

---

# **Digital Transformation of the Financial Sector: The Impact of FinTech Firms**

Sujit “Bob” Chakravorti  
CEO  
Chakra Advisors

Payments Canada Summit  
May 9, 2018

# Chakra Advisors

---

- Based in San Francisco Bay Area
- Advise FinTech, technology, financial firms and policymakers on the impact of technology on financial services
- Enable greater access to efficient financial services
- Discuss the evolving financial services industry on the incumbents and disruptors blog (<https://chakradvisors.com/blog>)

# Incumbents, Disruptors, and Competition

---

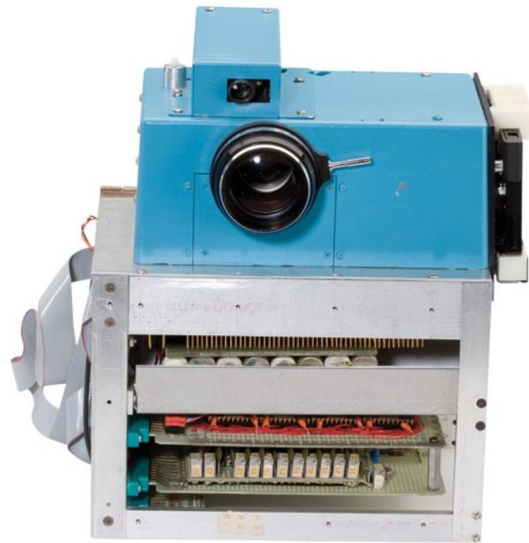
- Incumbents face competition from within industry and non-traditional entrants
- Incumbents can react in different ways:
  - ▶ Do not recalibrate (Kodak strategy)
  - ▶ Compete head on (transformation)
  - ▶ Partner or acquire (within and across industries)
- Generally, competitive forces are great for consumers but there are growing pains (transition costs)

# Case of Kodak

---



Started selling film in 1880s



First Digital Camera: Circa 1975



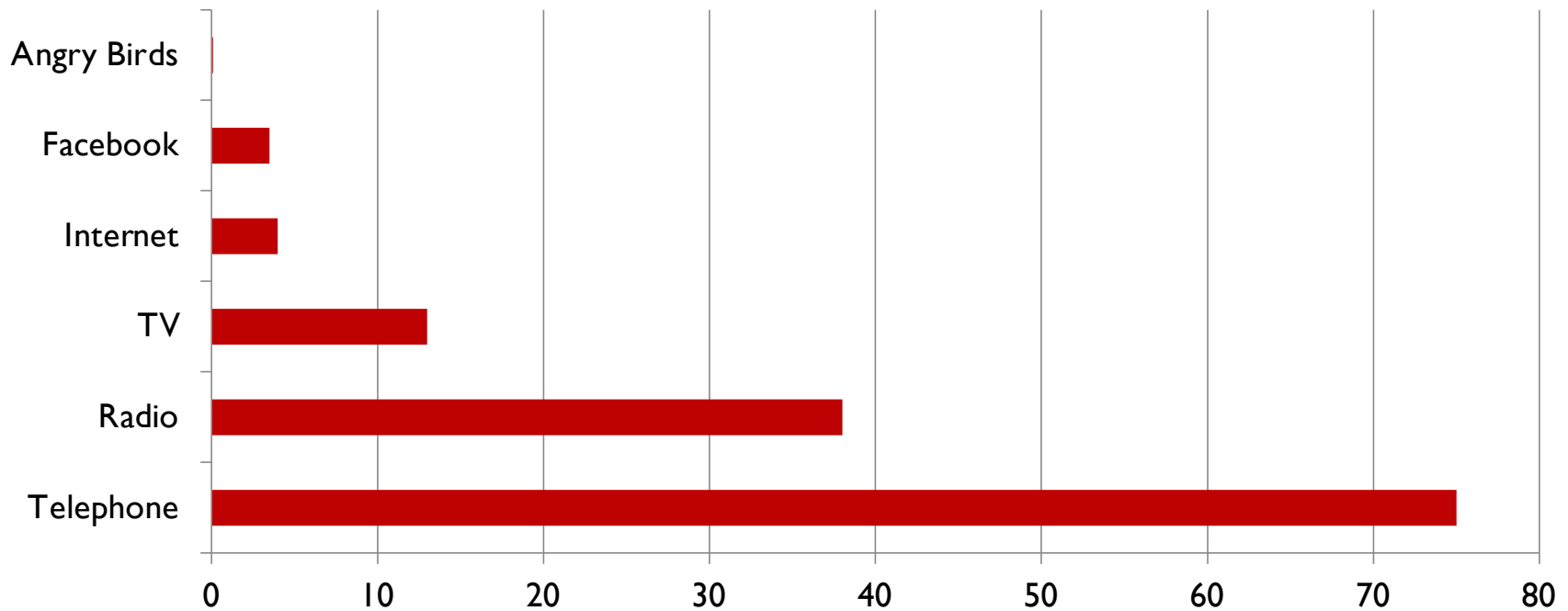
Digital camera: Circa 2004

# The Amazon Effect

Retailer	Highest Market Value (2006)	Market Value (4/30/2018)	Percent Change
Best Buy	\$28.4B	\$21.28B	(25%)
JCPenney	\$18.1B	\$903.2M	(95%)
Kohl's	\$24.2B	\$10.2B	(58%)
Macy's	\$24.2B	\$9.45B	(61%)
Nordstrom	\$12.4B	\$8.20B	(34%)
Sears	\$27.8B	\$329.5M	(99%)
Target	\$51.3B	\$38.7B	(25%)
WalMart	\$214.0B	\$262.6B	23%
Amazon	\$17.5B	\$734.2B	4,095%

# Rate of Technology Adoption

## Time to Reach 50 Million Users (Years)



Source: Timothy Aepfel, "It Took the Telephone 75 Years To Do What Angry Birds Did in 35 Days. But What Does That Mean?" *WSJ*, March 13, 2015 (Citi Digital Team)

# What is FinTech?

---

- Working definition:
  - Any technological innovation that improves the delivery, access, and/or efficiency of the financial system
  
- FinTech has been around for decades
  
- What is different now?
  - ▶ More customer facing
  - ▶ Access to customer data in real time
  - ▶ Integration into platforms run by financial service providers (Application Programming Interfaces)

# Match/Search Process

---

Buyer/Borrower/  
Investor

Seller/Lender/  
Securities

Platform

- Traditionally been financial services firms
- Non-traditional firms are intermediaries



# Why End-Users Like FinTech Products

---

Easy to set up account	43.4%
More attractive rates/fees	15.4%
Access to different products and services	12.4%
Better online experience and functionality	11.2%
Better quality of service	10.3%
More innovative products than traditional bank	5.5%
Greater level of trust than traditional bank	1.8%

Source: The Fintech Blog, June 9, 2016.

# FinTech Product Focus (not exhaustive)

---

- **Payments** among consumers, businesses, and individuals
- **Lending** to consumers and (small) businesses (untapped markets)
- **Wealth and Asset Management** (robo advising and financial management)
- **Cryptocurrencies and ICOs** (digital payment alternative and means to raise capital)

# FinTech Technology Focus (not exhaustive)

---

- **Mobile Technology** enables on-the-go connectivity to financial service providers and networks
- **Data Analytics** analyze large datasets with increasing use of cloud technologies
- **Artificial Intelligence** enables faster and more efficient transactions (however, role for humans is not likely to be eliminated)
- **Blockchain Technology** enables authentication and verification of transactions including smart contract execution

# Payment Platforms

---

- Frictions for payment segments include: access, high cost, low convenience, slow transaction speed
- Payors/Payees want to pay/get paid by anyone, anytime, anywhere
- Peer-to-Peer platforms bypassing traditional payment channels, e.g. Venmo
- Cross border platforms to reduce fees, e.g. TransferWise

# Square Partnerships

---

- Square—allows small merchants to accept payment cards
- Visa invested in Square and collaborated on best practices for securing mobile transactions
- Apple worked with Square to design a contactless acceptance device that accepted Apple Pay at small merchants
- Collaborating with SAP, Square was able to offer accounting, project management, and operations support

## Responses by Incumbents

---

- Zelle—Peer-to-Peer platform to make payments between bank accounts competing with Venmo
- Faster Payments—Various initiatives globally to improve the speed, security, cost, and connectivity of payments
- JPMorgan Chase and Amazon—checking accounts

# FinTech and Lending

---

- Credit has existed since 3500 BC (agricultural) and not always extended by financial institutions
- Platform lending matches lenders with borrowers, e.g. LendingClub, Kabbage, Prosper, and Swift Capital (acquired by PayPal)
- FinTech firms have developed different analytics to measure creditworthiness

# Credit Screening

---

- Origins of credit bureau started in early 1800s in England for bad tailor debts
- FinTech lenders increase access to those that have limited or no credit history
- Alternative metrics for credit screening are being developed, e.g. consumer mobile phone usage in Kenya (Tala)
- Amazon, Square, and PayPal extend credit to small businesses that may not be extended credit from traditional lenders



# Convergence of Traditional and FinTech Lenders

---

- Some FinTech lenders are becoming more like traditional banks such as SoFi expanding from student loans to unsecured consumer credit and mortgages
- Banks are also providing lending platforms, e.g. Goldman Sach's Marcus platform

# Investment Platforms

---

- Previously, investors relied on brokers for information on stocks, bonds, and other types of investment
- The Internet allows easy access to information on various types of securities/investments
- Algorithms based on customer risk-reward preferences, liquidity needs, and other characteristics determine the optimal portfolio, e.g. Betterment, Wealthfront, and Personal Capital
- Reducing human interaction and processing reduces costs and enables lower fees to customers

# FinTech Investment Platform Challenges

---

- Need significant scale to make profit
- Tougher to convince non-Millennials to participate
- Traditional players such as Vanguard, Charles Schwab, and Blackrock have started or acquired digital advisory platforms

# Cryptocurrencies

---

- More than 1,000 cryptocurrencies exist today
- Bitcoin, the most well-known, started at an exchange rate of less than \$.01 (May 2010) to over \$9338 (as of 5/7/18)
- Although volatile, cryptocurrencies also provide payments and store of value functions
- Useful when governments take extreme measures on their currency such as demonetization or taxes deposit

# Explosion of Cryptocurrencies

---

Year	Market Cap of All Coins (Billions)	Percentage of Bitcoin
2013	\$1.5	92.5%
2014	\$7.1	92.3%
2015	\$4.0	83.3%
2016	\$11.3	79.5%
2017	\$177	45.2%

Source: [coinmarketcap.com](http://coinmarketcap.com) as reported in [visualcapitalist.com](http://visualcapitalist.com)

## An Interesting Crypto Use Case

---

- [Digital Mint](#), Chicago-based, is democratizing access to digital payments via cryptocurrencies in 15 states
- Initially, targeted at low- to moderate-income neighborhoods
- Unbanked consumers benefit from access to digital payments that are necessary for online purchases
- Merchants benefit from lower transactions costs than credit cards

# Initial Coin Offerings (ICOs)

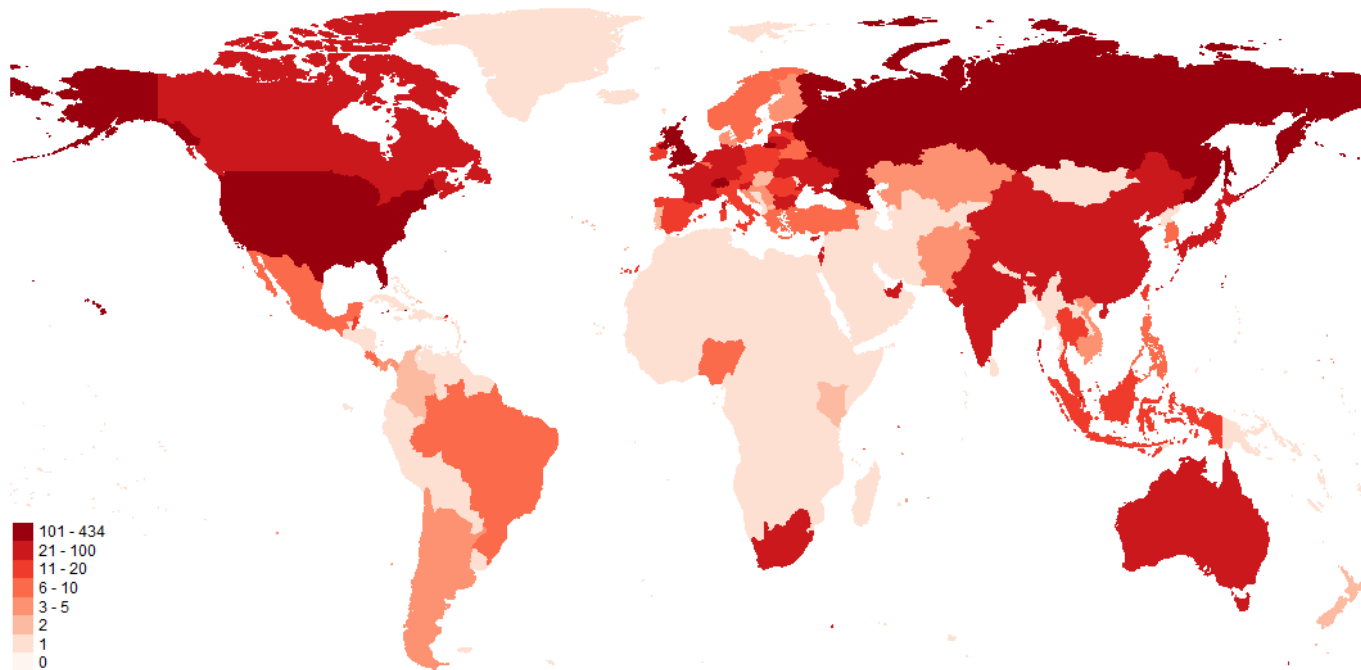
---

- Utility or security?
- Generally, tokens are bought with cryptocurrency
- Global market
- More regulation on the horizon

# Where Are ICOs Being Issued?

---

ICO Counts Across the Globe



Source: ICOmarks.com as of 4/10/2018



# Market Evolution

---

- Financial analysts estimate that incumbent financial institutions are likely to lose more than 20 percent of their market share and profit
- Traditional financial institutions should have a holistic approach to digitalization of financial services
- Incumbents should partner with FinTech firms to provide seamless delivery and processing of financial products when appropriate
- Incumbents are more actively investing and acquiring FinTech firms
- Central banks will also be transformed by FinTech firms

# Role of Regulation

---

- Provide transparency to transactors by mandating adequate disclosures
- Provide consumer protections and necessary security standards
- Remain vigilant against fraud and punish fraudulent actors
- Ensure system resiliency and manage systemic risks
- Regulation will catch up

# Regulation and FinTech

---

- Many FinTech firms are overwhelmed with the maze of regulations and some would like a banking charter
  - ▶ OCC FinTech bank charter (stalled) vs. Vision 2020 by state regulators (promotes coordination across states)
  - ▶ Industrial Loan Companies—Square’s recent application
- Focus on activity-based regulation regardless of type of institution providing the service
- Should not be used solely to prevent entry potentially impeding innovation

# Regulatory Differences: US Cannabis Industry

---

- Cannabis has been legalized in 30 states for either medical and/or recreational use in the US (legal sales of cannabis in Canada will occur later this year)
- However, remains illegal at the federal level (most financial institutions reluctant to bank cannabis)
- Financial institutions are reluctant to serve the industry resulting in cash being the predominant payment form
- Part of solution: need real time track and trace for funds and product
- Some have suggested public banks as a solution