Fintech in the era of data

<Changes in data ownership & use>

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뱅크샐러드

AGENDA

01

What has changed?

02

Impacts on our ecosystem
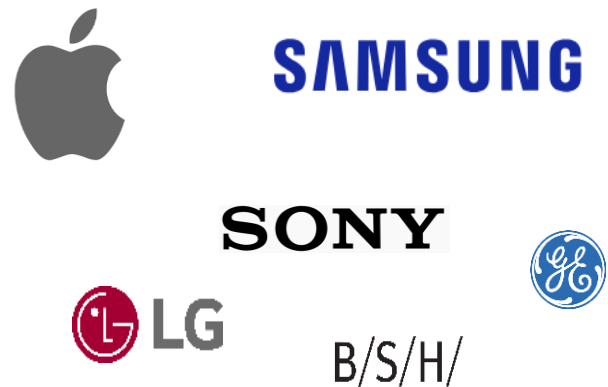
03

Creating values as fintech companies

01 What has changed?

Applying new perspectives on data ownership and use

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Fighting over data: Data ownership now determines who owns the market

Product/device-centric competition	Data-centric competition

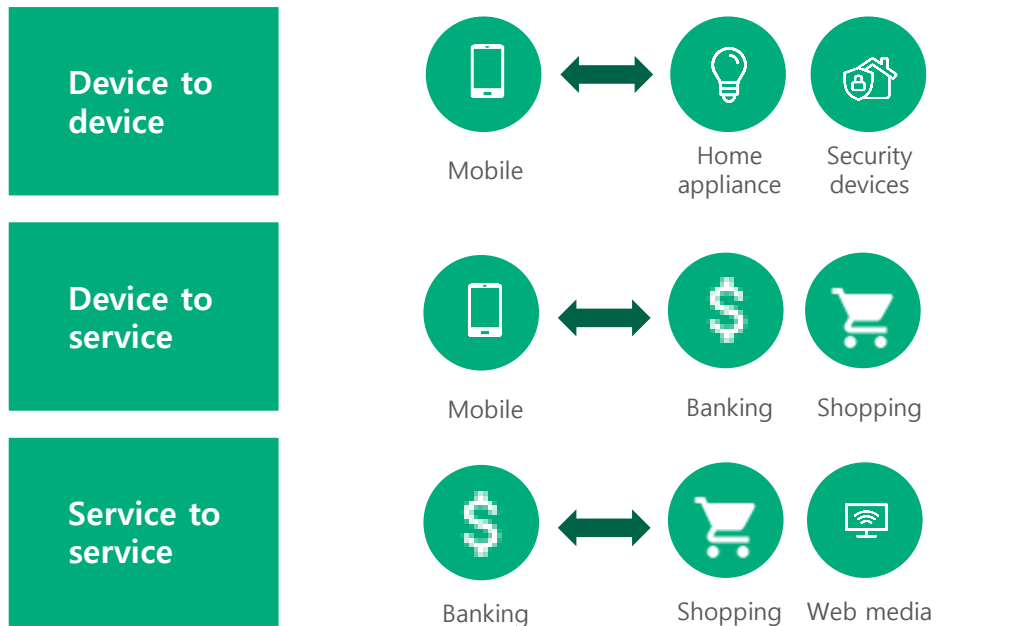**Product/device-centric competition:**

- Compete over more **advanced & updated device specifications and superior device features**
- Sales driven from their **proprietary products**
- **Clear distinction** from hardware manufacturers from software companies

Data-centric competition:

- Compete over touchpoints, which play as channels to **collect interactive user data**
- **Selectively investing in device manufacturing**; work with 3rd parties for soon-to be commoditized devices
- Service/experience driven economy with **unclear boundaries between software/ hardware companies**

The way of collecting and connecting data has changed

1 to 1 connectivity

Device to device

Mobile — Home appliance — Security devices

Device to service

Mobile — Banking — Shopping

Service to service

Banking — Shopping — Web media

- **Device often plays a role as a mechanic remote control**
- **Interactive data may be collected and accumulated within the service, but the use is often limited to the very service**

Platform driven connectivity

Mobile

Shopping

Web Media

Google

Facebook

Amazon

Banking

Home appliance

Security devices

- One platform to **centralize storing & processing of data**
- **360 degree user view** can be mapped from different sources and **shared to customize user experience**

Government is responding to the trend: GDPR to govern data protection & rights

EU case

General Data Protection Regulation (GDPR)

Introduced to..
- Harmonize data privacy laws across Europe while protecting and empower data privacy of EU citizens

Applies to any entity that deals with personal data involving any European individuals, such as

- Basic demographic data
- Online cookie/IP address data
- Sexual orientation, health, income, and more

Key changes include…
- Breach notification
- Right to access
- Right to be forgotten
- Data portability
- Privacy by design
- Data protection officers

Required to gain explicit consent for data and their use

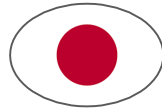# Government developed the concept in finance as well: PSD Ⅱ

PSDII

Amendment of Banking Act

Amendment of Credit Information Act

Entered in 2017 and applied in 2018 to…
- Harmonize payment services across Europe while facilitating market competition to ensure greater choices for customers

Key Result
- Opening up the EU market for new services and providers : **TPPs including AISPs and PISPs**
- While fully complying to GDPR, TPPs can access customer data by **secure and common communications (SCC)** provided by the incumbent institutions
- **Strong Customer Authentication (SCA)** to implemented, using 2 factors out of 3: Knowledge, Possession, Inheritance

Bank accounts ⟷ Secure & common communications ⟷ TPPs / Banks proprietary services ⟷ Customers
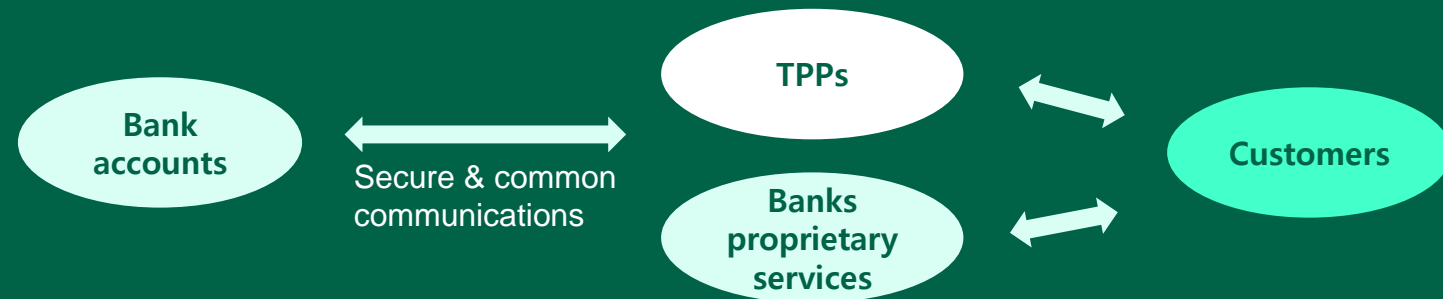
Korea is catching up quickly to join the enhanced competition over data economy (1/2)

"Last opportunity to participate in the global competition over data economy"

Head of Korea Financial Services Commission, from public hearing for "Amending Credit Information Act for data based financial innovation" in Feb 2019

2018.09
인터넷전문은행
특례법

산업자본의
은행 지분보유한도를
혁신ICT 기업에 한해 확대

2018.12
금융혁신지원
특별법

혁신적인 서비스에 대한
한시적 규제 면제 및 유예

2019.02
Enforcement of
Open API

데이터 표준 API에 따라
개인의 모든 금융정보를
통합 조회 가능

2019.02
Opening up
Payment Network
to fintechs

결제 인프라 확대 및
핀테크 성장 고도화

Korea is catching up quickly to join the enhanced competition over data economy (2/2)

Key changes discussed for the amendment

1. 가명정보 활용 및 사후 제재
- 특정 개인을 알아볼 수 없도록 안전하게 조치된 정보를 활용 및 빅데이터 이용에 신뢰 문제가 발생할 경우 제재
- 가명정보가 이용 과정에서 개인식별이 가능할 경우 처리 중지 및 삭제 등을 의무화
- 고의적 재식별 시 형사 처벌이나 과징금 등을 부과하는 방안 마련(기존에는 가이드라인만 존재)

2. 빅데이터 금융 정보 DB와 분석 및 이용의 법적 근거 명확화
- 다양한 데이터가 신용평가에 활용될 수 있도록 빅데이터 분석이나 이용의 법적 근거를 마련하고 인프라를 구축하며 신용정보관리 보안 강화

3. 신용정보산업의 경쟁 촉진
- 산업간 활발한 데이터 교류로 인해 시장 확대 및 성장의 기회 마련, 경쟁을 통한 고도화되고 혁신적인 서비스 창출의 환경 제공

4. 정보 보호 및 보안 강화

Before the amendment...

- Cleansed personal data to be disregarded after 5 years-- essentially with no practical value

After the amendment...

- Allowing service providers to use personal data as long as it is **unidentifiable** to specific individuals

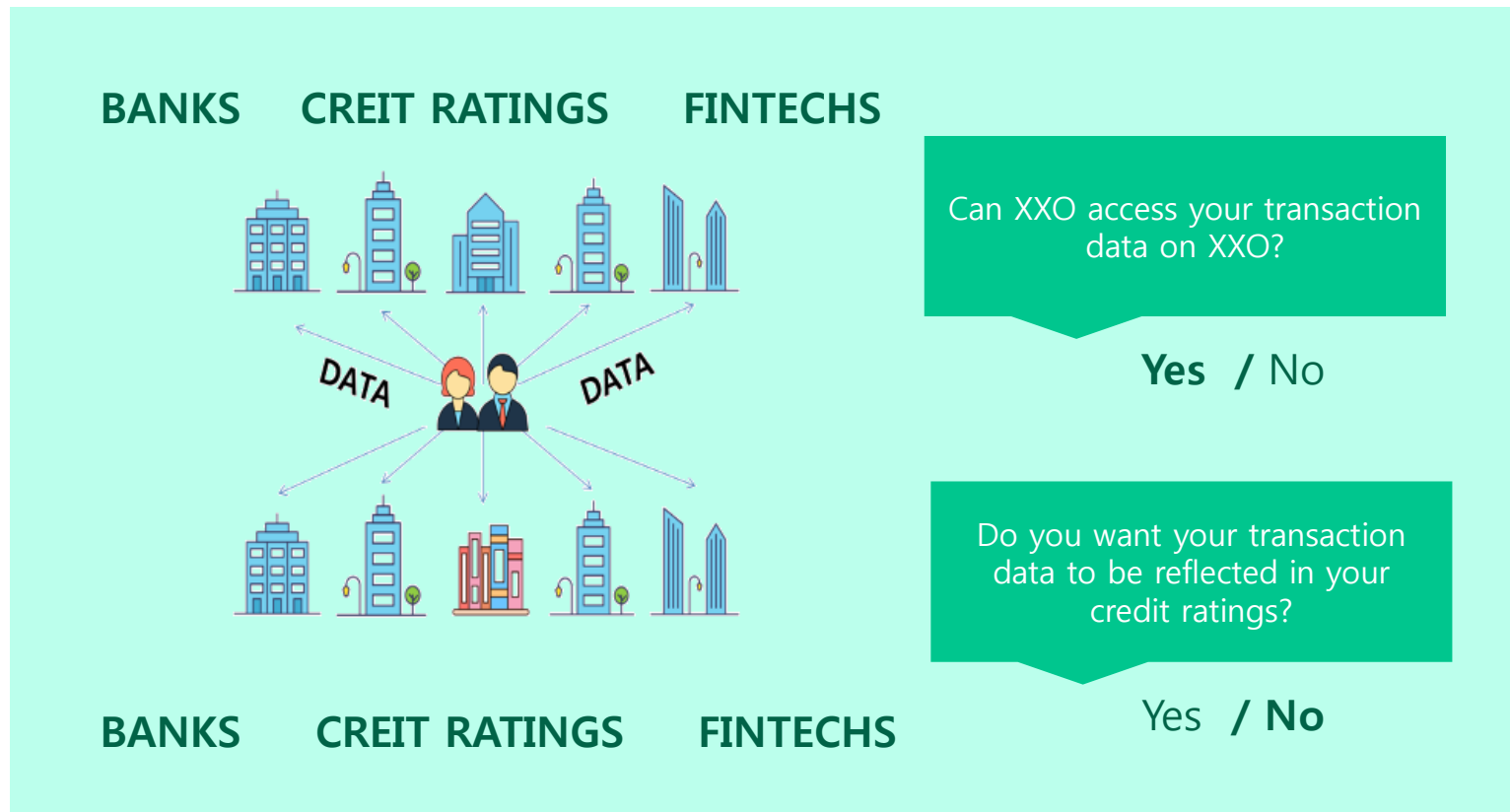- Service providers can leverage **personal data to create more value added products & services**

02 Impacts on our ecosystem

The perspective on data ownership and rights in finance changed, leading to a series of changes in the overall ecosystem

1 Control pad to customers

2 Open competition over data

3 Emergence of data infra providers

1

Users grant different financial services what range & depth of data they can access and track their use

BANKS   CREIT RATINGS   FINTECHS

DATA   DATA

Can XXO access your transaction data on XXO?

Yes / No

Do you want your transaction data to be reflected in your credit ratings?

Yes **/ No**

BANKS   CREIT RATINGS   FINTECHS

- **The location of data storage** no longer to be confused with **the ownership**

- Tracking of data becomes critical: potential **use of block-chain tech** to record every data related activity

- Customers can leverage their data from different entities to benefit from better financial deals & services **upon their choice**

SOURCE: 금융위원회 금융결제 혁신방안 발표 2019.2.25

2 Market dynamics changes with new competitive factors to own the market

	Opening of payment network	Opening of data
Entity	PISP	AISP
Access range	Bank/Card **payment network** traditionally exclusive to banks/card companies	Financial data including **customer account and transaction data**
Lead	**Government** driven (Open Platform by KFTC)	**Government** to set the **API standards** **Businesses** to build consortiums for different **aggregation APIs**
KSF	• **Seamless UX** • Trust for strong platform **security**	• **Speed and range** of the connectivity • **Value added services** from data
Practical implications	• **Low cost burden on PISPs** • **Expanded application** of payment services	• **Consortiums** for different combinations of data—**starting from bank/cards to securities/insurances**
Key issues	• **SCA and who to center identification**	• **API standards and scrapping allowance**

Incumbents and emerging players— PISP and AISPs— both are facing equal competition to create better customer value

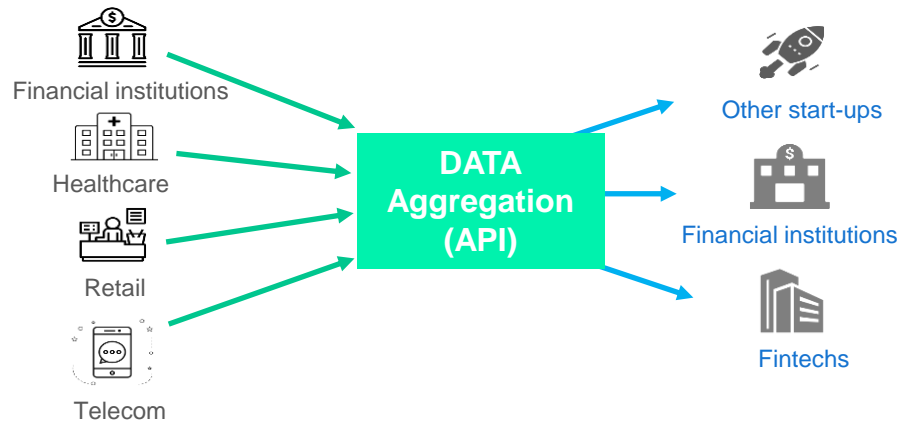**2** Open API can open competition up to vast potential business value

Leveraging Open API in financial industry		
Area	**Application**	**Value**
Product recomm-endation	• Customized credit card, loan, and insurance recommendations from various channels & services	Increased customer touchpoints
Product underwriting & development	• Underwriting new products based on 360 customer user data—consumption, asset, and behavioral data	Revenue & profit max.
Approval / purchase process	• Loading customer info automatically from existing data bank • Simplifying & shortening time spent on customer onboarding process via API connectivity	Cost rational-ization
Advanced CSS	• Leverage new sets of data to enhance the accuracy and predictability of the CSS model	Expanding customer base

Leveraging financial open API in other industries		
Area	**Application**	**Value**
Commerce (retail)	• Targeted marketing based on transaction data • Customized financial products based on buying patterns	Increased customer touchpoints
Online game	• Directing customers to in-app payment	Revenue & profit max.
Healthcare	• Developing customized insurance with insurance companies based on customer healthcare and behavioral data	Expanding customer base
Real estate	• Directing customers to non F2F mortgage loans based on their existing financial data	Increased customer touchpoints

3 Emergence of new business model : Data infrastructure player

1) DATA Aggregation

Domestic DATA Aggregation Business Perspective

Financial institutions
Healthcare
Retail
Telecom
→ **DATA Aggregation (API)** →
Other start-ups
Financial institutions
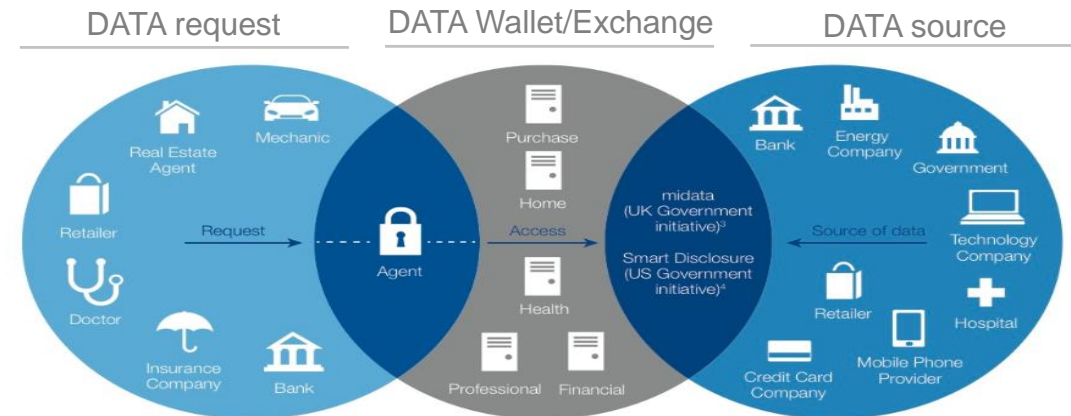Fintechs

US DATA Aggregators

ENVESTNET YODLEE
Founded in 1999
Valued at ~650M
(Acqired in 2016 by Envestnet)

PLAID
Founded in 2012
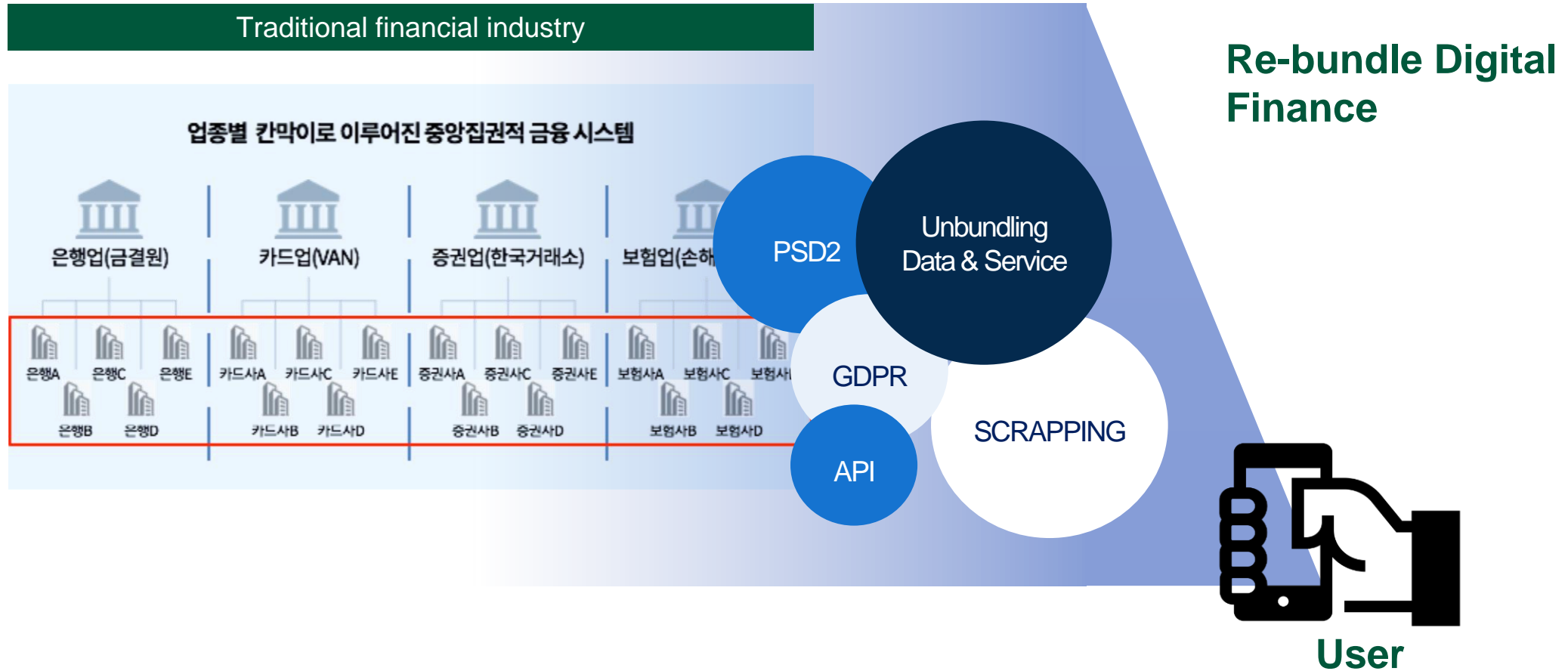**Total investment of ~66M**
(From Goldman Sachs + etc. in 2016)

2) DATA Wallet & Exchange

Domestic DATA Wallet Business Perspective

DATA request | DATA Wallet/Exchange | DATA source

Real Estate Agent, Mechanic, Retailer, Doctor, Insurance Company, Bank | Request → Agent | Purchase, Home, Access, Health, Professional, Financial, midata (UK Government initiative)[3], Smart Disclosure (US Government initiative)[4] | Bank, Energy Company, Government, Technology Company, Retailer, Hospital, Credit Card Company, Mobile Phone Provider, Source of data

- In order to access user data, **companies request the access to users via DATA wallet services**
- Users can **manage their data flow & access on the wallet**
- Data will be provided in **standard open API** to be applied to any institutions and services

"MY DATA" in Finance = Digital Finance rebundling

Traditional financial industry

업종별 칸막이로 이루어진 중앙집권적 금융 시스템

은행업(금결원) 카드업(VAN) 증권업(한국거래소) 보험업(손해

은행A 은행C 은행E 카드사A 카드사C 카드사E 증권사A 증권사C 증권사E 보험사A 보험사C 보험사
은행B 은행D 카드사B 카드사D 증권사B 증권사D 보험사B 보험사D

PSD2

Unbundling Data & Service

GDPR

SCRAPPING

API

Re-bundle Digital Finance

User

03

Creating values as fintech companies

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AISPs can consolidate traditionally fragmented customer experience to provide end-to-end personal finance services
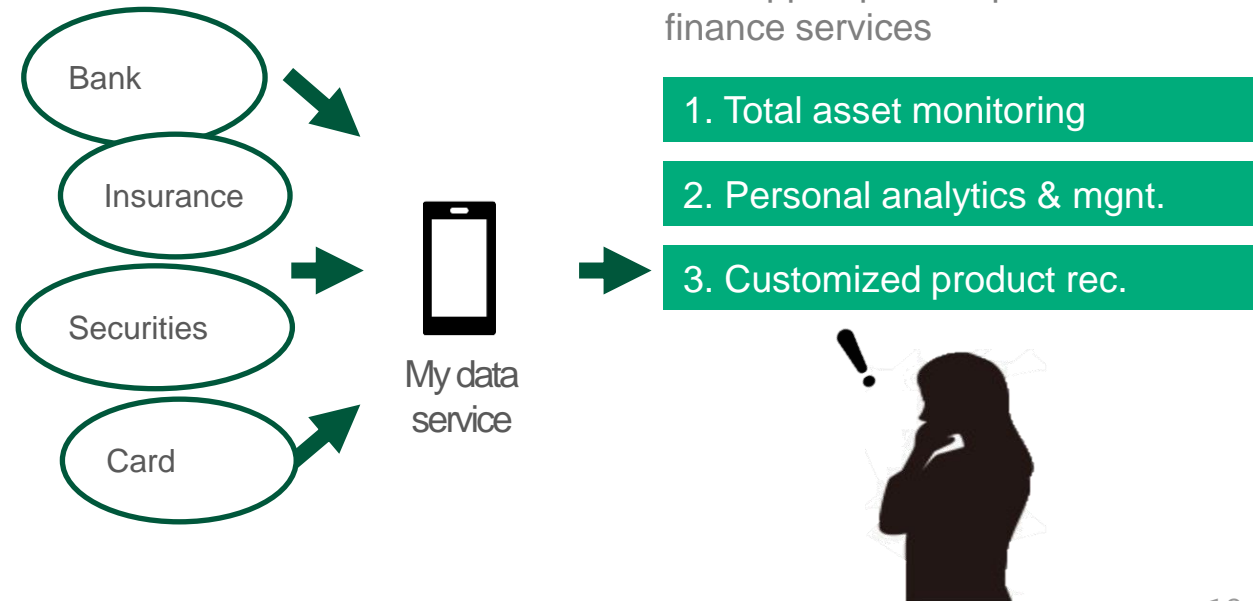
Traditional siloed market by business

- Walls between financial systems leading to **fragmented data access**
- Information is often given one-way: **strong information asymmetry exists between suppliers and customers**

Total 172 apps

Bank

Insurance

Securities

Card
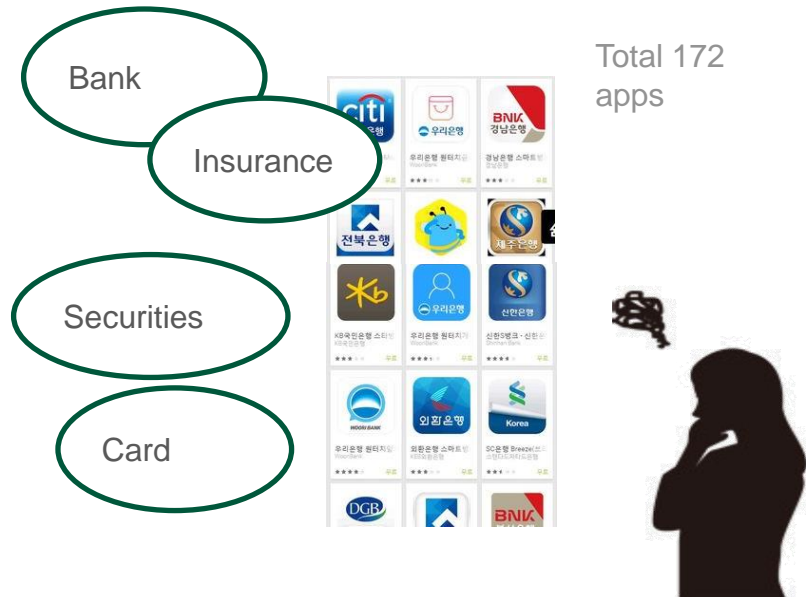
"My data model" enabled by open API

- **360 view on customer financial life**
- Financial curation to compare product/services comprehensively

One app to provide personal finance services

Bank

Insurance

Securities

Card

My data service

1. Total asset monitoring

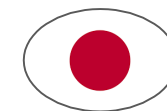2. Personal analytics & mgnt.

3. Customized product rec.

A number of global fintechs have already proved their value in the market
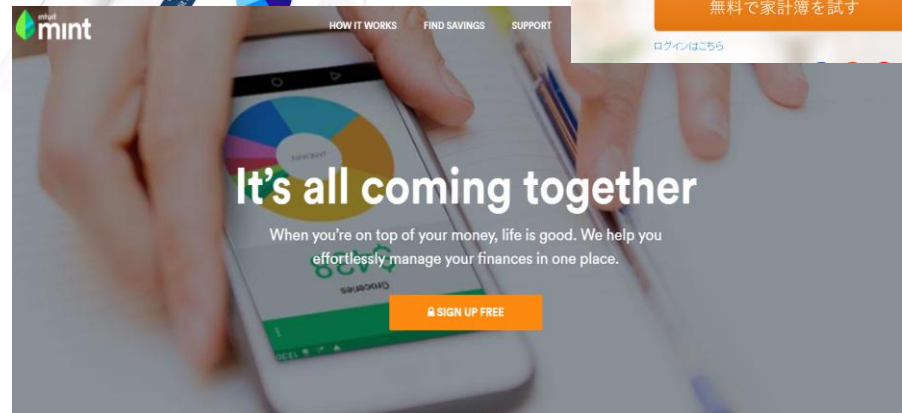
Global Personal Finance Management (PFM) services
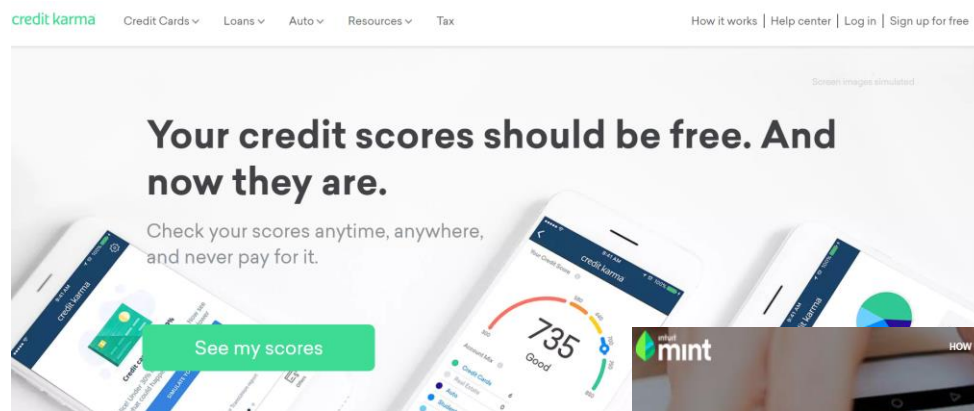
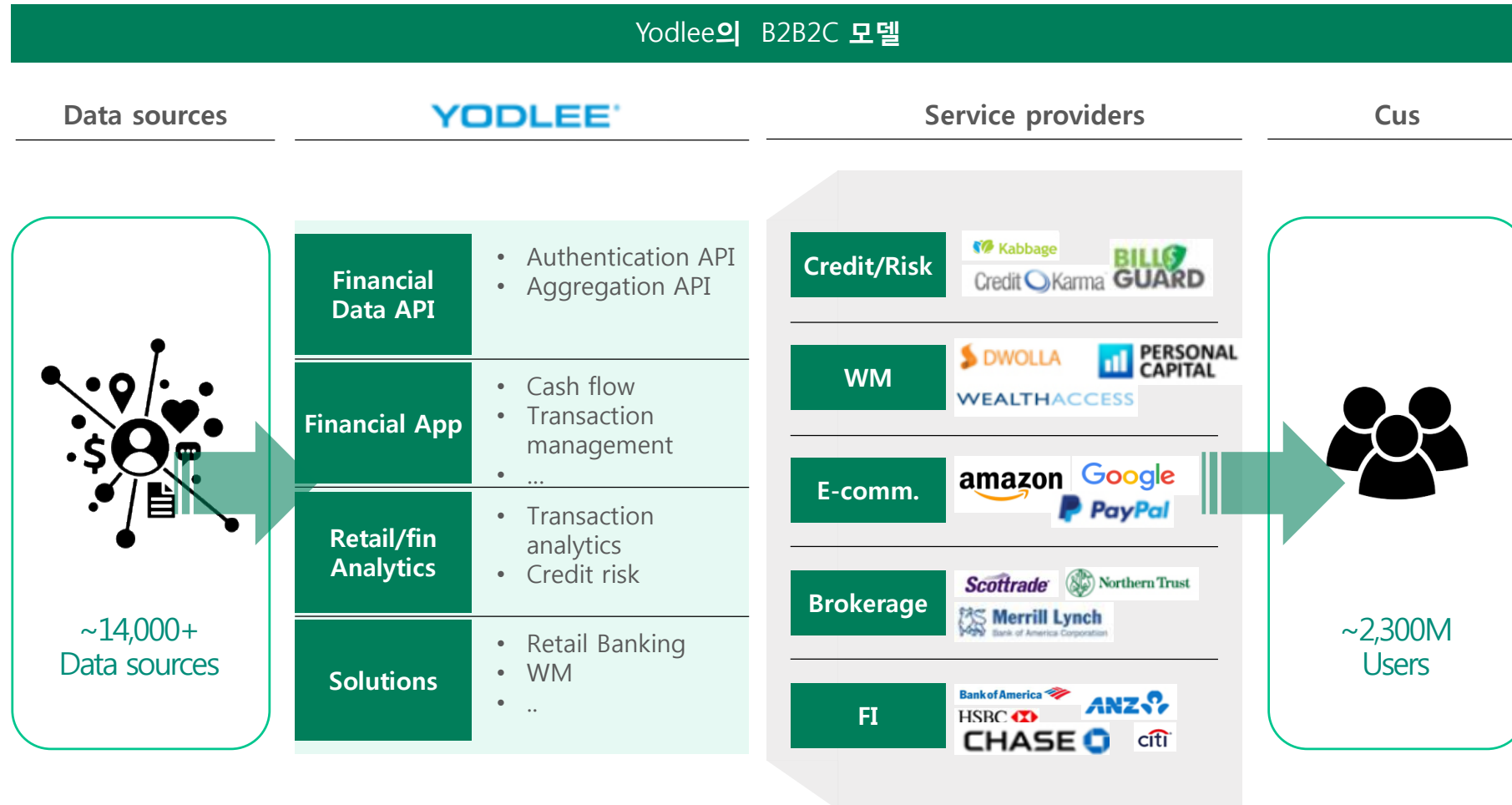**Credit Karma**
Free credit score monitoring

Money forward
Book-keeping & management

Mint
Asset monitoring and management

Global infrastructure players like YODLEE has successfully established a B2B2C model
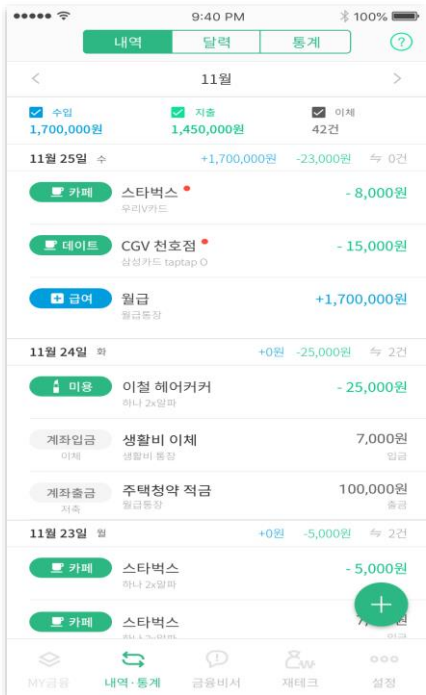
Yodlee의 B2B2C 모델			
Data sources	**YODLEE®**	**Service providers**	**Cus**

Data sources	Financial Data API	• Authentication API • Aggregation API
	Financial App	• Cash flow • Transaction management • ...
~14,000+ Data sources	Retail/fin Analytics	• Transaction analytics • Credit risk
	Solutions	• Retail Banking • WM • ..

Credit/Risk — Kabbage, Credit Karma, BILL GUARD

WM — DWOLLA, PERSONAL CAPITAL, WEALTHACCESS

E-comm. — amazon, Google, PayPal

Brokerage — Scottrade, Northern Trust, Merrill Lynch Bank of America Corporation

FI — Bank of America, HSBC, ANZ, CHASE, citi

~2,300M
Users

Banksalad as the first personal finance management app in Korea

Customer data aggregation and consolidated management > **Value added serviced from data**

Monitoring **total asset and credit rating info**	**Tracking cashflow**	**Advisory on consumption**	**Customized product recommendation**
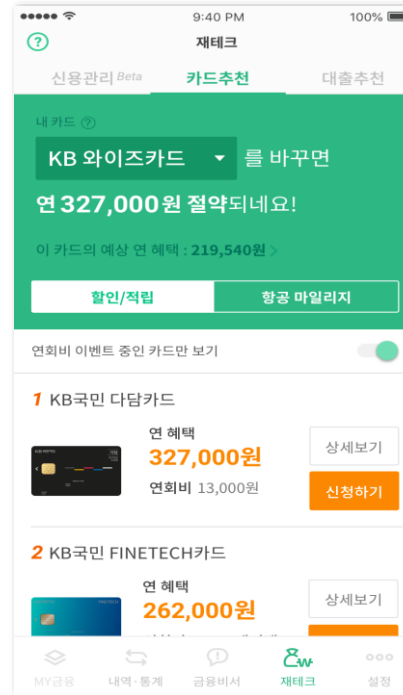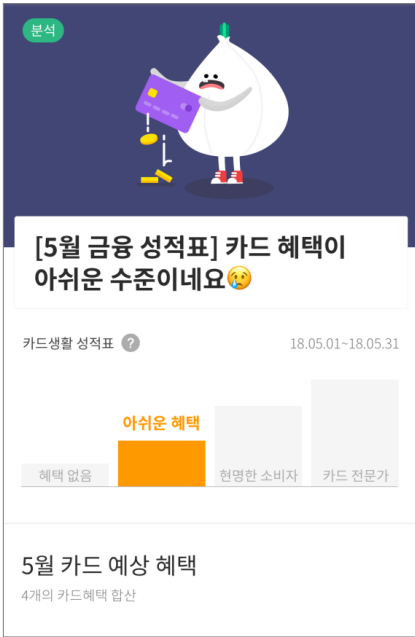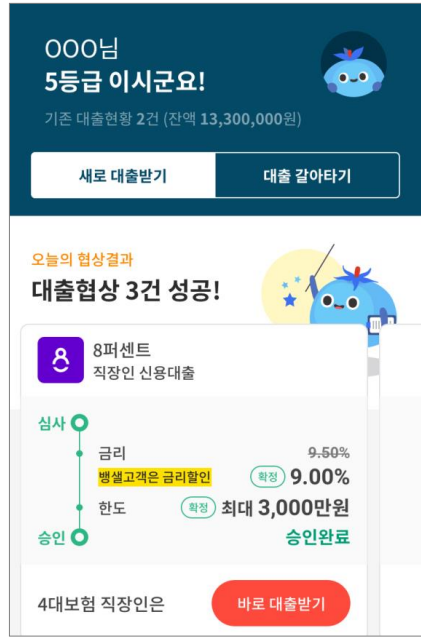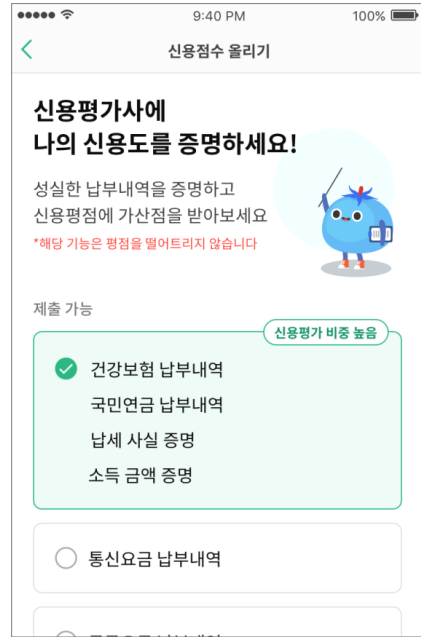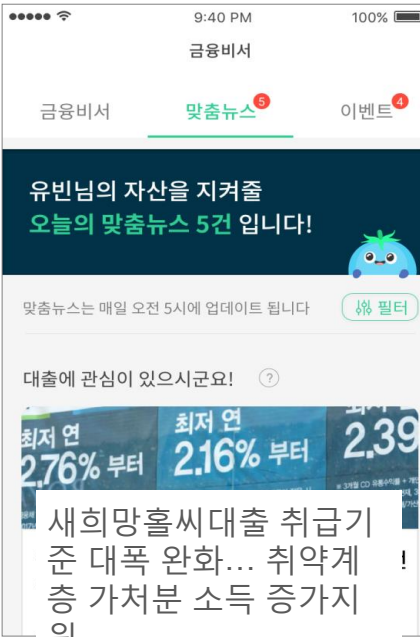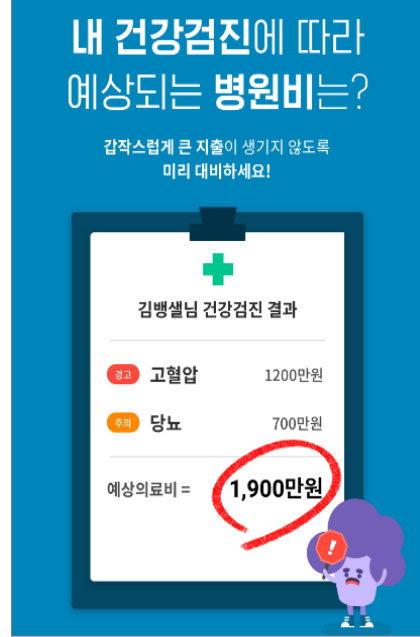
- **Launched "신경꺼도 내 돈관리" Campaign in 2018 to create new category—Money management**

- **Banksalad not only provide customers with consolidated view on their financial activities, but also provide value added services to better manage their personal finance**

Assisting customers in various aspects of their personal finance…

Choosing & managing Credit card	Negotiating for best rates & getting pre-approved	Improving Credit scores	Contents curation	Structuring health insurance

Solving informational asymmetry in finance--the goal is to empower customers with data, to help them make best choices for their financial life

…While solving inefficiencies for businesses

Item	Avg. card channel customer recruitment	Banksalad
Avg. monthly payment amount per credit card	**KRW** 569,964	**KRW** 1,007,876
Percentage of active customers who used their card for more than 3 months	50~60%	86.8%*
Dormant card rate	8.90%	0.75%**

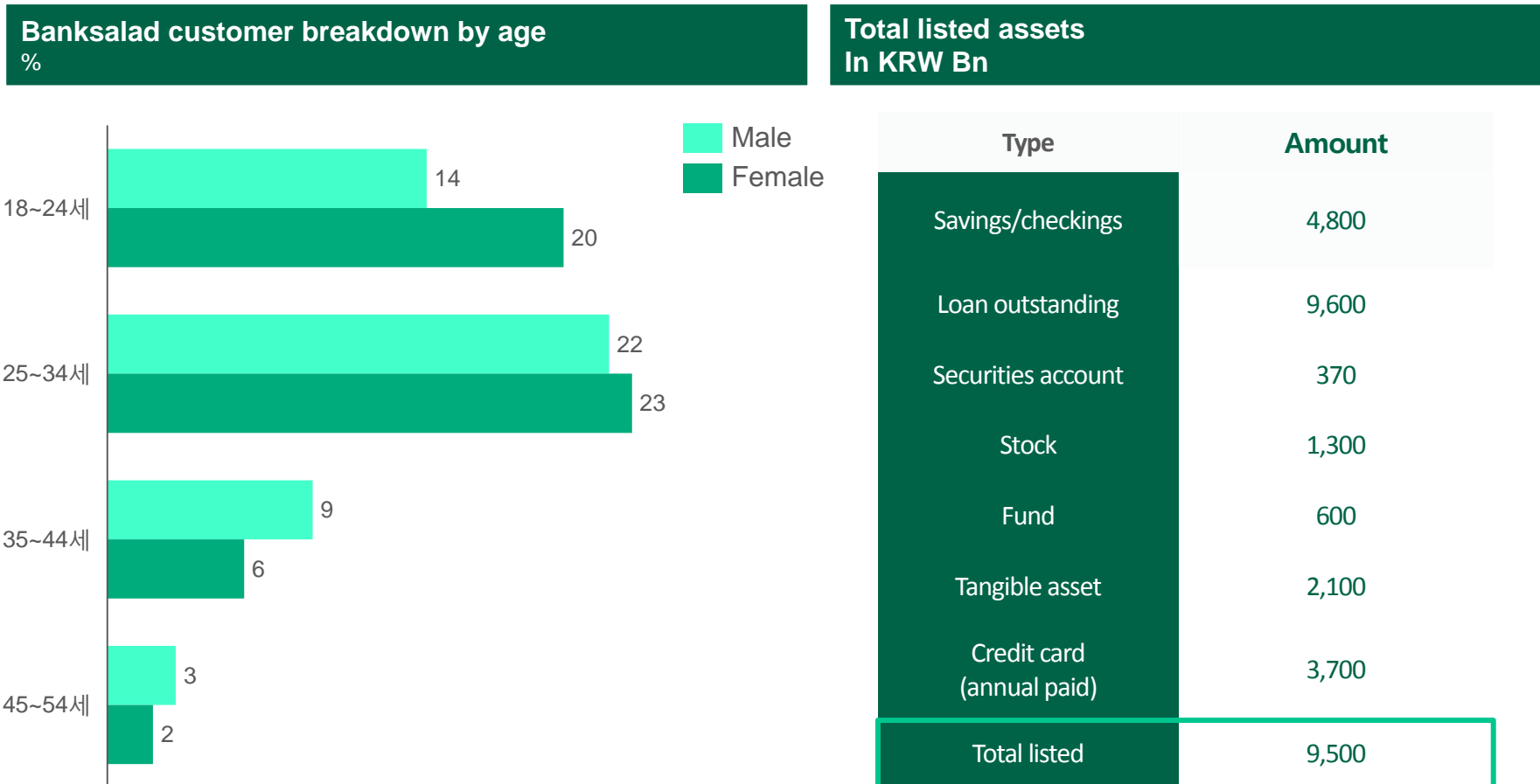## Only cost of ~150,000 per issuance

* The percentage of customers who actually used the card for more than 3 months from Jan., 2017 to Jul., 2017 out of new customers from Jan., 2017 to May, 2017 (Card company internal data)

** The percentage of customers who didn't actually use the card from Aug., 2016 to Jul. 2017 out of customers who actually used the card on Jul. 2016

Banksalad provides a new channel to communicate & interact with potential customers

Banksalad customer breakdown by age
%

Male
Female

- 18~24세: Male 14, Female 20
- 25~34세: Male 22, Female 23
- 35~44세: Male 9, Female 6
- 45~54세: Male 3, Female 2

Total listed assets
In KRW Bn

Type	Amount
Savings/checkings	4,800
Loan outstanding	9,600
Securities account	370
Stock	1,300
Fund	600
Tangible asset	2,100
Credit card (annual paid)	3,700
Total listed	9,500

How to take this to the next level

Distinct data capabilities	Understanding & interacting with customers

360 degree customer view

- Collecting **real time consumption & asset data**
  - Incorporating a range of data from cash flow to debt structures
  - Individual product info from card to investment products
- **Deriving asset goals based on customer lifecycle**

Discovering customer needs from the field

- **2,000+ customer interviews to understand customer patterns**
  - Provider perspective vs. Customer perspective
  - Deriving pain-points from the incumbent services

Developing **proprietary algorithms**

- **Has 15+ IP protected algorithms**
  - Predicting transactions based on life patterns
  - Analyzing payment information
- **Securing top-class financial data scientists**
  - Data Scientists with masters in data engineering
  - Ample experience in machine learning and algorithm development

UX starting from customer needs

- **Journey based UX design principles**
  - Lean UX Design Cycle
  - Versioning
  - Appstore rating of 4.3[1]
- **First in the market UX--Pre-qual, health data based insurance recommendation**

Based on Jan 2019

THANK YOU

뱅크샐러드