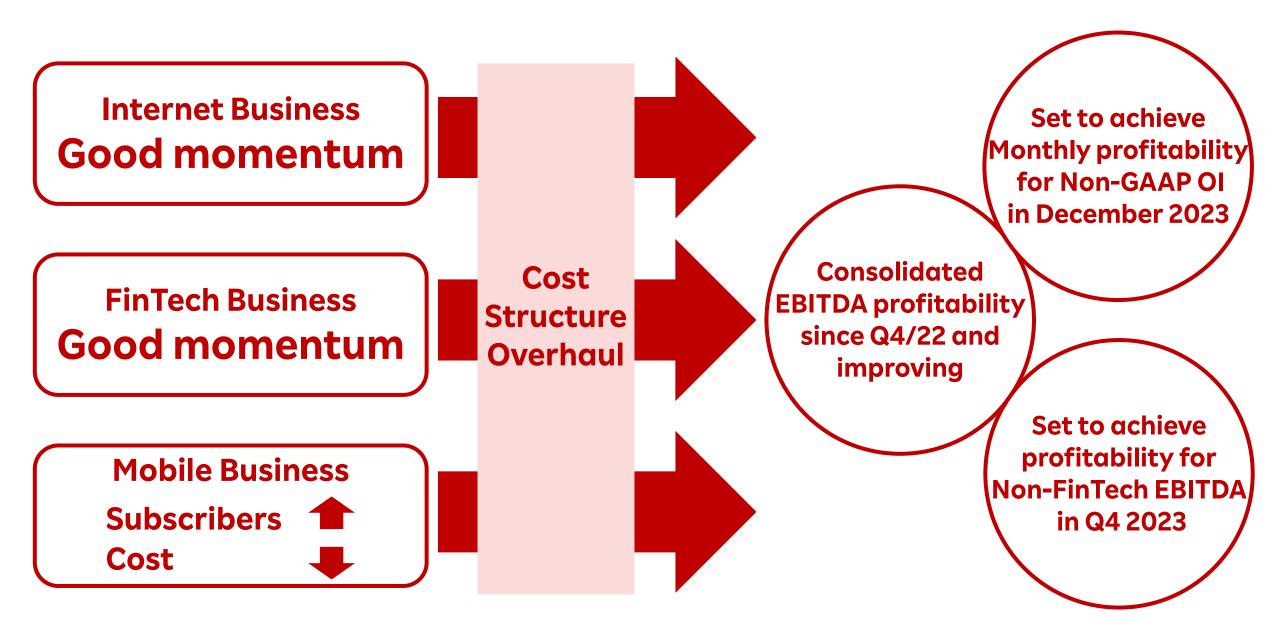
# FY2023 Third Quarter Consolidated Financial Results

November 9, 2023 Rakuten Group, Inc.





Topics

# 1 Q3/23 Summary

# **2** Mobile Business

# **3** Financial Strategy

**4** Al Strategy

# 1. Q3/23 Summary

# Q3/23 Consolidated Profit and Losses\*

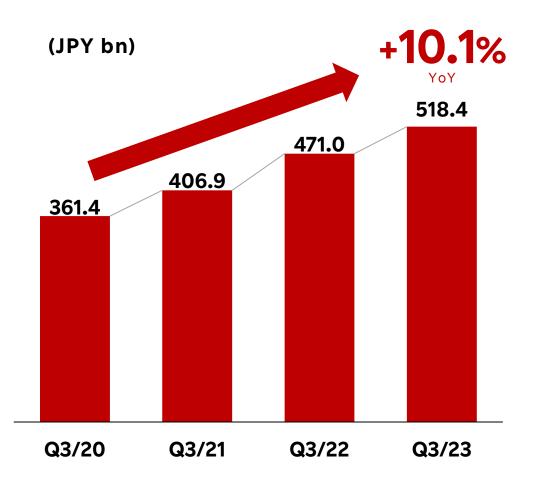
	(JPY bn, rounded)	Q3/22	Q3/23	ΥοΥ
Consolidated Revenue		471.0	518.4	+10.1%
	Internet Services Segment	264.5	301.2	+13.9%
	FinTech Segment	162.5	184.6	+13.6%
	Mobile Segment	84.5	88.7	+5.0%
	Adjustments	-40.5	-56.0	-15.5
-	GAAP ating Income (Losses)	-83.0	-41.0	+42.0
	(Ref.Excluding Mobile Segment & Investment Business)	39.5	48.5	+22.8%
	Internet Services Segment	16.6	16.6	+0.3%
	FinTech Segment	21.1	28.6	+35.8%
	Mobile Segment	-117.6	-81.2	+36.4
	Adjustments	-3.1	-5.1	-2.0
IFRS	Operating Income (Losses)	-94.2	-54.5	+39.7
Non	-GAAP EBITDA	-14.9	35.6	+50.4

Rakuten Ichiba, Rakuten Travel, and
 overseas digital contents businesses
 contributed to higher revenue.
 Rakuten Card, Securities and
 Payment also showed strong growth.

Continued growth of Internet
 Services (Travel) and FinTech
 segments, and an improvement of
 Mobile segment

<sup>\*</sup> Effective September 1, 2023, Rakuten Pay (online payment) business and Rakuten Points (online) business are transferred from Internet Services segment to FinTech segment. No retrospective revisions have been made to past results as the size of the amount is negligible.

# Q3/23 Consolidated Revenue\*



# Continued very strong and consistent growth Q3/23 Revenue growth



\* Due to the introduction of IFRS 17, Q2/22~Q1/23 revenue was retroactively adjusted.

#### Consolidated Revenue Growth Accelerating since Establishment 2 tn+ Rakuten Symphony **Consolidated Revenue Target in FY2023** Enter MNO 1.5 tn business Rakuten General Insurance Sales revenue tops JPY Z tn+ Moved to First 1 Trillion Yen Section of Tokyo Stock Exchange FCB/GSW 2 (currently Prime) Partnerships years (Forecast) Kobo 1 **27 Consecutive Years of** Rakuten tn Vissel Kobe Life Insurance **Annual Revenue Growth** • Viber 3 Rakuten Edv Rakuma • Englishnization: vears Official company language Rakuten Rakuten becomes English Ecosystem Securities concept Rakuten Rakuten announced 0.5 tn Bank years Points Rakuten Card Rakuten Travel Rakuten

2013

Founding

Rakuten Ichiba

1997

Rakuten Books

Rakuten

goes public

2000

Eagles

2005

2021

2023 (Forecast)

2018

# Monthly Consolidated Non-GAAP OI Profitability in Sight<sup>\*1\*2</sup>

■ FinTech 28.6 33.0 21.1 21.5 25.2 Internet Services 26.6 25.0 21.5 21.5 (excl. Minority investment) 16.4 17.1 9.4 -121.5 -117.6 -102.7 -81.2 -107.8 -82.4 Mobile --32.7 -36.8 Consolidated Non-GAAP OI (Loss) -66.1 -5.1 -71.4 (excl. Minority investment) -4.5 -78.1 -82.8 1.3 Consolidation Adjustments Q2/22 Q3/22 Q4/22 Q1/23 Q2/23 Q3/23

Aiming for profitability in December 2023 for Consolidated Non-GAAP OI

\*1 Due to the introduction of IFRS 17, Q2/22~Q1/23 Non-GAAP OI and EBITDA were retroactively adjusted .

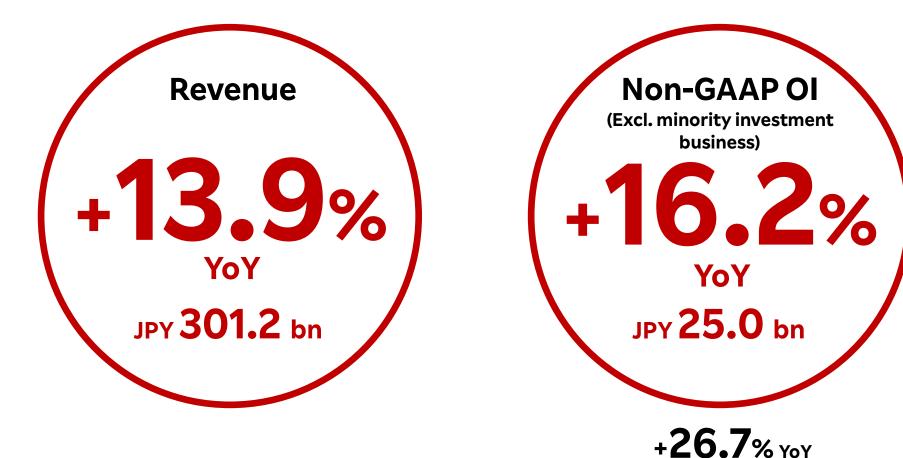
R

(JPY bn)

\*2 Effective September 1, 2023, Rakuten Pay (online payment) business and Rakuten Points (online) business are transferred from Internet Services segment to FinTech segment. No retrospective revisions have been made to past results as the size of the amount is negligible.

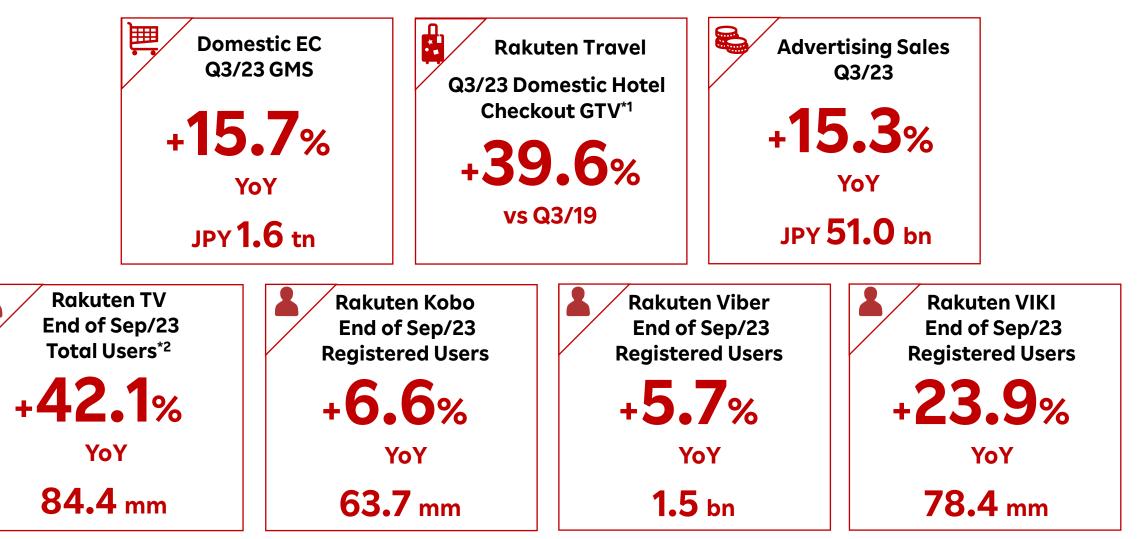
# Internet Services Segment: Q3/23 Financial Highlights

- Core Businesses and Growth Investment Businesses booked robust growth
- Other Internet Services showed a modest YoY recovery



(excluding minority investment business and the SPU cost transfer from Rakuten Mobile implemented from Q1/23)

# **Internet Services Segment: Key KPIs**

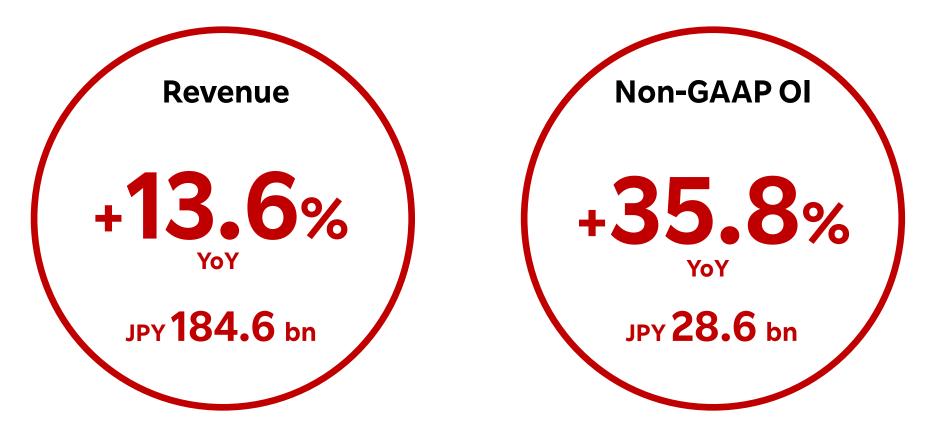


\*1 Excluding corporate reservations.

\*2 Total number of registered users and non-registered AVOD (Advertising Video On Demand) users. From Q2/23, the definition of Rakuten TV registered users has been updated to exclude users who cancelled their membership and this change has been retroactive adjustment.

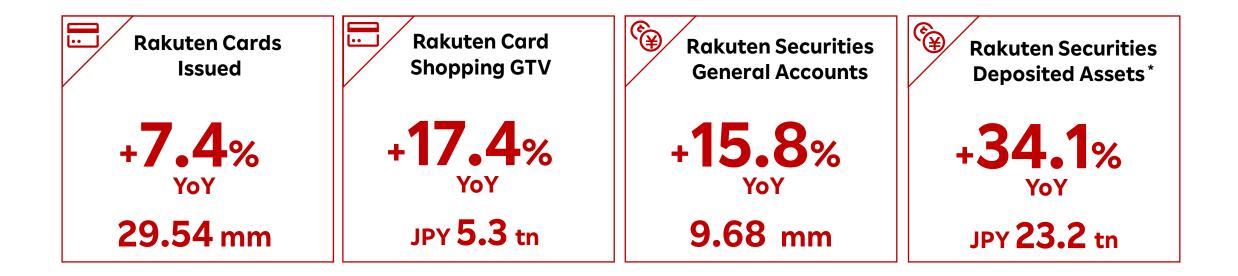
# FinTech Segment: Q3/23 Financial Highlights\*

- Rakuten Card, Rakuten Securities, and Rakuten Payments contributed to revenue growth
- Non-GAAP OI had a substantial increase largely driven by Rakuten Securities



\*1 Effective September 1, 2023, Rakuten Pay (online payment) business and Rakuten Points (online) business are transferred from Internet Services segment to FinTech segment. No retrospective revisions have been made to past results as the size of the amount is negligible.

# **FinTech Segment: Key KPIs**



\* Based on J-GAAP

# Rakuten Bank (Consolidated): Ordinary Profit Growth in 1H (April 1 ~ September 30, 2023) in Line with the Company Plan

Key Financial and Other Data (J-GAAP)

<b>Ordinary Income</b>	<b>Ordinary Profit</b>	<b>Non-interest Income<sup>*1</sup> Ratio</b>	<b>ROE</b> *2
(1H FY2023 consolidated, JPY)	(1H FY2023 consolidated, JPY)	(1H FY2023, consolidated)	(1H FY2023, annualized basis, consolidated)
<b>65.9</b> bn + 12.8% YoY	<b>22.5</b> bn + 25.4% YoY	39.5%	13.7%
<b># of Bank Accounts</b>	<b>Total Deposit Balance</b>	<b>G&amp;A Expense Ratio*4</b>	Capital Adequacy Ratio *5
(Sep. 2023, non-consolidated)	(Sep. 2023, non-consolidated, JPY)	(1H FY2023, non-consolidated)	(Sep. 2023, consolidated)
<b>14.3</b> mm + 10.3% YoY Main account*3 ratio: <b>31.4</b> %	<b>9.5</b> tn + 13.7% YoY	<b>43.5</b> % -4.1pts YoY	11.3%

\*1: Calculated as the sum of fees and commissions income, other operating income and trust fees.

\*2: (Annualized) ROE is calculated by multiplying profit attributable to owners of parent for by twice and dividing that amount by average own capital at the beginning and end of the period.

The balance of own capital for the beginning of the period was calculated as if the capital increase through a public offering in April 2023 and the increase due to a third-party allotment in May 2023 had been conducted at the beginning of the period, resulting in an increase in shareholders' equity by JPY13,324mm.

\*3: Accounts that are used for direct debit or direct deposit of payroll including salary or bonus.

\*4: G&A expenses divided by gross operating profit.

\*5: Capital adequacy ratio (domestic standard) is calculated based on standards stipulated by Article 14-2 of the Banking Act for the purpose of determining whether banks have sufficient equity capital given their holdings of assets and other instruments (Notification No. 19, the Financial Services Agency of Japan, 2006).

# **Rakuten Pay Ranked First in Customer Satisfaction Survey**

Rakuten Pay ranked first in all six major indicators in the QR code payment industry in the 2023 Japanese Customer Satisfaction Index Survey issued on September 26, 2023





#### **Customer expectations**

(Expectations for a company/brand)

# Perceived quality

(Overall ranking for quality)

### Perceived value

(Cost performance)

#### **Customer satisfaction**

(Level of satisfaction)

#### Intention to recommend

(Intention to recommend to others)

#### Loyalty

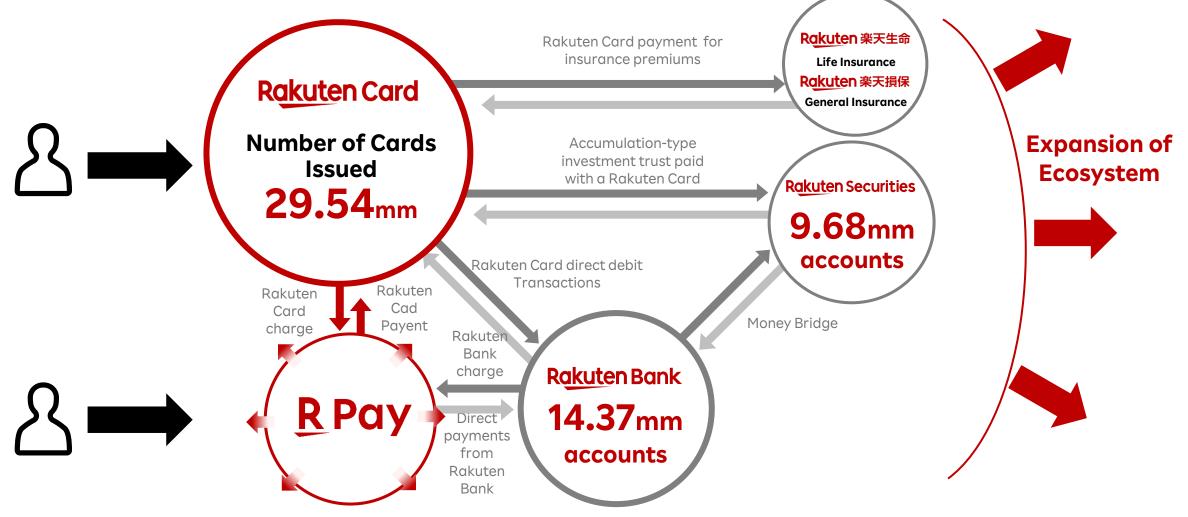
(Intention to reuse in the future)

#### Rakuten Pay Ranked No. 1 in the App Store (Japan) "Free App" ranking (as of October 25, 2023)



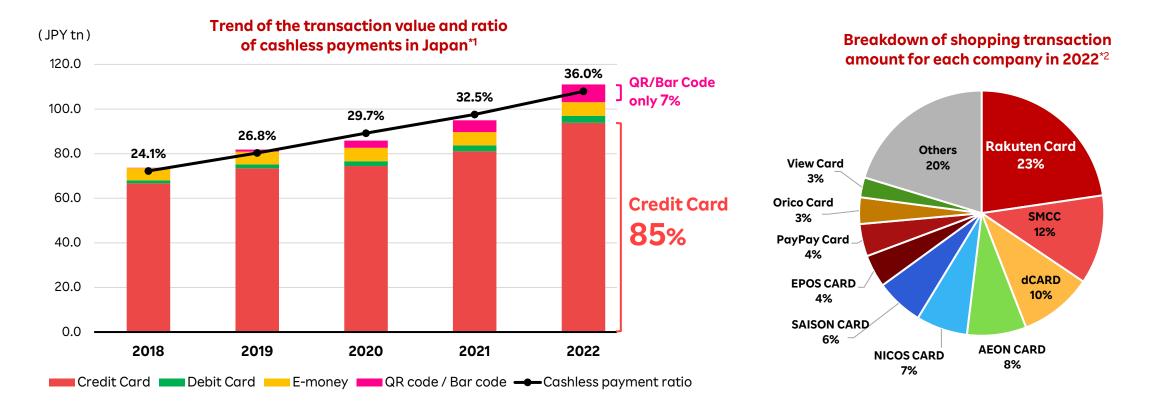
# Rakuten Group's FinTech Ecosystem Strategy

Rakuten Pay to strengthen the synergy with Rakuten Card to become the top player in QR/bar code segment, which will ultimately maximize FinTech Ecosystem



# **Cashless Payment in Japan**

Rakuten's top position in credit card, which is 85% of cashless payment volume in Japan<sup>\*1</sup>, should drive a strong growth in QR/bar code payment with Rakuten Payment reorganized as a subsidiary of Rakuten Card

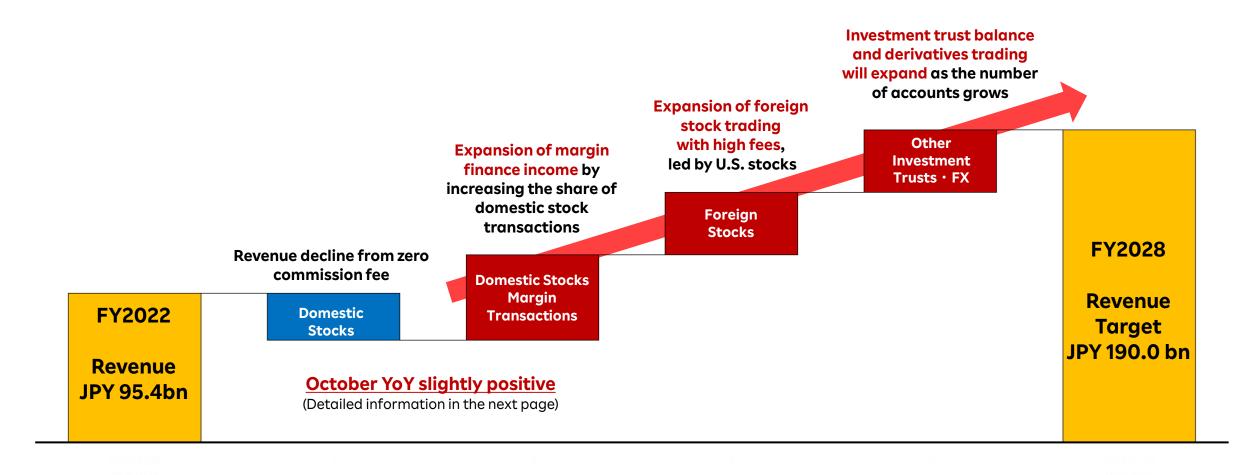


\*1 Ministry of Economy, Trade and Industry, April 6, 2023 Trends in the amount and ratio of cashless payments in Japan (2022)

\*2 In-house research based on the Ministry of Economy, Trade and Industry (METI)'s Dynamic Statistics Survey of Specified Service Industries and disclosed information from major credit card companies (limited to companies with disclosures). Transaction volume from April 2022 to March 2023 is tabulated. However, since SMBC Card does not have information disclosed during the same period, it is calculated based on the issuing market share disclosed by SMCC from January to December 2022. "Others" is a figure obtained by subtracting the total value of the aggregate companies from the credit card transaction volume of the METI's survey.

# **Rakuten Securities Launched Zero-Commission Trades for Domestic Stocks**

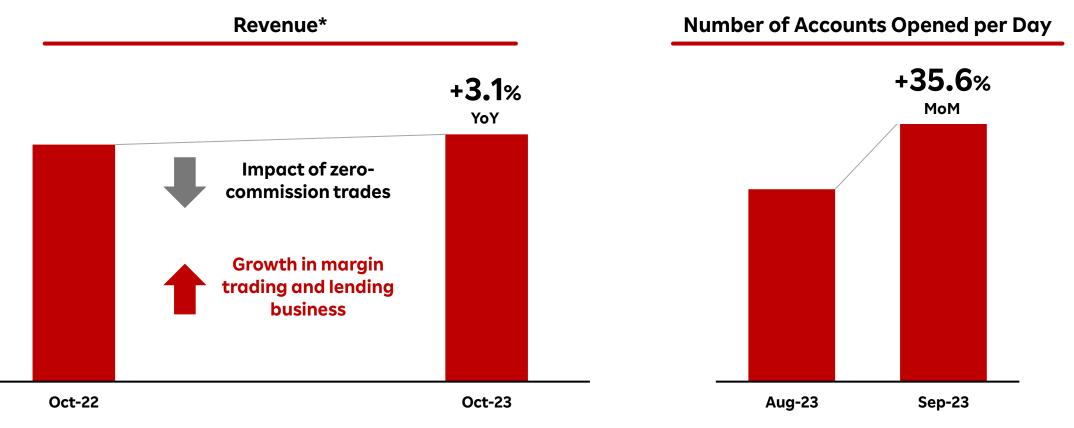
Expect to expand market share with significant long-term upside potential



R

# Impact of the Announcement of Zero-Commission Trades

- Limited impact on October YoY growth rate, helped by more diverse revenue mix/growth
- After the announcement on August 31, account openings accelerated. Aiming for a quick expansion in market share



\* Rakuten Securities, Inc. Non-consolidated based on J-GAAP

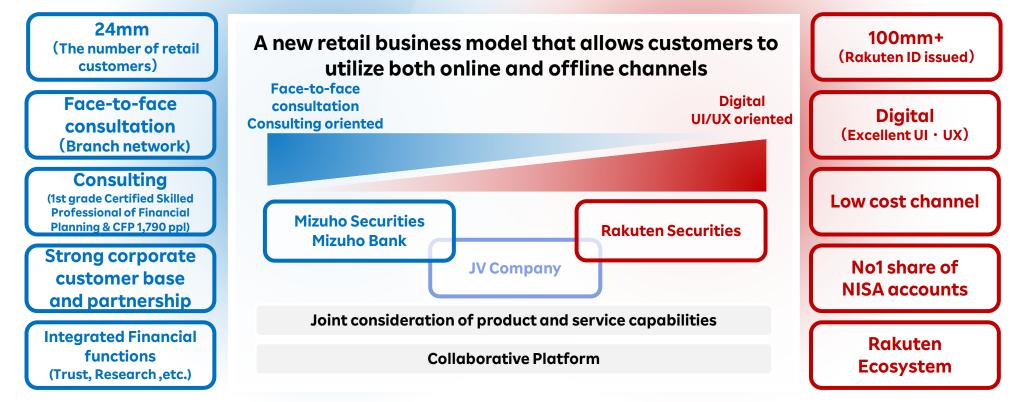
# Rakuten Securities: Announced Enhancement of Strategic Capital and Business Alliance with Mizuho Securities

Investment from Mizuho Securities in the amount of 87bn yen for additional 29% of Rakuten Securities, Inc. (Continue to be a consolidated subsidiary of Rakuten Group after the transaction)

Provide new asset formation and asset management services with the customer's perspective by leverage both online and offline channel

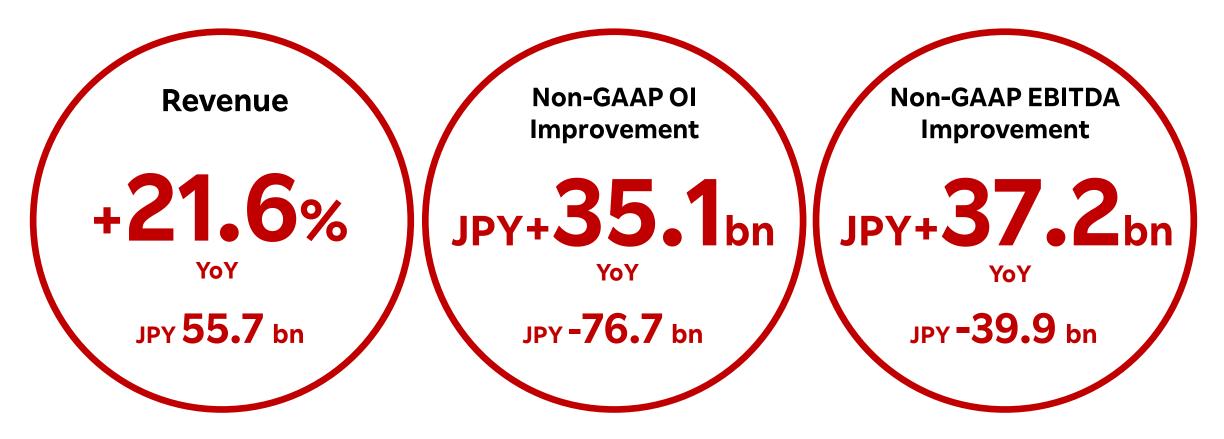
#### Strength of (Mizuho)

#### **Strength of Rakuten**



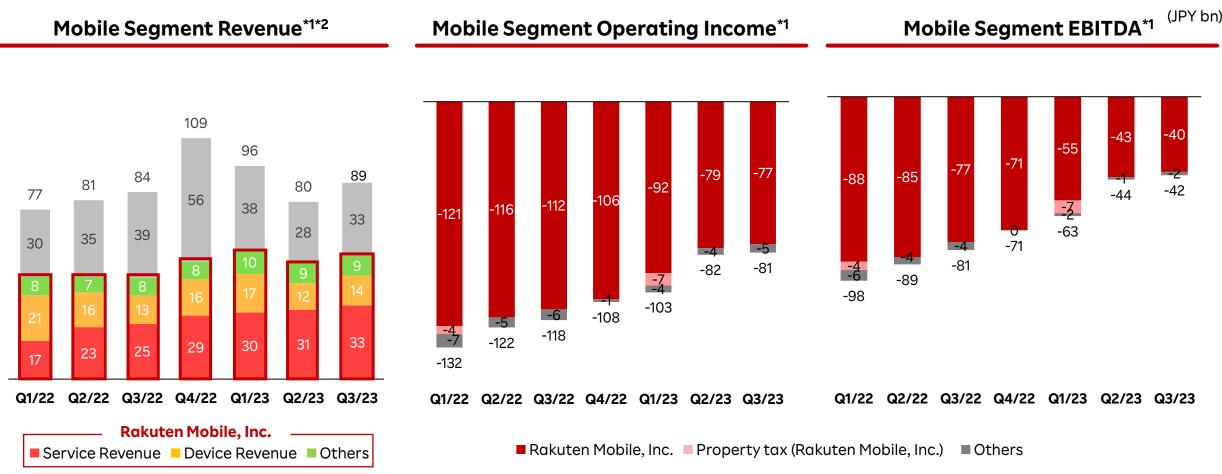
# Rakuten Mobile, Inc.: Q3/23 Financial Highlights

- Delivered continued loss improvement with cost normalization initiatives
- Subscribers and ARPU both grew, leading to strong revenue growth
- Churn rate dramatically improved after the launch of SAIKYO plan



# **Track Record of Revenue Growth and Profit Improvement**

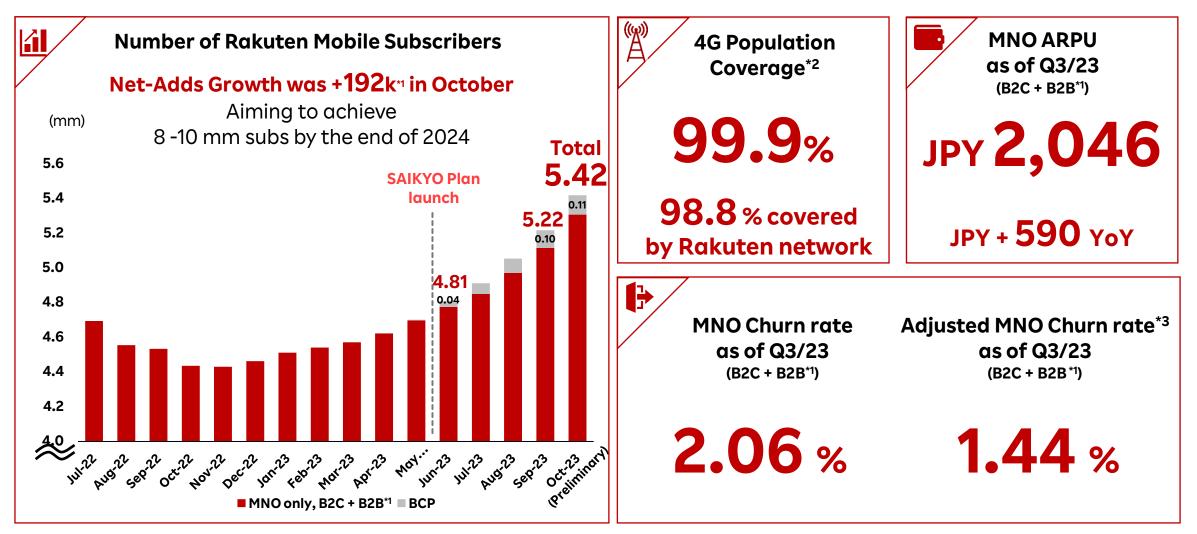
Going forward, revenue growth will drive profit improvement as our network becomes competitive



#### Mobile Segment Others

\*1 At the beginning of Q1/23, a part of media and entertainment businesses previously included in the Mobile Segment was transferred to Internet Services segment. Previous quarters have been restated to reflect this reorganization. \*2 The breakdown of Rakuten Mobile revenue have been revised due to definition changes. Past figures have been retroactively adjusted.

# **Mobile Segment: Key KPIs**



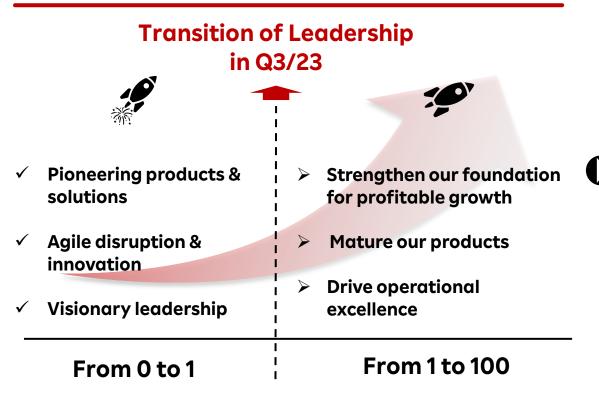
<sup>\*1</sup> Excluding BCP, BCP is pricing plan for Business Continuity Plan purposes in B2B

\*2 After June 2023 (Planned). Rakuten network + partner network combined. Population coverage is calculated based on areas where communication is available in 50% or more of the locations in approximately 500-meter plots used for the census. \*3 Excludes churn (B2C) within the same month as activation.

# Rakuten Symphony: Transitioning into the Next Phase of Growth

- Sharad Sriwastawa is appointed as Representative Director and President of Rakuten Symphony, Inc.
- We have the new Leadership in place to drive the business to maturity and become a trusted vendor for telecom operators and enterprises around the world

#### **On Track to Accelerate Growth**



#### Key Focus Areas under New Management

#### "We will sharpen our focus"

#### **Product:**

 Focus on core products with proven productmarket fit to maximize our return on investment

#### Go-to-Market:

- Focus on existing accounts & "Fast to close" opportunities with high margin software commercials
- Expand channel partnerships for Enterprise and Telecom segments
- Scale existing sales footprint in selected geographies

# 2. Mobile Business

# **Transform from Phase 2 to Phase 3**

2020-2022	2023	2024-	
Phase 1	Phase 2	Phase 3	
Established	Lean and solid	Becoming profitable and	
foundation rapidly	management	the No. 1 mobile carrier in Japan	
Speedy base station build-out + Established virtualization technology + Secured a stable customer base	<ol> <li>Cost Reduction</li> <li>((\vec{\vec{\vec{\vec{\vec{\vec{\vec{</li></ol>		

**Keywords for Launching Phase 3** 

# QualityGrowth

# Quality

Network quality improvement

- 4G 1.7GHz and 5G continuing to expand
- Network optimization under the new roaming agreement being executed
- Platinum Band awarded

# Platinum Band (700MHz) Awarded on October 23, 2023

- Initial deployment in urban areas to fill remaining coverage holes that could not be addressed by our own 1.7GHz and roaming, especially indoors
- 10-year cumulative capital expenditure of JPY 54.4 billion (including interference remediation costs). Initial focus on coverage inside buildings in cities and will be back-end loaded in the 10-year period
- Capex will be low owing to our network based on V-RAN / O-RAN. A software-centric network allows for mostly radio-head replacements with a software update at existing 1.7GHZ base stations

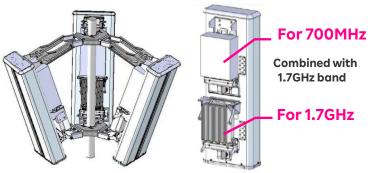
# Platinum Band (700MHz) Awarded

 Service Start timing in the MIC disclosure is March 2026, but this is MINIMUM OBLIGATIONS THAT WE AIM TO BEAT

> ✓ We are aiming to be on air in early 2024, mainly in metropolitan areas first

**Development Image of Wireless Equipment** 

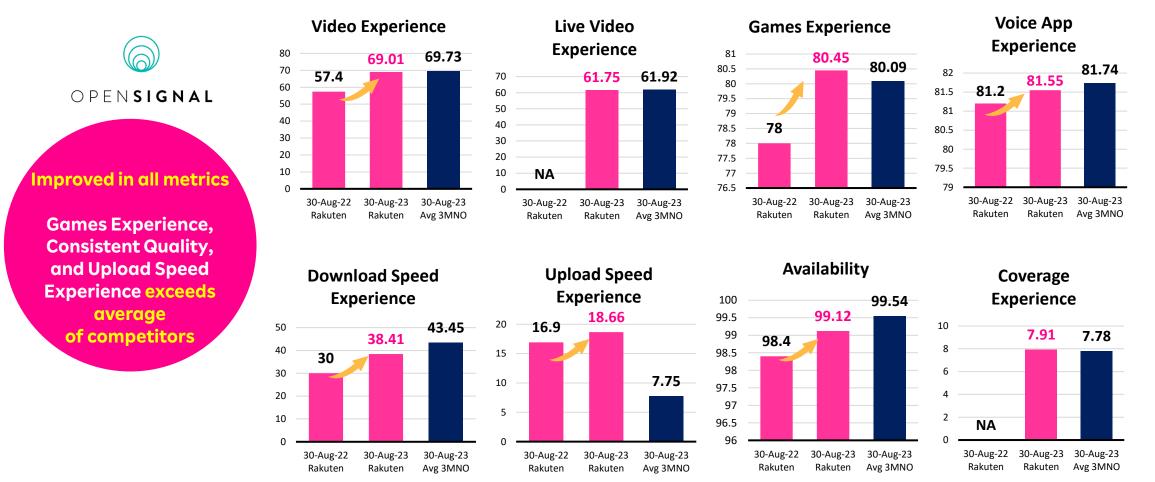
Wireless equipment for 700MHz band attached to 1.7GHz base station



By utilizing network technology and our existing base station sites, Platinum Band base stations buildout should be at low cost

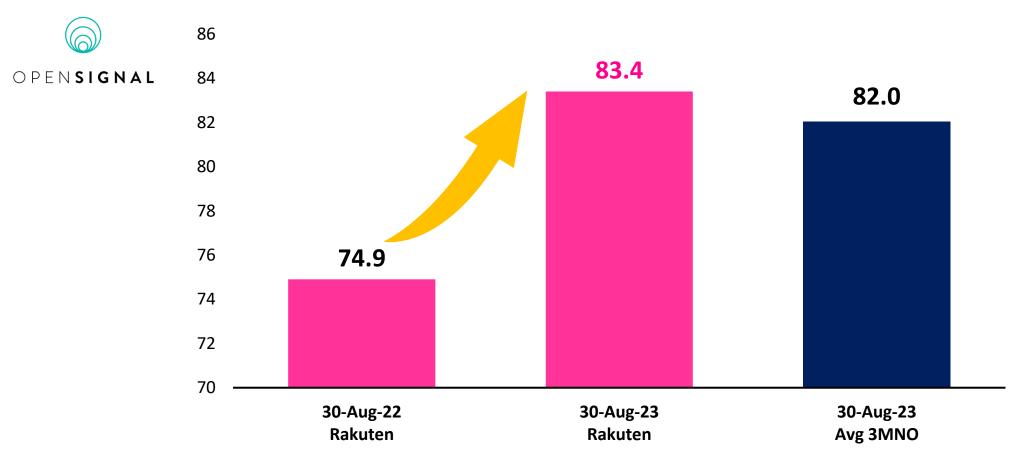
# Improving Network Metrics Even Before the Completion of Network Optimization

Network optimization with the new roaming agreement still too early to be reflected in Opensignal metrics, and yet, showing a great improvement with our own network



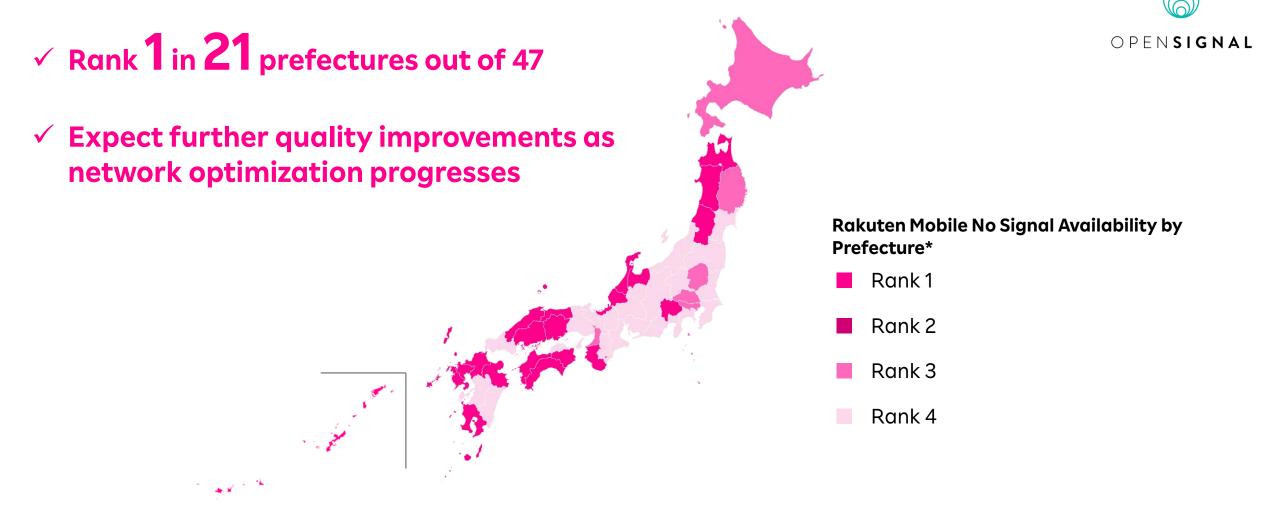
\* Created by Rakuten, based on Opensignal data from mobile measurements recorded May 30 - Aug 30, 2022 (90 days aggregation) and Mobile Measurements recorded from May 30 - Aug 30, 2023 (90 days aggregation) © 2023 Opensignal Inc.

# Highly Rated for "Consistent Quality", Exceeding the Average of Other MNOs



\* Created by Rakuten, based on Opensignal data from mobile measurements recorded May 30 - Aug 30, 2022 (90 days aggregation) and Mobile Measurements recorded from May 30 - Aug 30, 2023 (90 days aggregation) © 2023 Opensignal Inc.

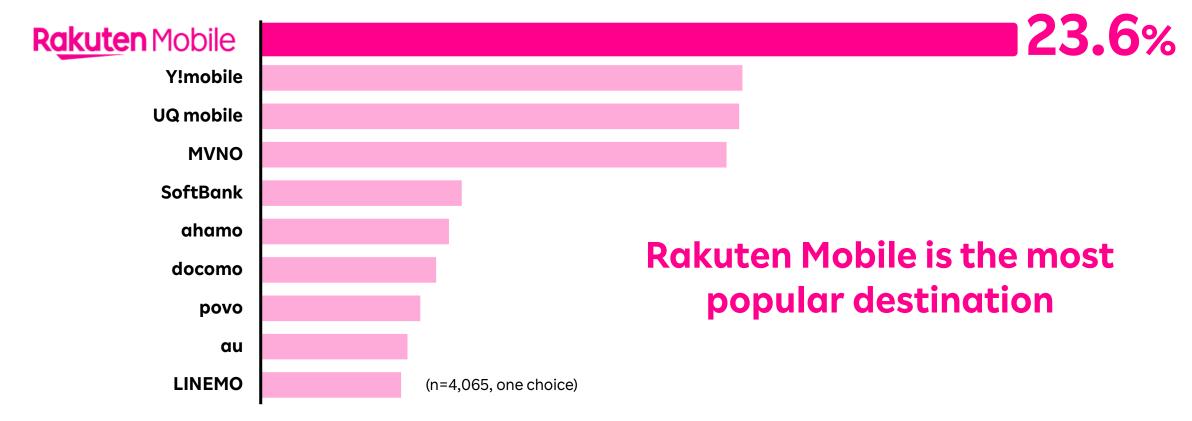
# Received High Ratings in Each Prefecture as an Indicator of Our Low Rate of Signal Loss



\* The chart was created by Rakuten, Based on independent analysis of mobile measurements recorded by Opensignal during the period Aug 2 – Oct 31, 2023 © 2023 Opensignal Limited. \* No Signal Availability is the average proportion of time that users on an operator's network had no signal.

## The Most Considered Option for Switching is "Rakuten SAIKYO Plan"

Q. Please choose one option that best describes the telecommunication company you are most considering switching to.



\* Source: MMDLabo, Survey on Considering Switching Telecommunication Services in September 2023, survey conducted between September 22, 2023 – September 27, 2023, https://mmdlabo.jp/investigation/detail\_2282.html

# **Progress Update on Network Optimization Based on New Roaming Agreement**

- The network optimization is taking longer than initially planned, especially with base station selection for roaming, but the project is making a good progress
- Base station activations are now being executed, and the remaining should be on-air mostly Q1 (Jan-Mar) next year





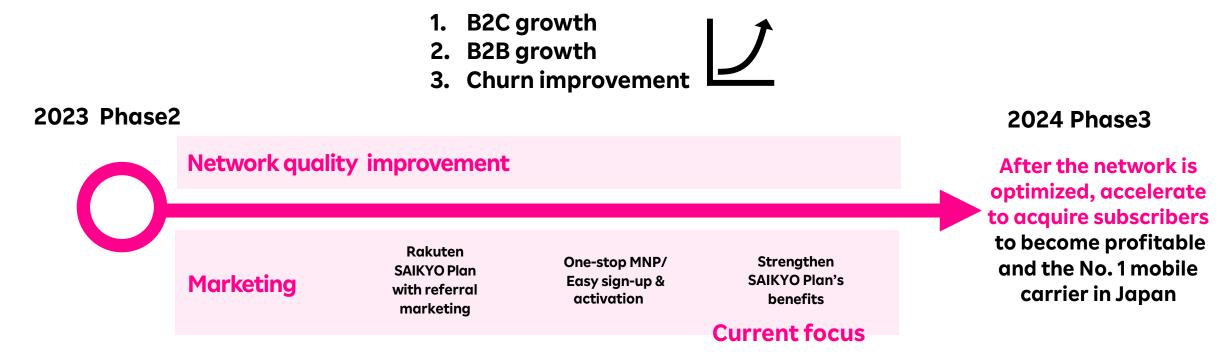
\* The actual roaming start timing will be decided after consultation with the other party, and the on-air schedule for each area will vary.

# **Growth**

Subscriber and top line growth

# Moving to Phase 3 (Becoming Profitable and No. 1 Carrier in Japan)

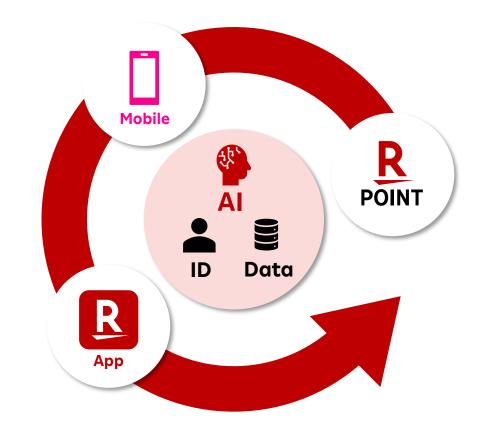
Already seeing accelerations in:

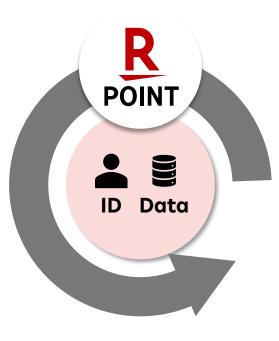


# First Step in an Ecosystem Evolution to Improve Marketing Efficiency

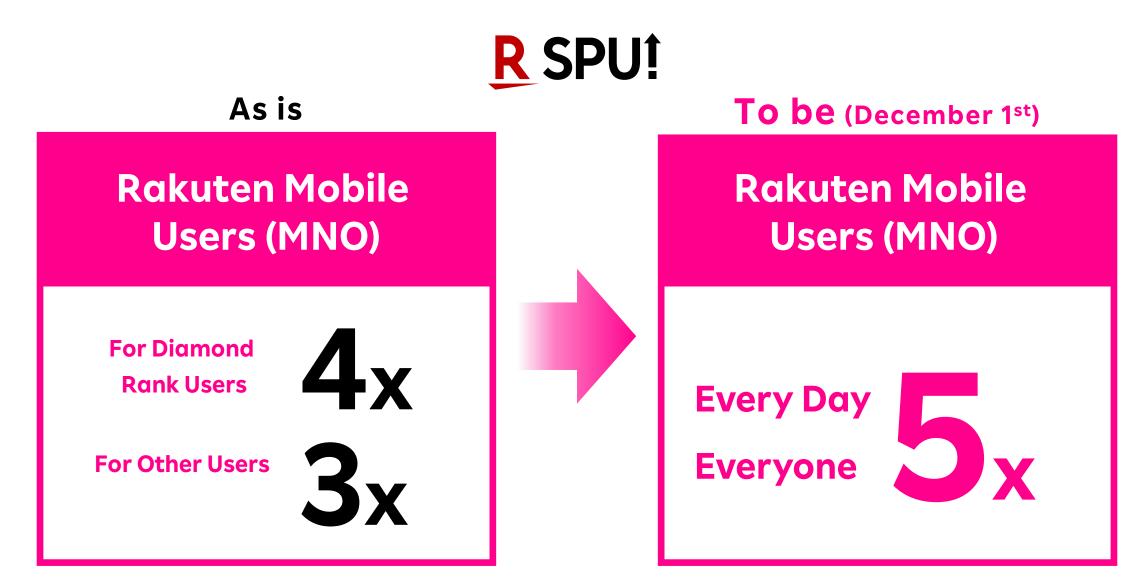
■ First step is to enhance Mobile

Today Ecosystem Based on Points Going Forward Ecosystem Based on Points, Mobile (Brain Share) and App (Cross cell growth by UX improvement) Al as a driver for better efficiency



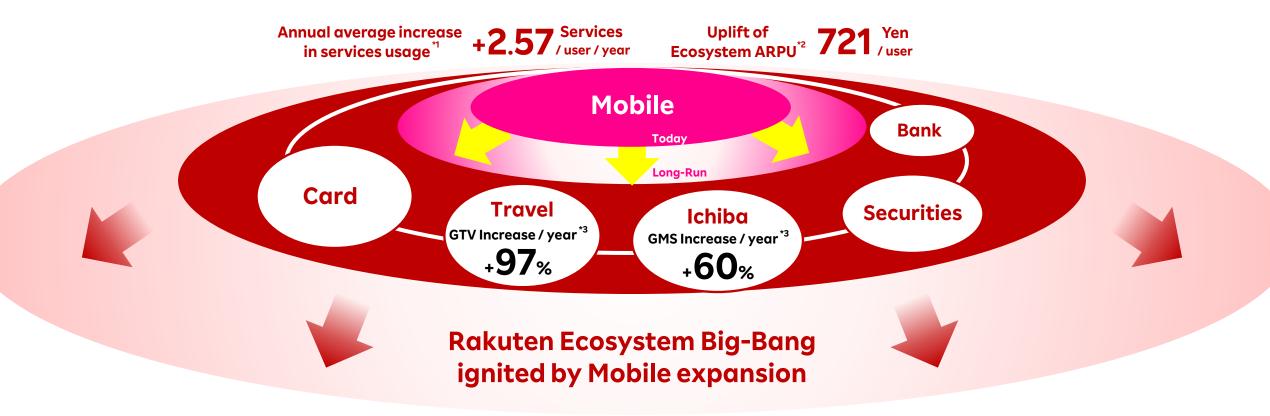


## SPU Program to Increase Benefits to Rakuten Mobile Users



## **SPU Program Revision**

- To accelerate the growth of Mobile to maximize the value of Ecosystem in the long-run
  - > Mobile proven to be the most nurturing material synergies to other businesses
  - > Mobile to play the central position within Ecosystem in the long-run



\*1 MNO users: Users who have an MNO contract from September 2019 to October 2022. Service usage is detected by points. The number includes MNO itself

\*2 The difference in average revenue between MNO users and non-MNO users over the past year at ten businesses

\*3 Users who have a contract with Rakuten Mobile between April 2020 and October 2022, and for whom 12 months or more have passed since the contract start. GMS growth is the weighted average of figures comparing GMS in the 12 months before

K the latest 12 months (2022/10~2023/9) for each contract start month. Travel includes both impact from mobile and travel demand recovery from the covid-19.

## **Rakuten SAIKYO Plan with Many Other Benefits**

Rakuten Mobile users who use Rakuten Card after entering the program will receive double points for spending in town



※要エントリー、上限500ポイント(期間限定ポイント)

Free Streaming of All NBA Games for Rakuten Mobile Users



#### Users who transfer from another carrier and apply to Rakuten SAIKYO Plan for the first time will receive 6,000 points



#### /**f:'J-**5" Special

Free streaming of Pacific League baseball games

## Rakuten TV 3 months free

### **Rakuten** MAGAZINE

Rakuten Magazine 90 days free

## **Rakuten** music

Rakuten Music 90 days free



YouTube Premium 3 months free

## More Marketing Initiatives to Come in Early 2024



## **Growth Drivers for Mobile B2B Business**



## 40% of 6,000 corporate clients already had relationship with Rakuten Group



Network quality improvement

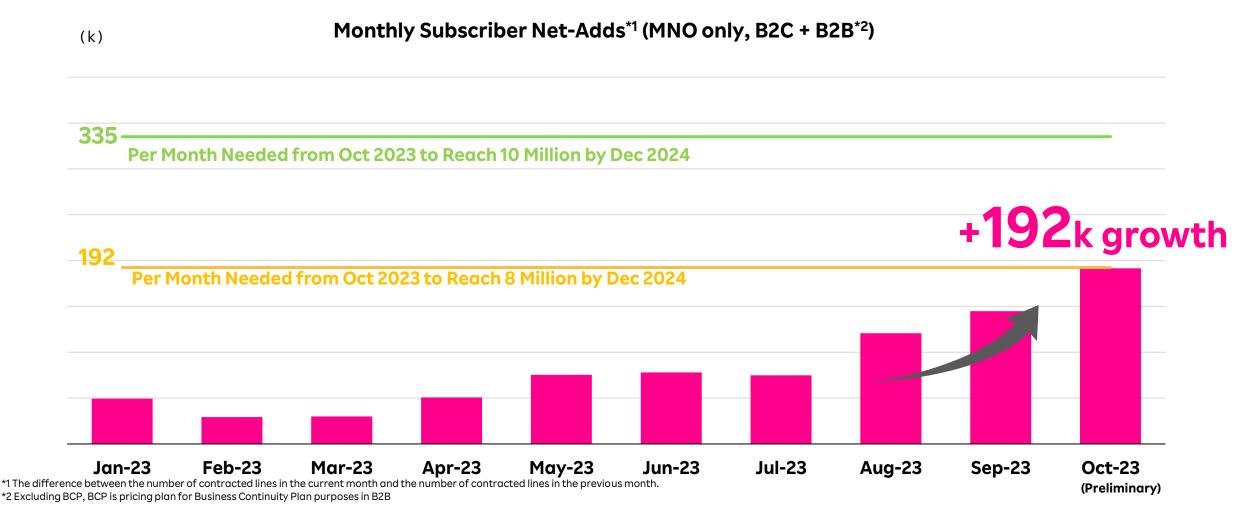


Subscriber and top line growth

2024~ Phase 3 Profitability for Rakuten Mobile

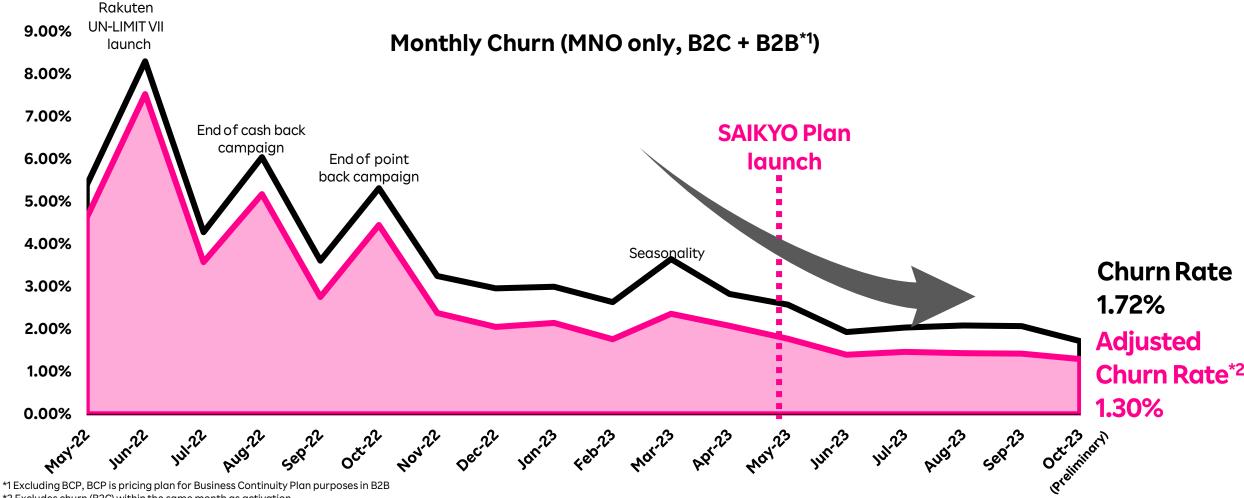
## Net-Adds Growth in Subscribers (B2C + B2B) Already Accelerating

Reached the level of monthly subscriber net-adds needed to reach 8 million subscribers by Dec 2024.



## Churn (B2C + B2B) to Decline Further

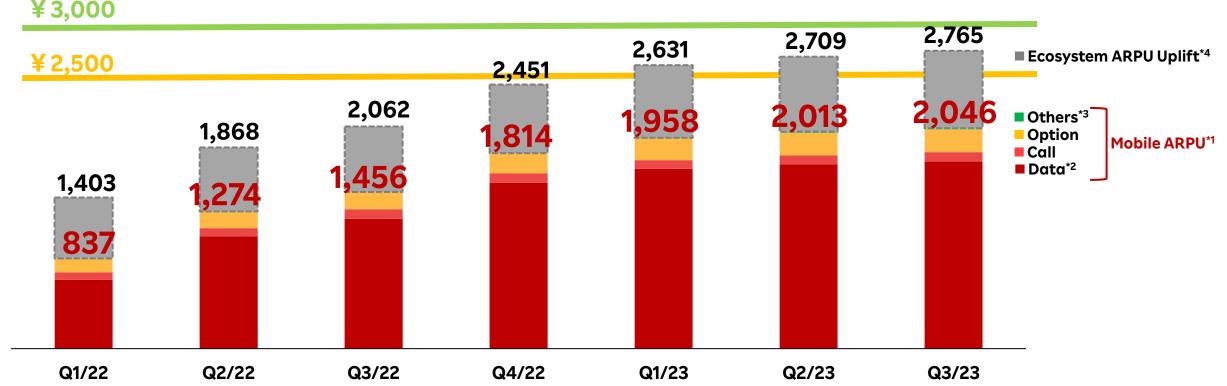
Churn is on the decline since June 2022 and should decline further as network quality improves



<sup>\*2</sup> Excludes churn (B2C) within the same month as activation.

## ARPU (B2C + B2B) Continues to Improve

Continuing to improve and achieve JPY 2,500-3,000 (excluding Ecosystem ARPU Uplift) by the end of 2024 to reach breakeven



### Mobile ARPU(MNO only, B2C + B2B) <sup>\*1</sup> + Ecosystem ARPU Uplift (JPY)

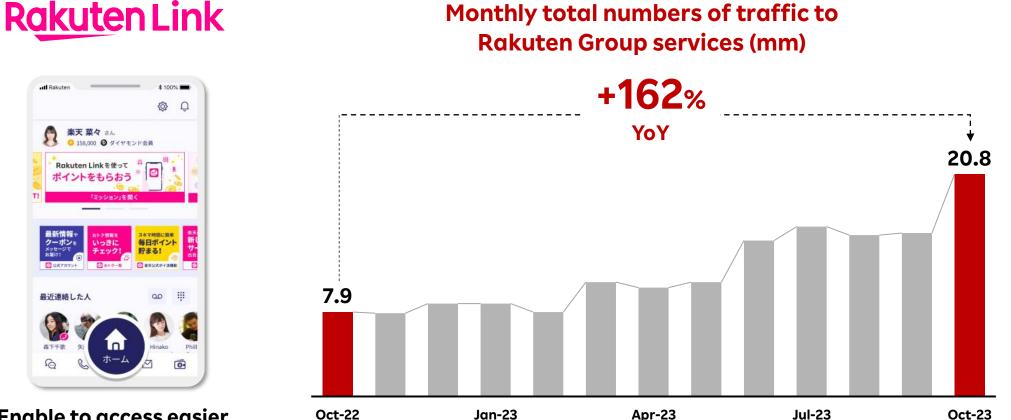
\*1 Excluding BCP, BCP is pricing plan for Business Continuity Plan purposes in B2B. Due to a definition change for subscribers and revenue breakdown, past amounts have been retroactively adjusted. The breakdown of revenue and KPIs is disclosed as an indicator used by management in decision-making (business management indicator). Therefore, the scope of calculation and breakdown may change in the future, and retroactive adjustments may occur.

\*2 Data ARPU: Point back campaign for users of less than 1GB during September-October 2022 are recorded as deduction from revenue. However, we include it in the calculation of ARPU here.

\*3 Include advertising, B2B miscellaneous income

\*4 Ecosystem ARPU Uplift: Difference in average revenue per person between MNO users and non-MNO users over the past year at ten businesses(Rakuten Ichiba, Rakuten Books, Rakuten Birect, Rakuten Kobo, Rakuten Fashion, Rakuten Travel, Rakuten Seiyu Netsuper, Rakuten Beauty, Rakuten Pay online payment). Calculated by comparing all MNO users and all non-MNO users for comparison. Due to the change in the target period for acquiring sample users, past amounts have been retroactively adjusted. R

## **Rakuten Link's New Feature "Home" Helps send Customers to Group**



**Enable to access easier** New Rakuten services, limited information, and features you want to use

all Rakuten

最近連絡した人

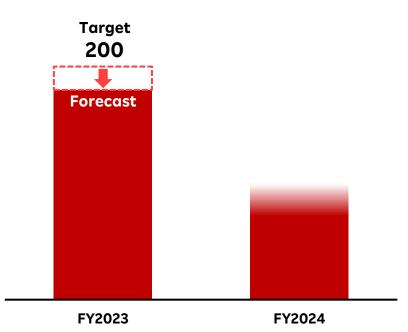
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(Updated October 16th)

## Capital Expenditure Update and Forecast\*1\*2

■ FY2023 capital expenditure to be below JPY200 billion guidance

(JPY bn, Rakuten Mobile, Inc.)



### Platinum Band-related 10-year cumulative capital expenditure of JPY 54.4 billion (including interference remediation costs)

- Initial focus on coverage inside buildings in cities
- Will be back-end loaded in the 10-year period

### • Maintenance capital expenditure will not be material

- The network is new
- Virtualization of network enhances hardware redundancy
- Current network can support well over 10mm subs and no material capital expenditure necessary for capacity in FY2024-25

\*1 Includes capital expenditure for 1.7GHz, 3.7GHz, 28GHz, 700MHz and indoor solution, but excludes IFRS16 right-of-use assets, capitalization for specified base stations opening fees. \*2 May be affected by the delivery status of equipment related to base station construction.

## Rakuten Mobile's Main Cases against NTT Integration and the Abolition of NTT Law

- NTT integration and abolition of NTT Law, which is currently being discussed by certain parties, may lead to monopolization of the market and return Japan into an isolation. This, in turn, may lead to an increased burden on the public, including a higher price for mobile.
- Not only NTT but the whole telecommunications industry in Japan is expected to return benefits to the people through a promotion of domestic competition and a stronger global competitiveness.

Case 1 : The Abolition of NTT Law

## **Strongly Object**

By abolishing NTT Law, for example, dominant telecom operators, namely NTT DoCoMo and NTT East and West, can collaborate, and that could lead to the elimination of competing operators (return to monopoly).

\*1 Switching offices, poles, pipes, etc. built with public funds \*2 Approximately JPY40 trillion in today's value Case 2: Use of NTT's "Special Assets"<sup>\*1</sup>

## **Continue Discussion**

"Special Assets"<sup>\*1</sup>, which amounts to 25 trillion yen<sup>\*2</sup> and was succeeded by NTT, are vital assets for all telecommunications operators, not just NTT, to provide services to the people, and we should carefully discuss how they should be managed.

#### Case 3: NTT's Obligation to Drive R&D and Share Results

## **Not Opposed to Revision**



However, to strengthen international competitiveness, we cannot only support NTT alone. We need policies/initiatives to promote innovation through aggressive R&D and investments by Japanese companies.

## 3. Financial Strategy

## **Our Commitment: Disciplined Financial Policy**

We highly value the relationship with investors

# Announced early redemption of JPY 68bn subordinated bond at the 1st call date (Dec 2023)

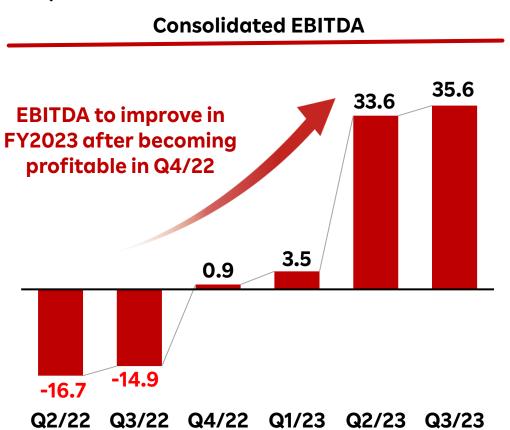


Details of 1st Subordinated Bonds

- Total amount of issue: JPY 140 billion (remaining balance is JPY 68 billion)
- Date of issue: December 13, 2018
- Maturity date: December 13, 2053
- Date of early redemption: December 13, 2023 (first optional redemption date)
- Total amount of early redemption: JPY 68 billion
- Early redemption amount: JPY 100 per JPY 100 of each bond

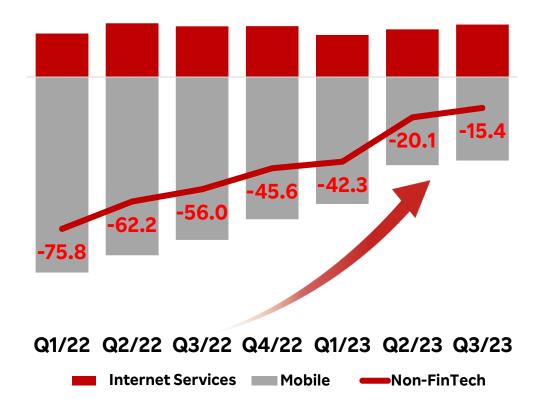
## **EBITDA Continuing to Improve**

(JPY bn)



Non-FinTech (Internet Services + Mobile Segment) EBITDA<sup>\*</sup>

> Aiming for profitability in Q4/23 for Non-FinTech EBITDA



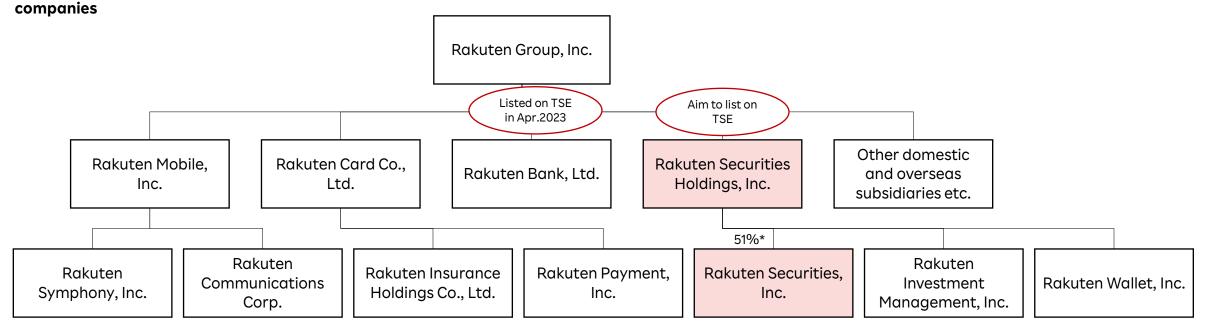
\* Due to the introduction of IFRS 17, EBITDA of Q2/22~Q1/23 were retroactively adjusted respectively. \* Non-FinTech EBITDA: Internet Services Segment + Mobile Segment EBITDA.

## **Capital and Business Alliance with Mizuho Securities**

- Investment from Mizuho Securities in the amount of 87bn yen for additional 29% of Rakuten Securities, Inc. (Continue to be a consolidated subsidiary of Rakuten Group after the transaction)
- IPO of Rakuten Securities Holdings still in the pipeline and will be executed at the appropriate timing

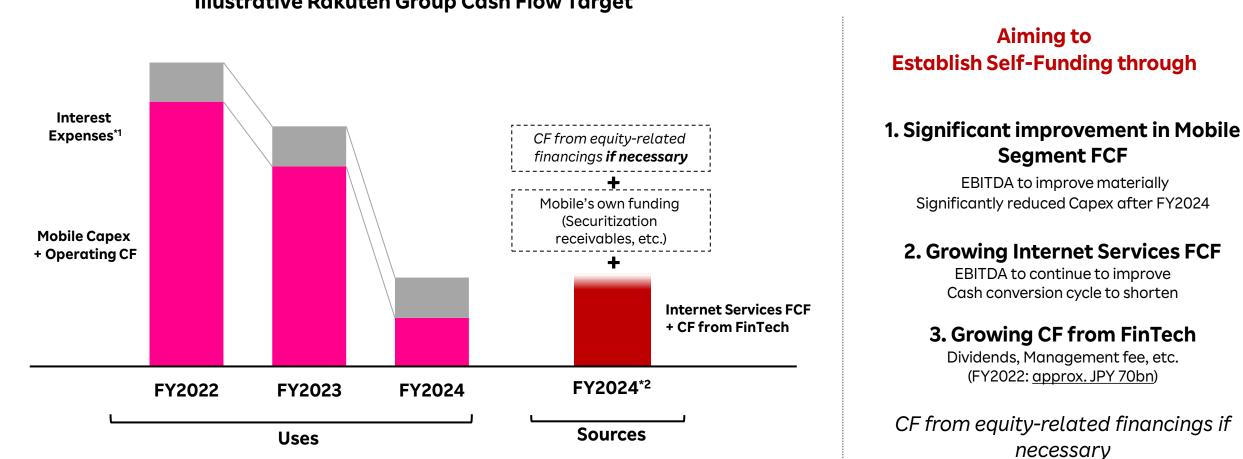
#### Initiatives for further FinTech Business Expansion (As of November 9, 2023)

- April 2023 Rakuten Bank listed on TSE prime market
- November 2023 Completion of Rakuten Card and Rakuten Payment reorganization
- November 2023 Additional share transfer of Rakuten Securities, and announced of strategic capital and business alliance enhancement between the two



\* 19.99% of Rakuten Securities, Inc. common stock already held by Mizuho Securities in November 2022. Additional 29.0007% will be transfer to Mizuho Securities in December 2023. 51% shareholdings is after the transaction.

## **Path to Self-Funding**



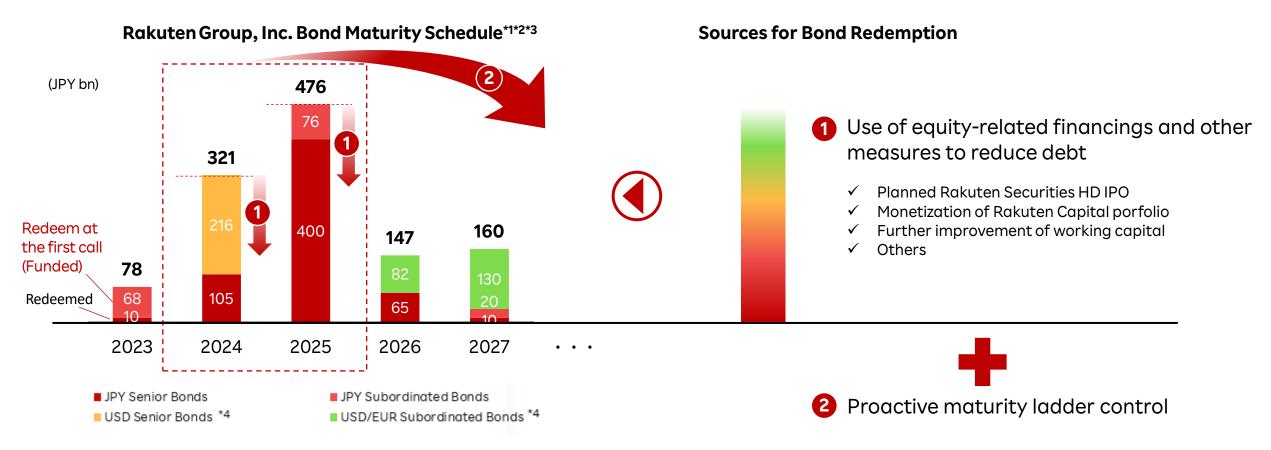
**Illustrative Rakuten Group Cash Flow Target** 

\*1 Interest expense and IFRS 16 cash out at non-Fintech entities. Assumes refinancing of existing bonds. \*2 Based on preliminary budget

FY2024~\*2

## **Proactive Management of Bond Maturity**

Use of equity-related financings to reduce gross debt
 Proactive debt maturity management under consideration



\*1: As of Sep 30, 2023. Issue amount basis.

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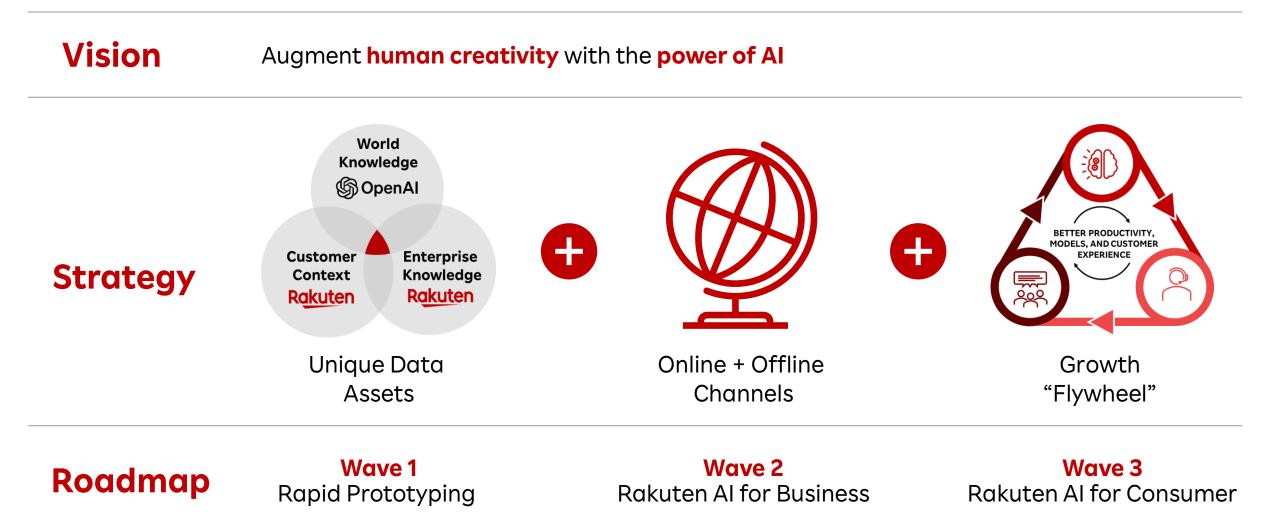
\*2: Assuming subordinated bonds will be redeemed at each 1st call date.

\*3: This does not include the maturity schedule of other debt outside of bonds.

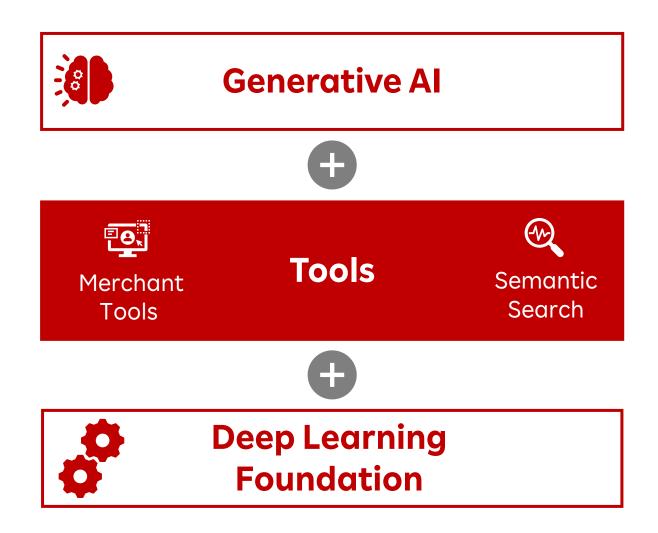
\*4: The swap contracted exchange rate is used for USD/EUR-denominated bonds.

## 4. Al Strategy

## **Rakuten's Al-nization Plan**

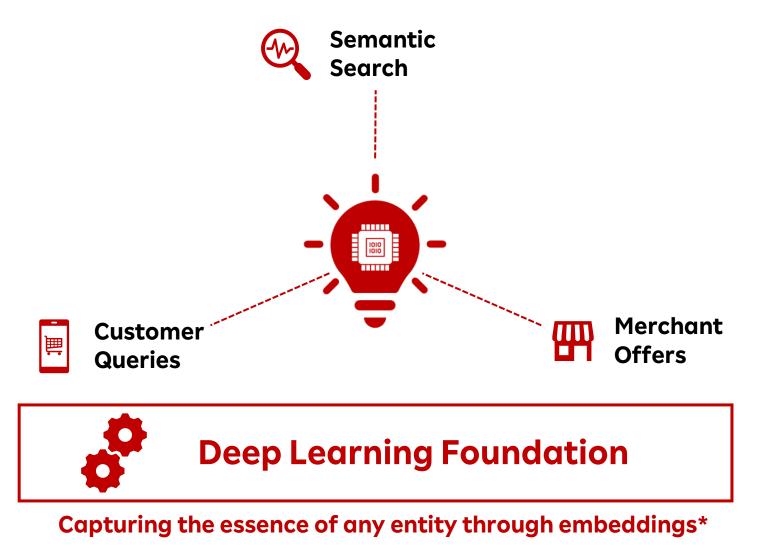


## **Retrieval Augmented Generation\*** Connects Generative AI with External Tools



\* Retrieval Augmented Generation: A technology to search for information not included in the AI model at the time it was built. It uses the search results to create responses.

## One of the Most Important Tools is **Semantic Search**



\* Embedding is a way to represent a word or an item in numeric values. Words with similar meanings will be closer in distance when computed mathematically. Embedding captures the essence of an item in multiple dimensions and enables matching or measurement of similarity between any two items.

## Semantic Search for Fashion

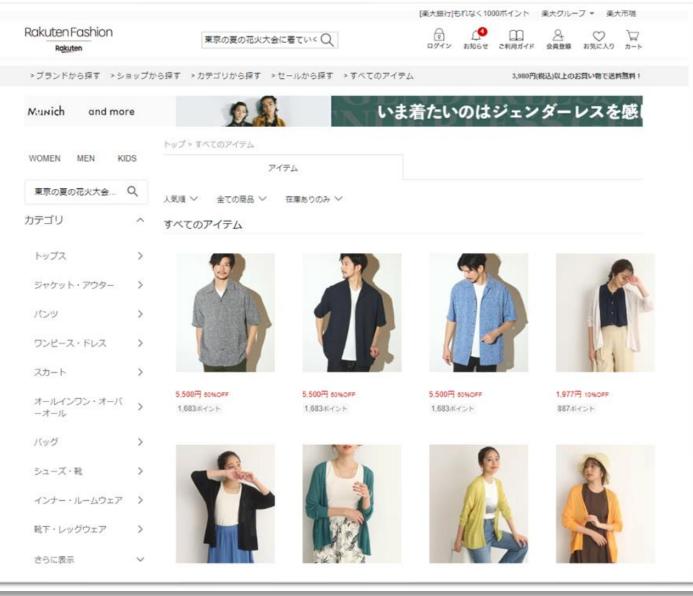
Search that understands what you mean, not just what you say

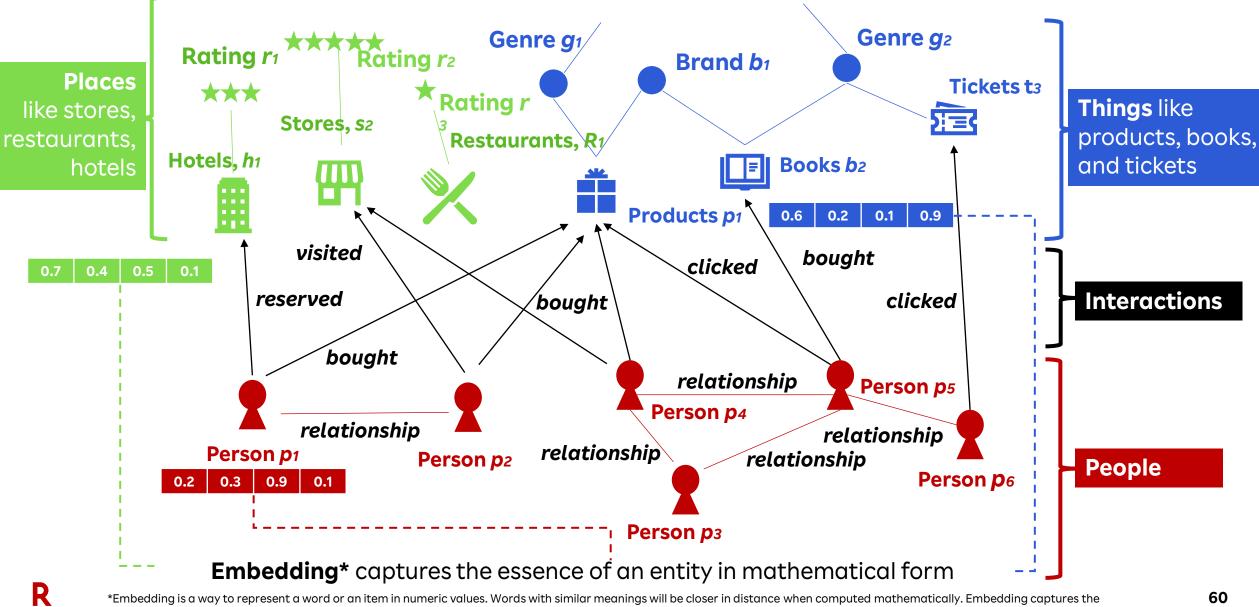
### Reduce Zero Hit Rate to ~1% +3% searches per session +4% sessions per user +5% Last GMS from Search

Results from semantic search AB tests carried out from July 14, 2023 to August 8, 2023.

### ▶ 東京の夏の花火大会に着ていく服

"Clothes to wear to a summer fireworks festival in Tokyo"

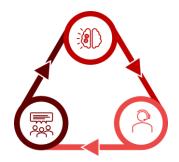




### Help People Find Any Information through Search, Recommendation and Ads

\*Embedding is a way to represent a word or an item in numeric values. Words with similar meanings will be closer in distance when computed mathematically. Embedding captures the essence of an item in multiple dimensions and enables matching or measurement of similarity between any two items.

## We are Continuing Our Mission to Augment Human Creativity with the Power of Al







### HUMAN INTELLIGENCE + ARTIFICIAL INTELLIGENCE

Combine human expertise with cutting edge AI technology to build the world's best AI system

### ACTION-ORIENTED APPLICATIONS

Design solutions that solve realworld problems from search, recommendations to ads

### CREATE OPPORTUNITY

Make AI a force for good that helps businesses and consumers, drives productivity, and fosters prosperity



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