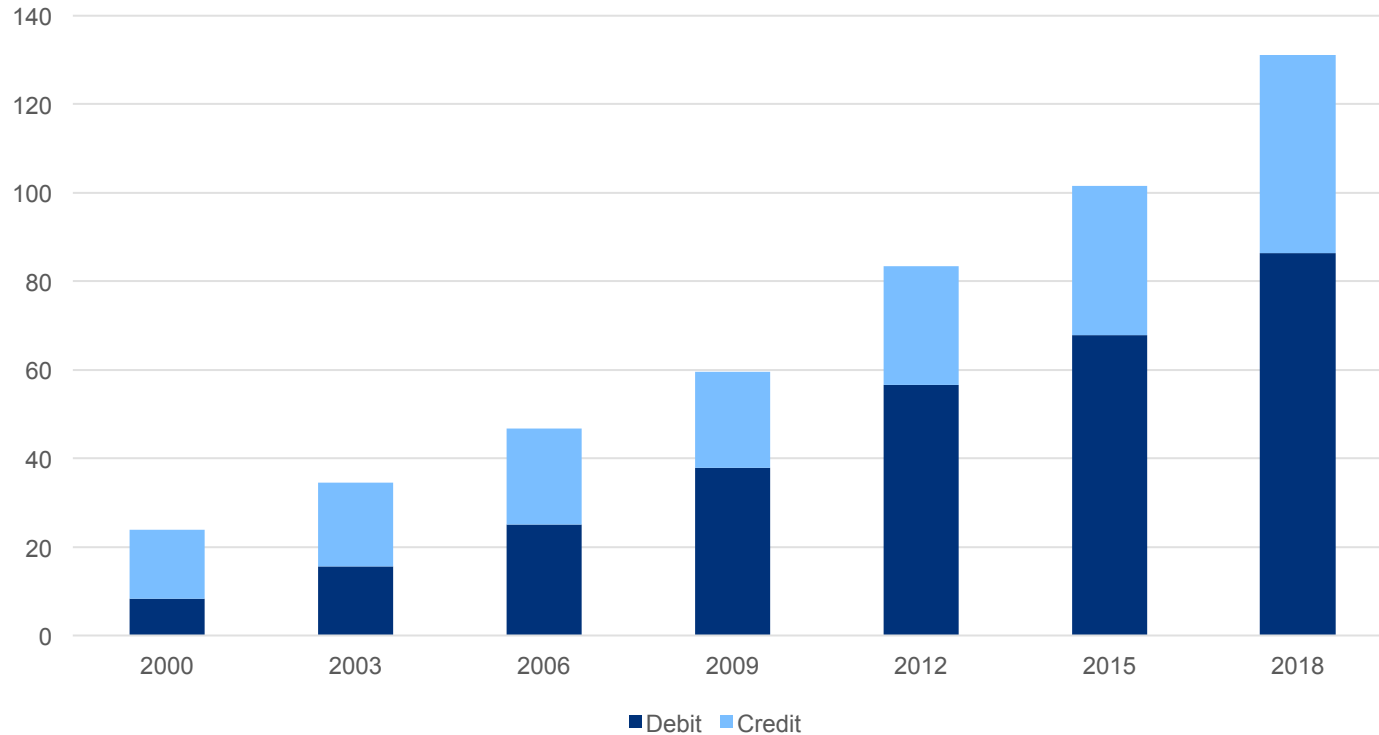
Account holders can move funds out of Alipay or WeChat Pay for a small fee.

This is by design, as it encourages users to keep money in the ecosystem.



US is a very different story

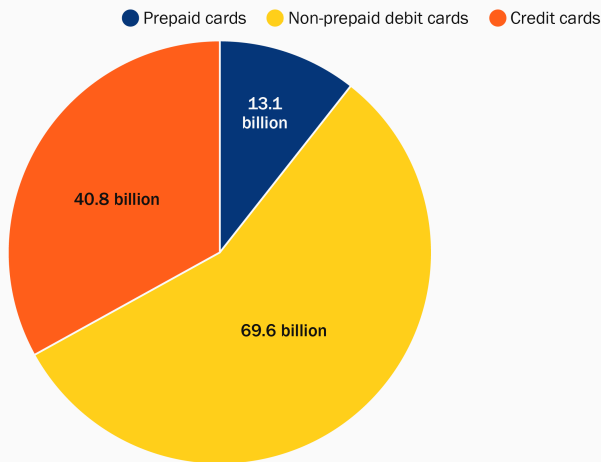
Payment Growth : Number of noncash payments (billions)



Source: Federal Reserve Payment Study

What's In Your Wallet: Differs by Income

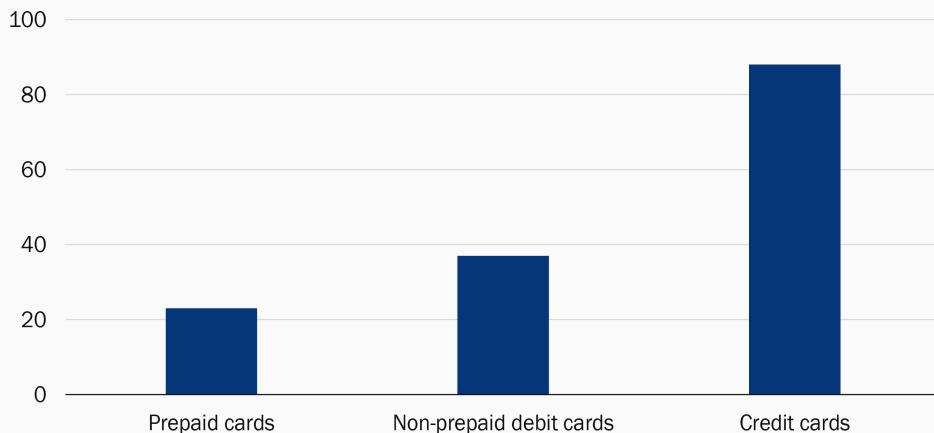
Total number of transactions, 2017



Source: Board of Governors of the Federal Reserve System

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Average value of card transaction (\$)



Source: Board of Governors of the Federal Reserve System

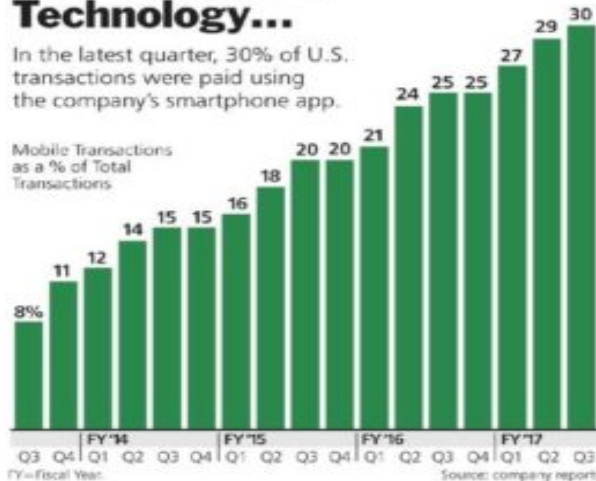
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Starbucks: America's Test Case for Alternative from Cards

Starbucks Is Pushing the Envelope in Technology...

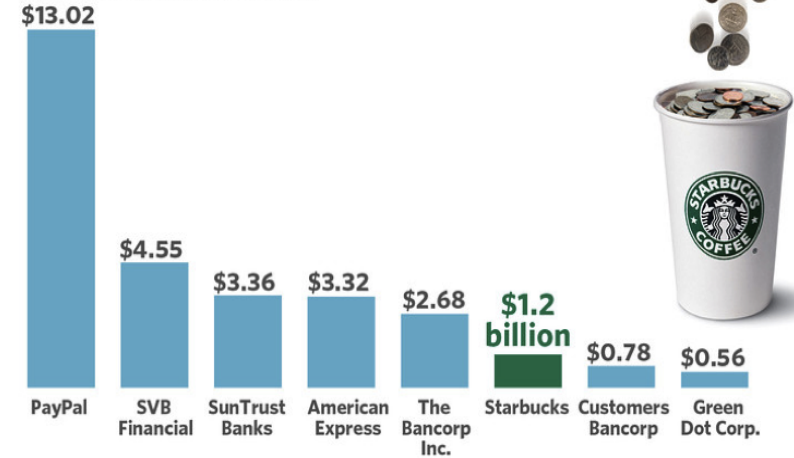
In the latest quarter, 30% of U.S. transactions were paid using the company's smartphone app.

Mobile Transactions as a % of Total Transactions



Where Starbucks stacks up in deposits

Starbucks and PayPal have more consumer cash than many financial institutions, in billions



Source: WSJ and S&P Global Market Intelligence, Starbucks

Economies of scale: payments favor big firms.

Small coffee shop in Silver Spring, Maryland paid more in swipe fee than for coffee beans (source WSJ).

Chinese Payments Go Global or Not?

54 countries and regions accept Alipay.

49 accept WeChat Pay.

European 6 mobile wallets working with Alipay on unified QR system: momo, ePassi, Pivo, Pagaqui, bluecode, vopps

First will follow Chinese tourists/business.
150 Million Chinese international travellers in 2018.
Top destinations: Japan, Vietnam, Indonesia, Thailand
Singapore.

In US that means Las Vegas, Orlando, NYC, LA.

Cruise ships, high end retail, specialty shopping areas.



Chinese Payments: Here Comes the Government

People's Bank Introduces Central Bank Digital Currency.

- Test is in Shenzhen (home of WeChat) and with free money.
- Uses accepted QR Code/digital wallet infrastructure

Ant Financial's IPO delayed by Chinese government.

Antitrust probe by Chinese government on Alibaba.

Basis of the investigation is a claim filed in 2015. Why the delay?

For China to become a leader in Central Bank Digital Currency (CBDC) does it need to replace private payment systems? Is that the goal?

Future of Payments: Banks or Tech?

- Payments Historically Part of Banking, but...



- Legally not in the US Framework
- Economics Changing
- **Concerns for Banks if Payments Migrate**
 - Significant Source of Revenue/Profit
 - Financial Stability
 - Consumer Protection
- **Concerns If Tech Gobbles Payments**
 - Anti-Competitive Nature
 - Further Digital/Payments Divide

