



Capital Market and Fintech

Professor Yoo Shin Jung
Sogang University

This is not an ADB material. The views expressed in this document are the views of the author/s and/or their organizations and do not necessarily reflect the views or policies of the Asian Development Bank, or its Board of Governors, or the governments they represent. ADB does not guarantee the accuracy and/or completeness of the material's contents, and accepts no responsibility for any direct or indirect consequence of their use or reliance, whether wholly or partially. Please feel free to contact the authors directly should you have queries.

Contents

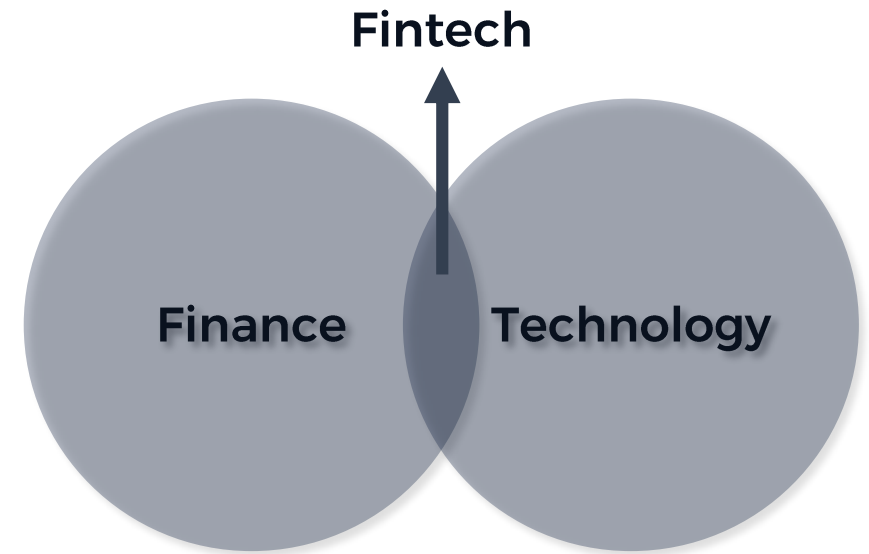
- 1 What is Fintech?
- 2 Background of Fintech
- 3 4 Step Activation Plan and its Impact
- 4 Fintech Industry in the U.S
- 5 Fintech Industry in Korea
- 6 Moving Forward

Contents

- 1 What is Fintech?**
- 2 Background of Fintech**
- 3 4 Step Activation Plan and its Impact**
- 4 Fintech Industry in the U.S**
- 5 Fintech Industry in Korea**
- 6 Moving Forward**

What is Fintech?

- Fintech = **Finance** + **Technology**
- Emerging technology for financial service
 - mobile payment
 - money transfer
 - asset management



Korean Fintech Market



- Governmental restriction
- High barrier to entry

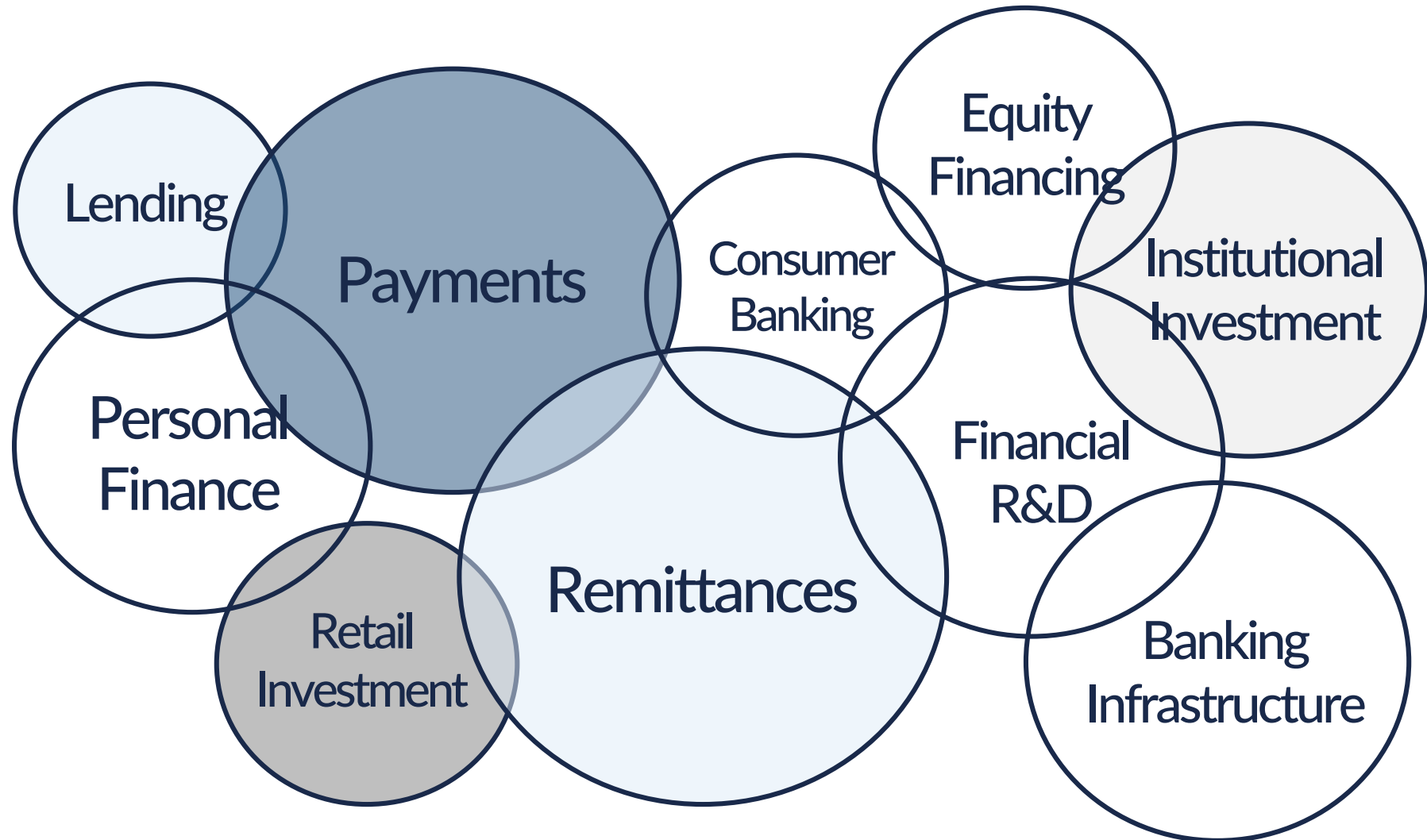
Global Fintech Market

- Greater interest in fintech
- Non-finance industries entering finance market



What is Fintech?

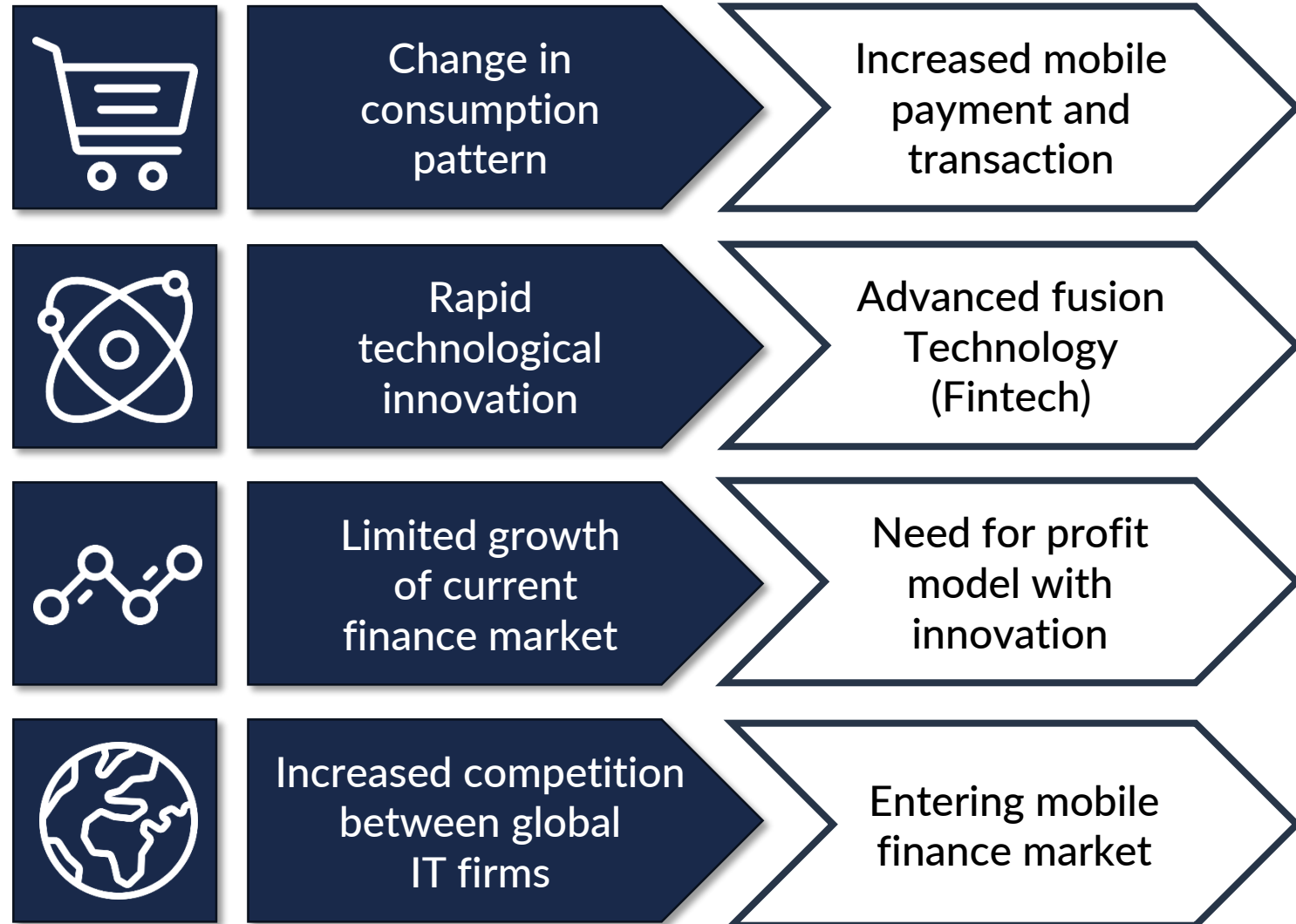
- Fintech business field = payment · transfer → lending → securities · fund → insurance



Contents

- 1** What is Fintech?
- 2** Background of Fintech
- 3** 4 Step Activation Plan and its Impact
- 4** Fintech Industry in the U.S
- 5** Fintech Industry in Korea
- 6** Moving Forward

Background of Fintech



Background of Fintech



Change in consumption pattern

- ✓ No temporal/spatial restrictions on PC due to use of mobile devices
- ✓ Able to purchase products regardless of location or time
- ✓ Rapid growth of mobile consumption market
- ✓ Increased expectation about potential in fintech growth

Background of Fintech



Rapid technological innovation

- ✓ Expansion of mobile market and potential unlocked
- ✓ Greater service coverage such as loan, securities, and fund for payment and transfer due to advanced fusion technology
- ✓ Establish foundation of customer convenience

Background of Fintech



Limited growth of current finance market

- ✓ Stagnant growth of finance market in the U.S and Europe after the global financial crisis
- ✓ Limited growth of bank loan profit and decrease in trading value for securities market → need for new profit model

Background of Fintech



Increased competition between global IT firms

- ✓ Entering finance market through utilizing fintech
- ✓ Expansion of e-commerce and smartphones → IT firms entering finance market
- ✓ Intensified competition among global IT firms like Apple and Google

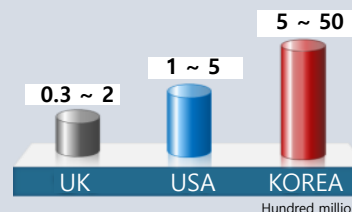
Contents

- 
- An aerial photograph of a city grid, likely New York City, with a semi-transparent blue overlay. The grid pattern of streets and buildings is clearly visible.
- 1** What is Fintech?
 - 2** Background of Fintech
 - 3** **4 Step Activation Plan and its Impact**
 - 4** Fintech Industry in the U.S
 - 5** Fintech Industry in Korea
 - 6** Moving Forward

4 Step Activation Plan

Step 1: Deregulation for Fintech

- Relieve capital for E-banking registration
 - High rate of registration capital
- Simplify the registration process
 - Shortening registration period (2~3 months → 20 days)
- Give flexibility of using certification, security system



Step 2: Development of Fintech Environment

- Operating Fintech Center Korea
 - Provide consulting with financial companies
 - Operate Demo day, on-1-on mentoring
- Supporting fund for startup
 - 2 thousand million won per 1 year
 - Give special guarantee treatment for Fintech

Step 3: Support for Fintech Infrastructure

- Release guidelines for de-identification
 - Designate institutions for supporting de-identification of financial information
- Provide Joint Open API Platform
 - API Standardization of 16 banks or 25 Securities firms

Step 4: Emergence of new Fintech Service

- Internet Bank
 - Lower the minimum capita requirement (100 million → 25 million)
 - *Preliminary approval (Nov 2015), Final authorization (2016)
- Crowd Funding: Crowd + Funding
 - Funding a project or venture by raising capital from a large number of people by internet-mediated registries and other methods

4 Step Activation Plan

1. Lower the entry barrier for fintech startups

Present

- High rate of capital for E-banking registration
 - Prepayment: 17 million USD
 - PG: 8 million USD
 - Payment Deposit: 8 million USD



Plan

- Relieve regulation for startups
 - Lower the minimum capital for prepayment, PG, and Payment deposit



2. Motivate investment by financial companies in fintech startups

Present

- High rate of capital for E-banking registration
 - Interrupting the investment for startups



Plan

- Encouraging investment in startups
 - Fintech companies
 - ✓ E-banking company
 - ✓ Financial software development company
 - ✓ Analyze financial data firm



4 Step Activation Plan

3. Support financing for fintech startups

Present

- Most fintech companies are startups
 - Lack of capital
 - Hard to finance due to low credibility



Plan

- 100 billion won investment in startups by industrial and corporate banks
- Give advantage to fintech company with reduced deposit fee (2.3% → 1.0%)

4. Lower the barrier for access to fintech technology

Present

- Financial transaction issues caused by incorporating fintech technology
- Financial companies are responsible for them
- Hard to apply fintech technology to financial companies



Plan

- Fintech firms are also responsible for financial transaction issues caused during partnership
- ✓ Active alliance between fintech companies and financial companies



4 Step Activation Plan

5. Authorize non-facial verification online and in other settings

Present

- Only in-person ID verification is allowed
 - Debit card, OTP as well
- Restriction for accessing internet banking



Plan

- Non-facial ID verification system is enabled
- Cases of foreign banks



Charles Schwab

Identifying by
telephone



Hello Bank

Identifying by
videophone



Jibun Bank

Identifying by
Internet service

6. Introduce crowdfunding

Present

- Use financial deficit to actualize an idea
- Crowdfunding for small amount of funding is needed



Plan

- Introduce crowdfunding
 - Central record management center
 - Develop the infrastructure for crowdfunding
 - Policy fund, VC preferred to funding investment

4 Step Activation Plan

7. Internet bank

Present

- Banking business authorization by FCS, K-Bank, Kakao Bank ('16.12, '17.4)
- 240K registered customers within 24 days after launch
- Price competitive and convenient
- Marketwide competition to prevent customer defection and occupy middle credit loan market

Plan

- Institutional alignment → relevant legislation
- Step 2 additional authorization for internet bank



8. Online insurance market

Present

- Increased demand for online insurance service
- ✓ Online insurance service providers only deal with their own products
- ✓ Hard to compare multiple services

[percent of using
online car insurance]



Plan

- Online insurance market (30 Nov. activated)
- Compare multiple services at once
- Easy for customers to make selection



4 Step Activation Plan

9. Open API Platform

Present

- Limit of developing new service
 - Research and transfer authorization required only for financial companies
- Distributing the development of several fintech solutions



Plan

- 17 banks and 15 securities begin joint development of open API platform (July 2015)
 - Led by KFTC (bank) and KOSCOM (securities)
 - Constructing open APO testbed (Dec 2015)
- expected to launch service during the first half of 2016

10. Robo-Advisor (RA) Asset Management

Present

- KOSCOM operates RA testbed ('16.7 Mon)
 - Total 42 algorithms and only 28 approved algorithms after 3-step screening process
- Capital legislation reform: permission of RA investment consulting and discretion ('17.5)

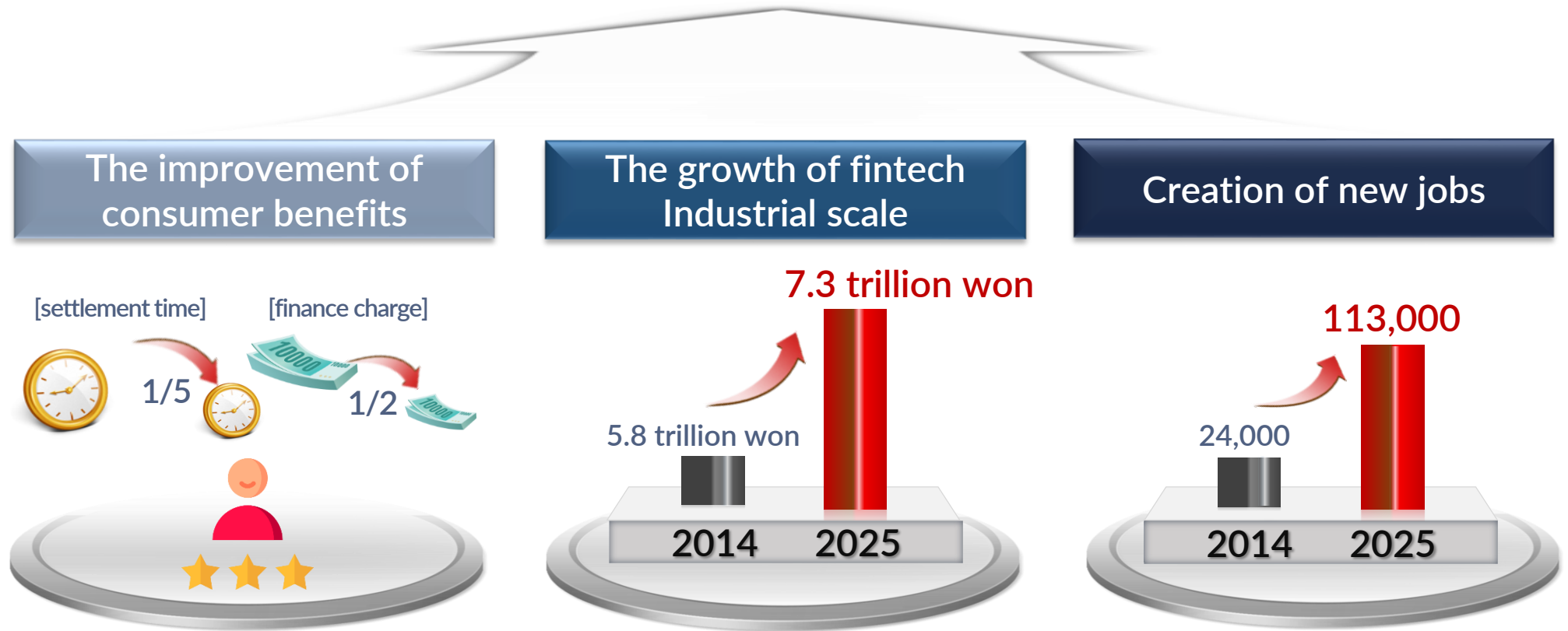


Plan

- RA global market is expected to grow
- '21 global RA operation scale: \$ 1.1 trillion
- Average annual growth of 53% for the next 5 years (source: KCMI)

Impact of 4 Step Activation Plan

Promoting FinTech as main industry of 'Creative Economy'



[Sources : FINACIAL SECURITY INSTITUTE (14years)]

Contents

- 1** What is Fintech?
- 2** Background of Fintech
- 3** 4 Step Activation Plan and its Impact
- 4** Fintech Industry in the U.S
- 5** Fintech Industry in Korea
- 6** Moving Forward

Fintech Industry in the U.S



- **Becoming Fintech Center of the World, New York**

- ✓ Share knowhow through close relationship with big finance centers, institutions, and firms
- ✓ Settled on investment that is worth 1.5 billion USD in Q1 of 2014
- ✓ Expected growth of 9.5 billion USD by 2018

- **New York's Support for Fintech: 'Fintech Innovation Lab'**

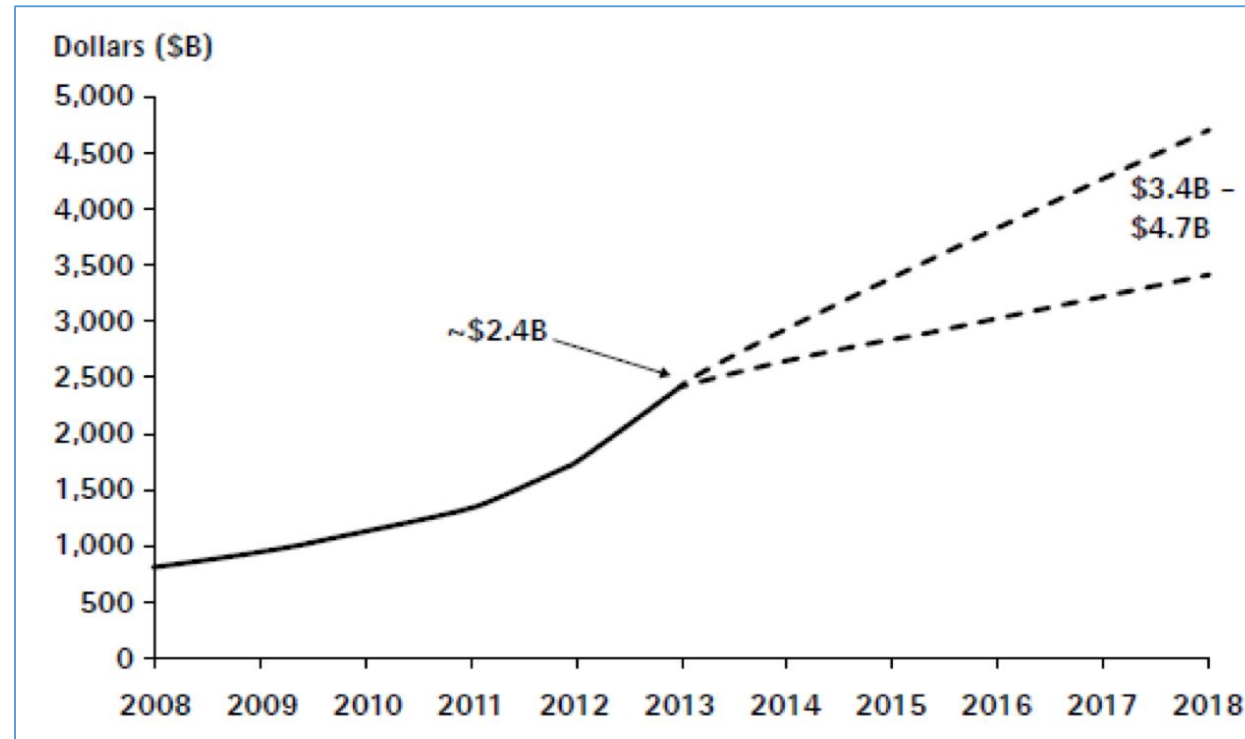
- ✓ Support from 15 major financial institutions
- ✓ Operate mentoring program about financial advice for startups
- ✓ 18 startups receiving support settled on investment worth 76 million USD
- ✓ Case of fintech fund formation: BBVA and Sberbank's \$1 billion venture fund

Fintech Industry in the U.S



- World's largest fintech market = U.S
- Dominates 83% of the world's global fintech investment (Silicon Valley 32%)
 - 2013 world investment scale = 2.4 billion USD → 2018 = 4.7 billion USD estimated

Forecast of U.S Fintech Investment Scale



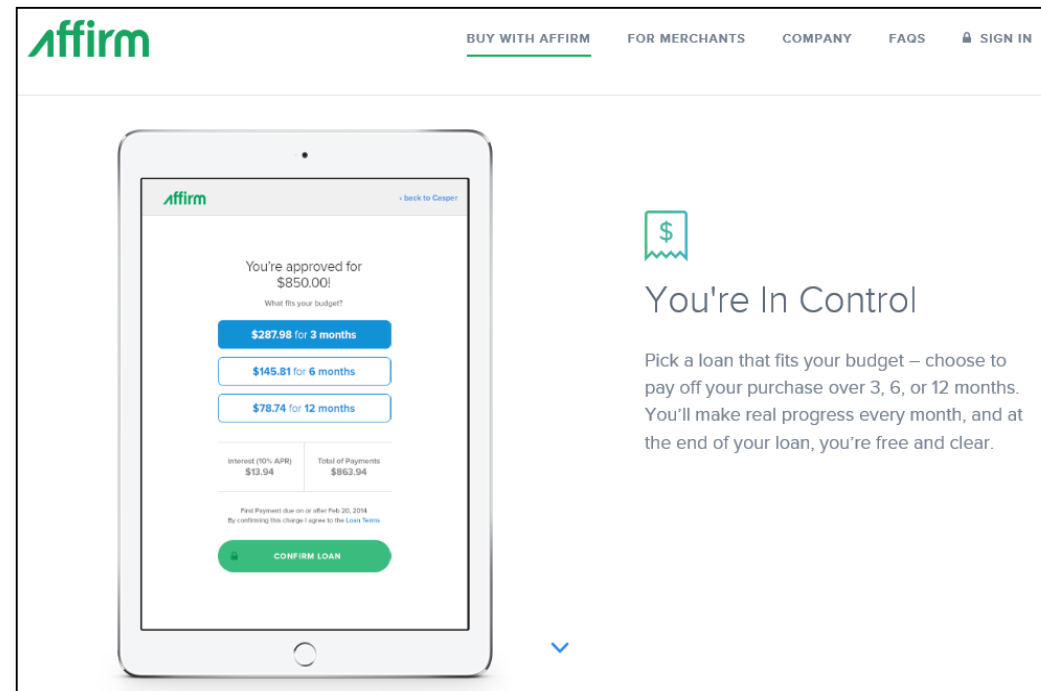
* Source : Accenture

Fintech Industry in the U.S



Affirm.com: U.S mobile payment startup

- Offer monthly payment plan according to the customer's credit
- Credit evaluation based on the customer data (name, phone number, email, birth, SSN)
- Quick announcement about monthly payment and rate information

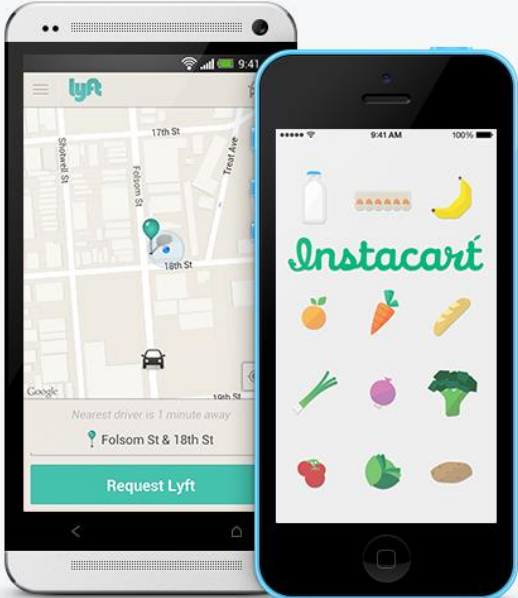


Fintech Industry in the U.S




Stripe.com: U.S mobile payment

- Provide solution for easier payment through mobile app to firms and developers
- App developers can use referral code assigned to their apps to capture market profit
- Support international calls in 139 countries, bitcoin, and Alipay



The image shows two smartphones. The left phone displays the Lyft app interface, showing a map with a car icon and the text "Request Lyft". The right phone displays the Instacart app interface, showing a grid of food items like milk, eggs, bananas, oranges, carrots, bread, green beans, purple onions, broccoli, tomatoes, and potatoes.

 Android + iOS

Seamlessly integrated mobile payments

Lyft, Postmates, OrderAhead, Instacart, and thousands of other mobile applications use Stripe's native iOS & Android libraries to charge on the go. Even collect cards up front for seamless background billing later.

[View mobile documentation ▶](#)

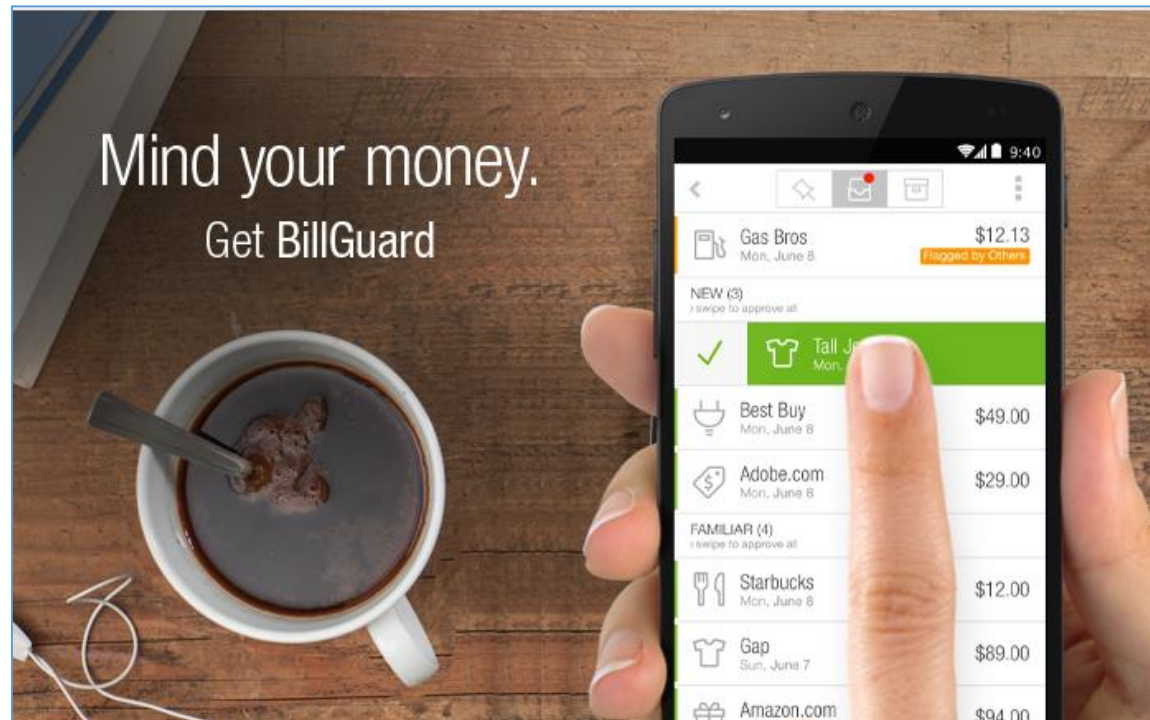
Lyft & Instacart are available on the Apple App Store and Google Play.

Fintech Industry in the U.S



Billguard.com: U.S Finance Service

- Security algorithm about customer credit card and account transaction
- Issue detected → alarm service
- Combined account and card management through mobile app



Fintech Industry in the U.S



Lending Club: U.S P2P lending service

- Founded in 2006, P2P online lending platform
- Less expensive than credit card lending and offer better rate than banks (big data analysis)
- Lending of 5 trillion USD in 2014, expected to grow rapidly

Financial Innovation

Lending Club is America's #1 credit marketplace, transforming banking to make it more efficient, transparent and consumer friendly. We operate at a lower cost than traditional bank loans¹ and pass the savings on to borrowers in the form of lower rates and to investors in the form of solid returns.



Fintech Industry in the U.S



OnDeck.com: U.S Online Lending Service

- Founded in 2007, provide online lending service
- Fast and convenient lending process (application 10 mins, approval confirmation within 10 mins, transferred in to account within a day)

How OnDeck Compares			
	OnDeck	Your Bank	Credit Card Advance
Fastest Funding	✓	✗	✗
Values Cash Flow, Not Just Credit Score	✓	✗	✓
Builds Business Credit	✓	✓	✗
Minimal Amount of Paperwork	✓	✗	✗
Transparent Rates and Fees	✓	✓	✗
World-Class Customer Service	✓	✗	✗

Fintech Industry in the U.S



Simple.com: U.S Online Banking

- Founded in 2009
- Online asset management firm (no branches with over 100K customers)
- Provide budget model for money management by analyzing customer's consumption pattern

The image displays the Simple.com website interface. At the top, there are six icons representing different services: a Visa card, a dollar sign with a slash, a check deposit, a bar chart, a photo of a check, and an envelope. Below these icons, the text reads: "With Simple, you get a stylish Simple Visa® Card, no surprise fees, and powerful budgeting and savings tools built right into your account—all accessible via web, iPhone, and Android."

Below this, there is a section titled "Saving, budgeting, and spending in one place —your account." followed by a paragraph: "When your account helps you save and budget, it can also help you spend smarter. Simple's Goals and Safe-to-Spend® work together to empower your everyday financial decision-making." and a link "Simple helps you spend smarter. [Learn more](#) →".

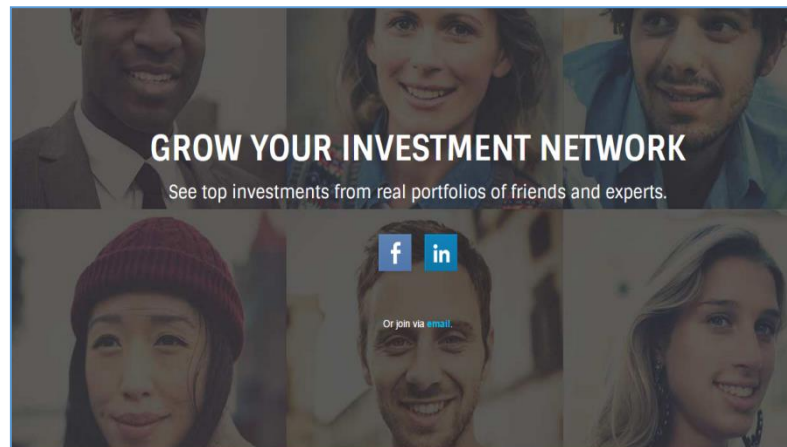
On the right side, there is a screenshot of the Simple.com mobile app interface. The app shows a balance of \$1,442.95 and a "Safe-to-Spend" amount of \$1,000.00. It also displays a calendar view with various financial goals and spending limits, such as "A boss tux" and "Dream home".

Fintech Industry in the U.S



Nvestly.com: U.S Online Stock Manager





- Link securities firms stock brokerage stock management company based on social media
- Analyze stock management of the users linked through Facebook or LinkedIn
- Provide tips or methods offered by famous stock investor

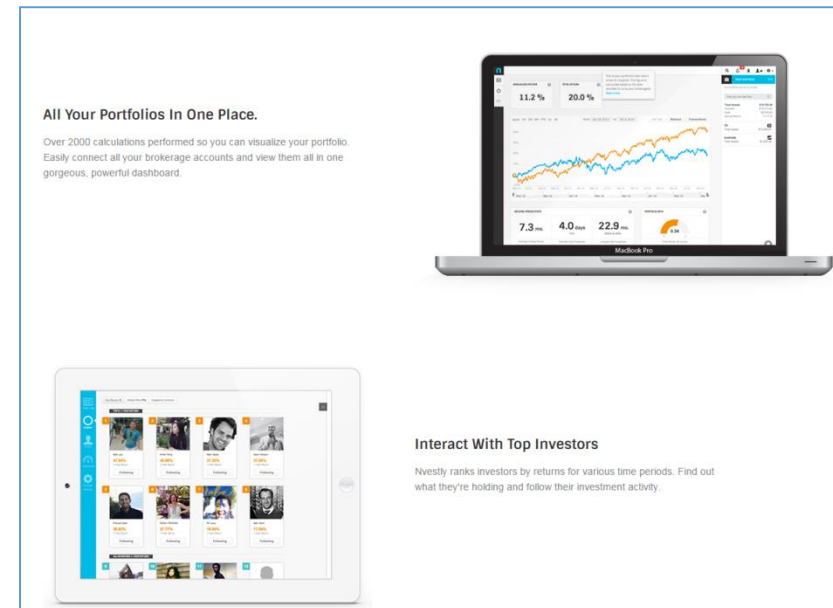


GROW YOUR INVESTMENT NETWORK
See top investments from real portfolios of friends and experts.

Or join via [email](#).

We Support The Following Brokerages

TD  Scottrade    sharebuilder Vanguard



All Your Portfolios In One Place.
Over 2000 calculations performed so you can visualize your portfolio. Easily connect all your brokerage accounts and view them all in one gorgeous, powerful dashboard.

Interact With Top Investors
Nvestly ranks investors by returns for various time periods. Find out what they're holding and follow their investment activity.

Fintech Industry in the U.S



Acorns.com: U.S Mobile Finance Service

- Provide service that allows penny (small changes) investment
- Automatic investment system through penny transfer to bank according to individual investment pattern and expected rate of return



Get the App



Friendly Fees

Low fees, no commissions on Trades.
There are no minimum balance requirements or transfer fees.



Solid Security

Live knowing your information is secure.
Bank level security and data encryption are standard on your Acorns account.



Intelligent Investing

Choose the level of risk that fits you best
or let Acorns suggest a portfolio based on your spending habits and goals.

Fintech Industry in the U.S



Future Advisor: U.S Online Investment Service

- Silicon Valley based online investment service firm
- Provide automatic execution of management strategy and investment platform according to individual investing pattern

Real Investment Management For Hardworking Americans



Your Investments Are Leaking

Hidden fees, unexpected tax bills and excessive churn are sabotaging your savings. We work to save you money everyday.



A Nobel Prize-Winning Strategy

Our automated service will help grow your wealth based on decades of proven academic research.



2 minutes

That's how long it takes to create your Personal Investing Plan. Link your accounts and we'll tell you what you're missing!

Fintech Industry in the U.S



Betterment: U.S Online Asset Manager

- Original algorithm that enables customized global asset distribution function
- Provide asset allocation according to investment goal
- Offer investment information through viewer-friendly website

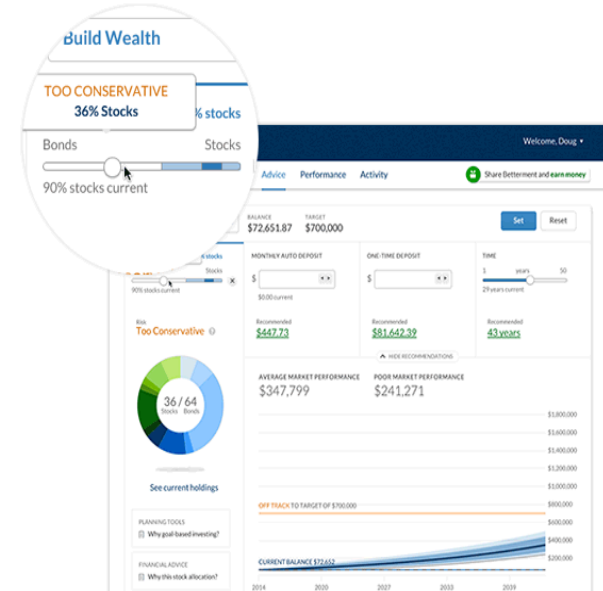
Advice that's catered to you.

Customized portfolio allocation.

Each investment portfolio is designed to get customers optimal investor returns. Our [goal-based investing framework](#) and advice algorithm let customers know if they are on track to reach their [investment goals](#) like Retirement or a Safety Net Fund, in seconds.

Automation and passive investing.

We recommend a globally-diversified, passive portfolio of 12 asset classes, tailored for your risk and time horizon. Years of research and Nobel Prize-winning Modern Portfolio Theory are the foundation of our [proven investment method](#).



Contents

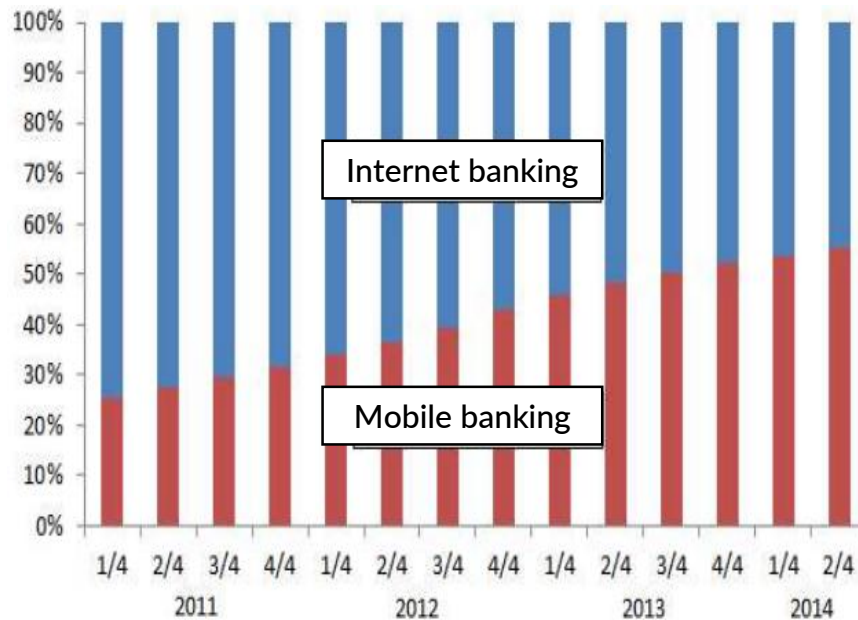
- 1** What is Fintech?
- 2** Background of Fintech
- 3** 4 Step Activation Plan and its Impact
- 4** Fintech Industry in the U.S
- 5** Fintech Industry in Korea
- 6** Moving Forward

Fintech Industry in Korea



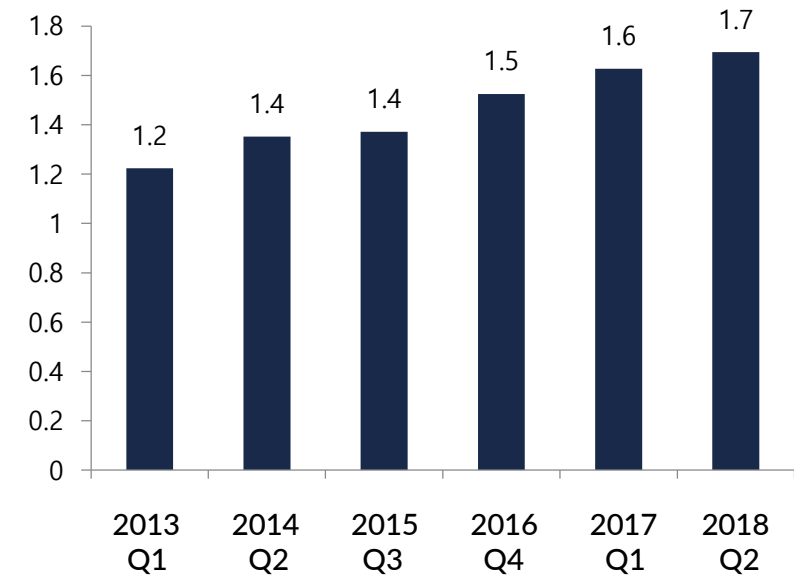
- 55% of internet banking users are registered mobile banking users
- Daily average of transactions on mobile banking is 1.6 trillion won

Distribution ratio of internet banking users (in %)



Source: Bank of Korea

Daily average of transactions on mobile banking



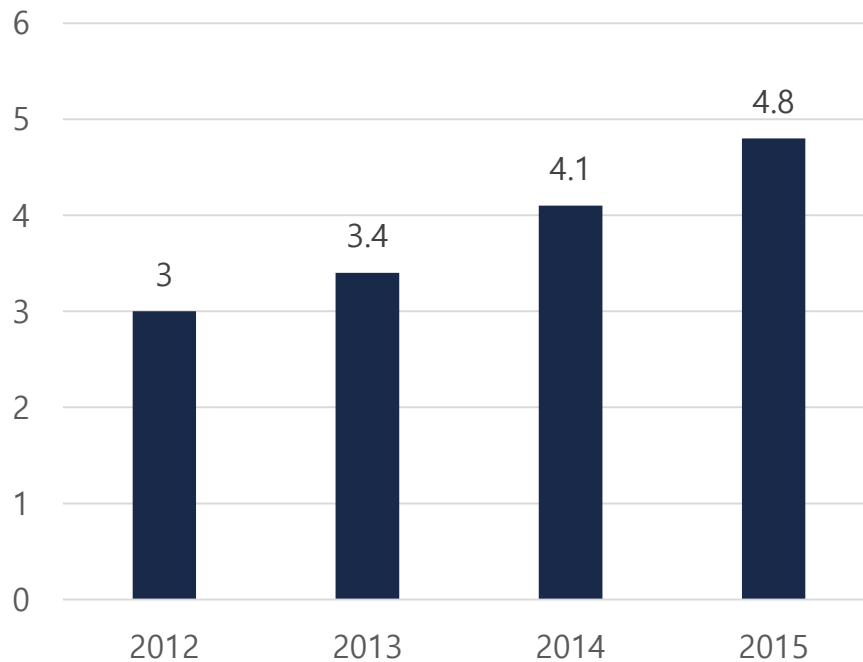
Source: Bank of Korea

Fintech Industry in Korea



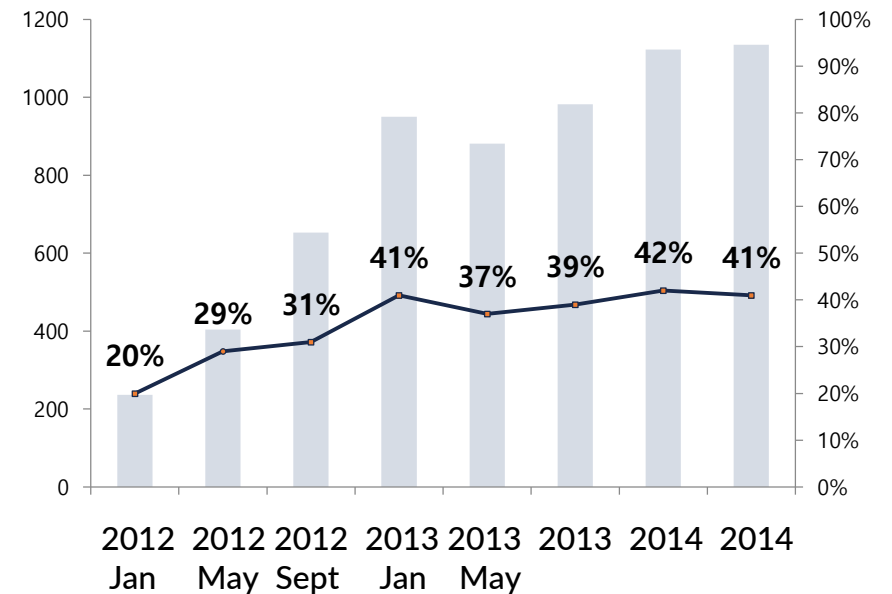
- Continued growth of mobile payment market (48 trillion won in 2015)
- More than 40% of the entire smart phone users use mobile payment service

**Korean Mobile Payment Market
(in trillion won)**



Source: KOLSA, Samsung Securities

**Daily average of transactions
on mobile banking**



Source: KT Digieco (Android)

Fintech Industry in Korea



- Banks and card companies adopting the smart technologies to launch new service lines
- Mobile and online banking, lending evaluation using big data

Fintech and Korean Financial Institutions

Company	Time	Type	Service
Kookmin Bank	August 2012	Smart Branch	Business management, advisory consulting, culture & leisure information service
Shinhan Bank	July 2012	Smart Branch	Opened S20 Smartzone
Samsung Fire & Marine Insurance	January 2009	Online Car Insurance	<ul style="list-style-type: none">• Direct without TM sales• Objective premium rates calculation without advertisement or consultant
Shinhan Card	March 2013	Big Data	<ul style="list-style-type: none">• Big data analysis of 2.2 million customers before the launch of new product to estimate annual fee per service• User payment information analysis to launch a mobile app service for customer convenience e.g. restaurant recommendation, menu, price information
Hyundai Card	January 2012	Big Data	<ul style="list-style-type: none">• Utilize card transaction data to analyze customer trend and market fluctuations• Focused analysis on topic areas beyond industrial profit comparison• Provide business area recommendation and guide as well as renting space

Source: NH Investment & Securities

Fintech Industry in Korea



Electronic Wallet Banking Service

- Participation in Korean mobile payment market from multiple business providers
→ telecommunication company, financial corporation, IT platform and distribution company
- Offer multiple services such as loan payment, membership management, coupon and points
→ Lack banking business such as lending

Telecom



- KT
 - MoCa
- LG U+
 - U+ Smart Wallet
- SK Planet
 - Syrup

Financial Corp.



- Hana Bank
 - Hana N Wallet
- Shin Han Card
 - Smart Wallet
- Samsung Card
 - M Pocket
- KB Kookmin Card
 - KB Wise Wallet

IT Service/ Developer



- Kakao
 - Bank Wallet Kakao
- Danal
 - Bartong
- KG Mobilians
 - M-Tic
- Samsung Electronics
 - Samsung Wallet

Distribution



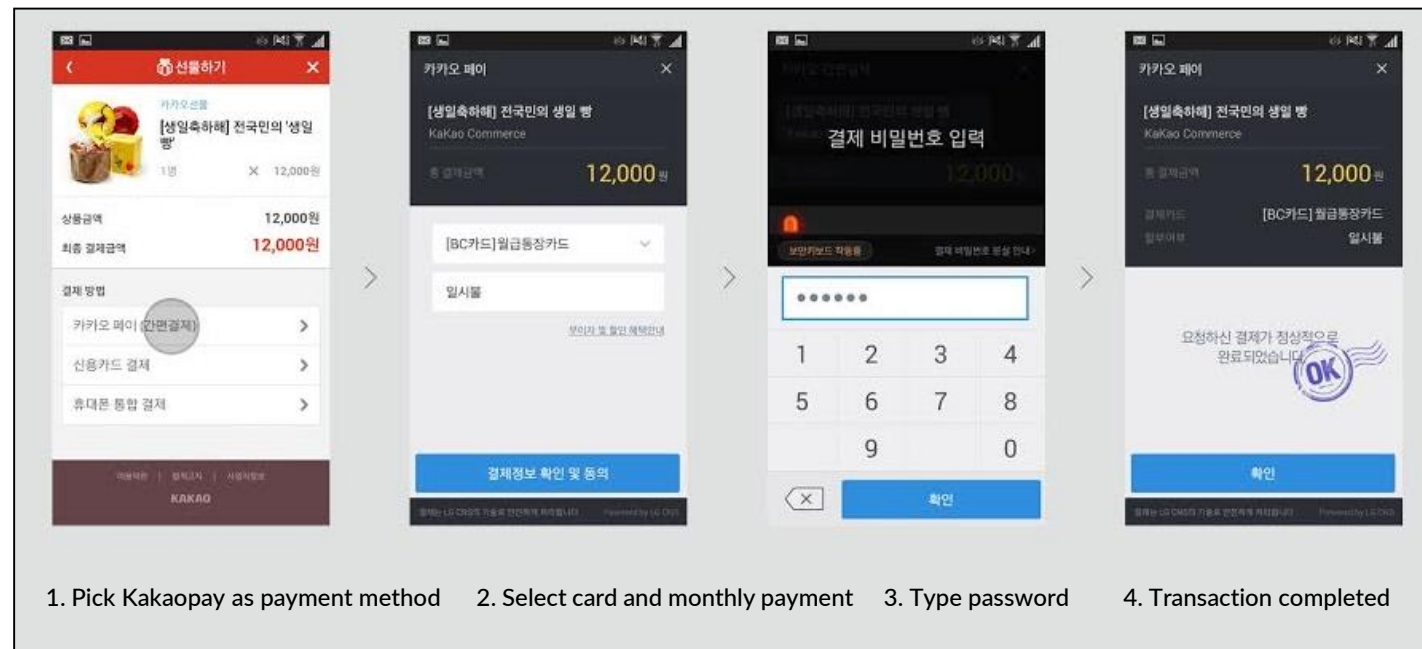
- Shinsegae
 - S Wallet
- Lotte Group
 - Cashbee
- GS Retail
 - POP T-Money

Fintech Industry in Korea



Emergence of IT Platform Payment Service

- Kakaopay reached 1 million users within 1 month since the launch of service
- Expectation for fintech activation increases



* Source: venturesquare

Fintech Industry in Korea



Securities Plus for Kakao: Daum Kakao and Securities Firms

- When Kakao users want to buy or sell stocks
→ connect to securities firms: Mirae Asset, Kiwoom Securities, Yuanta Securities
- Limit for activation: low commission fee and hesitant attitude of securities firms



Contents

- 1** What is Fintech?
- 2** Background of Fintech
- 3** 4 Step Activation Plan and its Impact
- 4** Fintech Industry in the U.S
- 5** Fintech Industry in Korea
- 6** Moving Forward

Moving Forward

Brokerage

- Facilitate transaction through bridging multiple services and enhancing convenience

Asset Management

- Asset management by utilizing mobile platform and software

IB

- Expand IB model by applying P2P model for investment and lending

Research

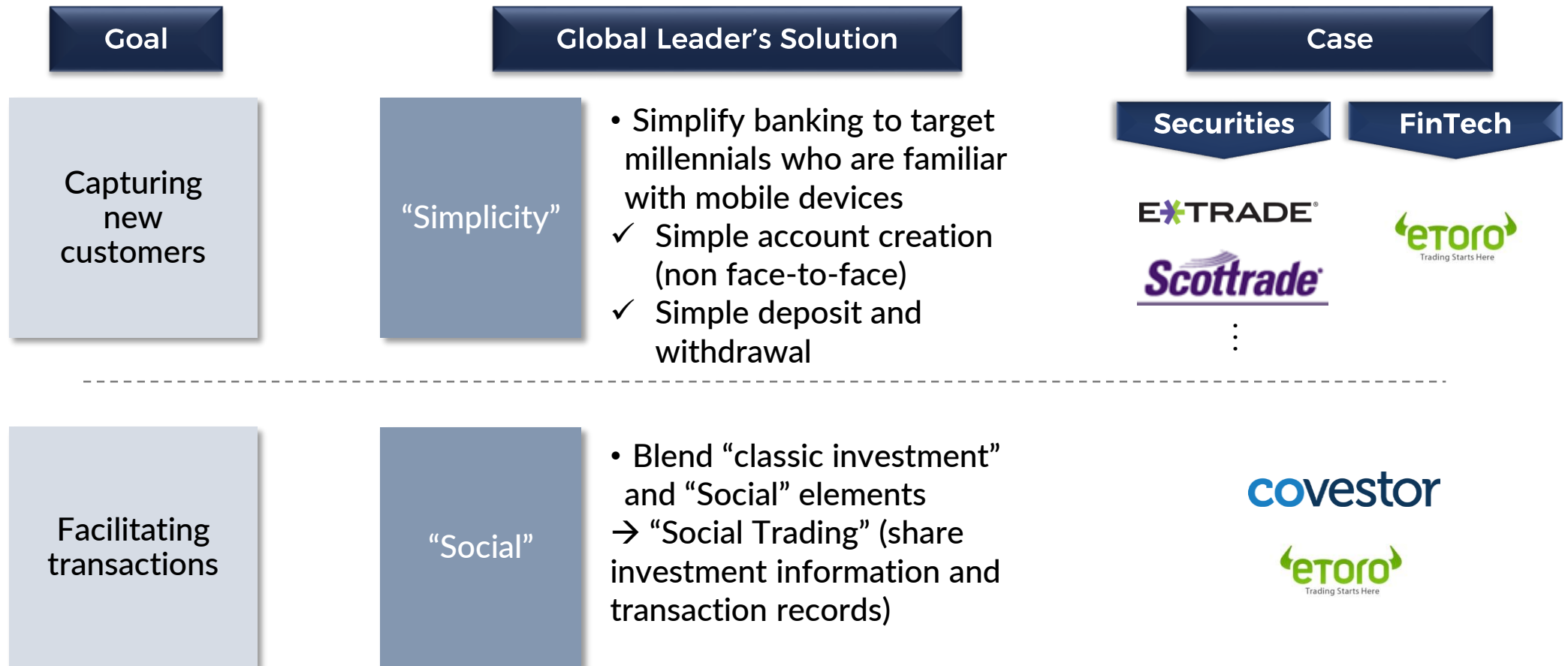
- Enhancing research efficiency by incorporating IT such as big data analysis and search engine

“ Creating new and differentiated profit model for the industry ”

“ Creating synergy between financial investment services and fintech ”

Brokerage

- Facilitate transactions and capture new brokerage through improving convenience and offering various mobile services

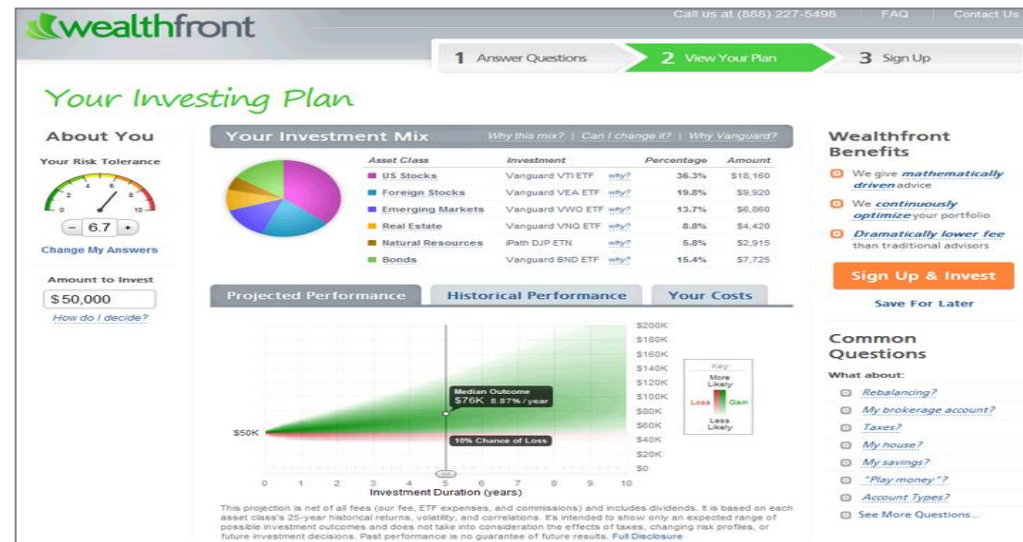


Asset Management

- Provide online asset management service with low commission fee to target mass/mass affluent customers by utilizing fintech

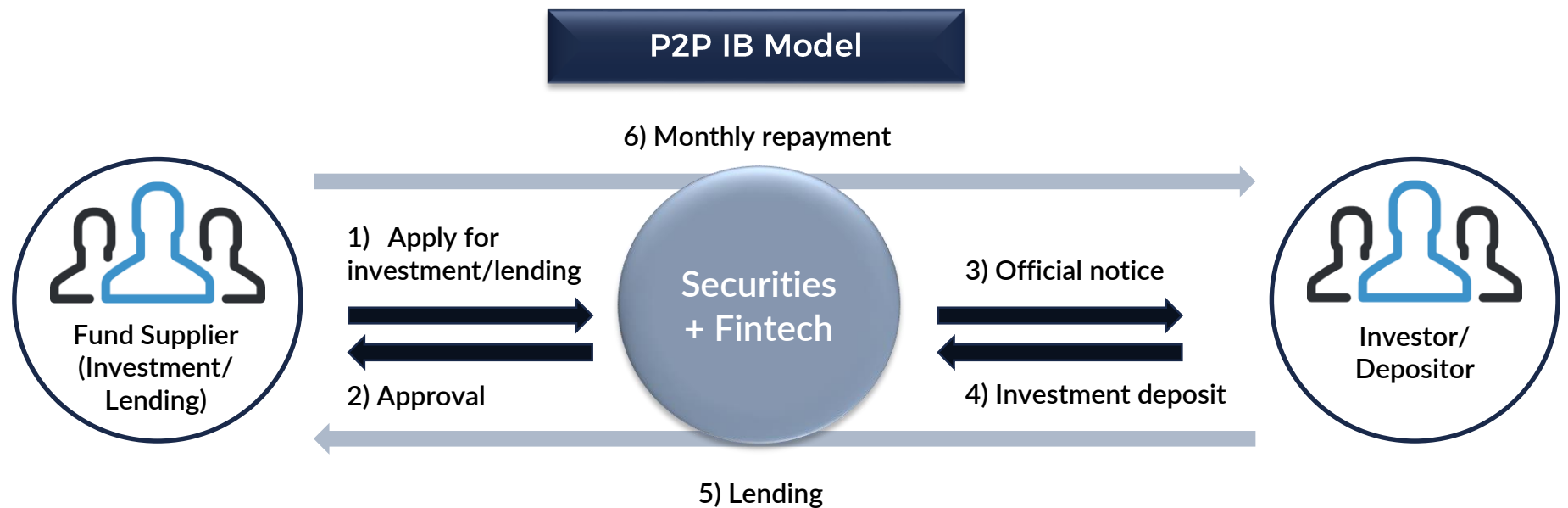
Case: Wealthfront

- Provides algorithm-based investment discretionary service that only deals with ETF (14,000 types)
 - Customized asset distribution, investment product selection, regular rebalancing
- No additional commission other than management commission of 0.25% annual rate
- Established in December 2011 and reached \$10 billion working capital



IB

- P2P IB Model (packaged model of investment and lending)
 - Financing for stage 1 startups and retailers in market failure or areas of weakness
- Utilizing crowdfunding and KONEX market
 - Supply fund for KONEX firms and crowdfunding through using mobile technology



Research

- Strengthening research function of financial investment firms through fintech (big data analysis and advanced search engine)
 - Combine analyst's financial analysis and non-financial analysis of fintech big data
 - Produce original data by combining SNS and CRM information
- Separating research as one profit model
 - Establish independent research specialist firm by using big data and advanced technology (utilize medium and small securities' independent research → differentiation)



Policy

- Improving current offline-based restrictions

Major Obstacles to Online and Mobile Business



Complicated
banking process

- Unable to create account without face-to-face interaction
- Must connect to bank account for transactions
- Need to go through ID verification with certificate per trade (required 2 certificates for bank and securities)



Burden of
explanation
and security

- Required excessive explanation during the sales of product
 - Financial investment company has to bear the responsibility to protect the customer when incorporating fintech on its own
- There has to be a system where both parties are responsible



Lack of cooperation
between existing
players and fintech
firms

- Profit sharing between the investment firm and fintech is prohibited
- Difficult to establish a synergetic relationship



Questions?