



BANK OF JAPAN

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Digital Advertising Activities in Japan's SPPI



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Introduction



Basic Information of Japan's SPPI

Scope

- Services provided by businesses to other businesses and governments (excluding services provided to households).

Purpose

- Capture developments in supply-demand conditions for service products provided to business and government.
- Used as a deflator of GDP (mainly used in corporate sector).

Index structure

- Compiled and published only on commodity basis (not industry basis).



Basic Information of Japan's SPPI

Time of release

- Monthly
- Preliminary indexes are released on the 18th business day of the month following the reference month.

Sources for weights

- "2015 Updated Input-Output Tables"
- Other various statistics are also employed as source data (including "Economic Census for Business Activity").

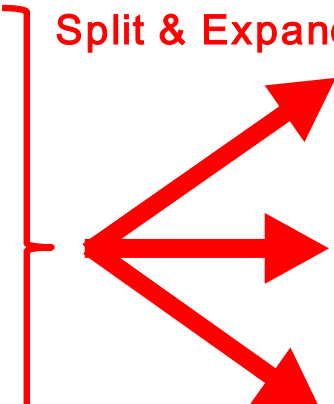

Rebasing

- Every five years (base year and weights are updated).
- At the time of rebasing, we incorporate new services and reconsider the pricing and quality adjustment methods



Rebasing

- ✓ Japan has just rebased SPPI this June from 2010 base to 2015 base.
- ✓ We have expanded the coverage of two digital services; “Web portals”, “Internet advertising” (as shown in yellow).

2010base			2015base	
Items	Weights		Items	Weights
Internet related services	9.2	Split & Expand 	Web portals	14.3
			Internet support services	4.1
			Internet data centers	1.2
Internet advertising	6.8	Expand 	Internet advertising	10.9



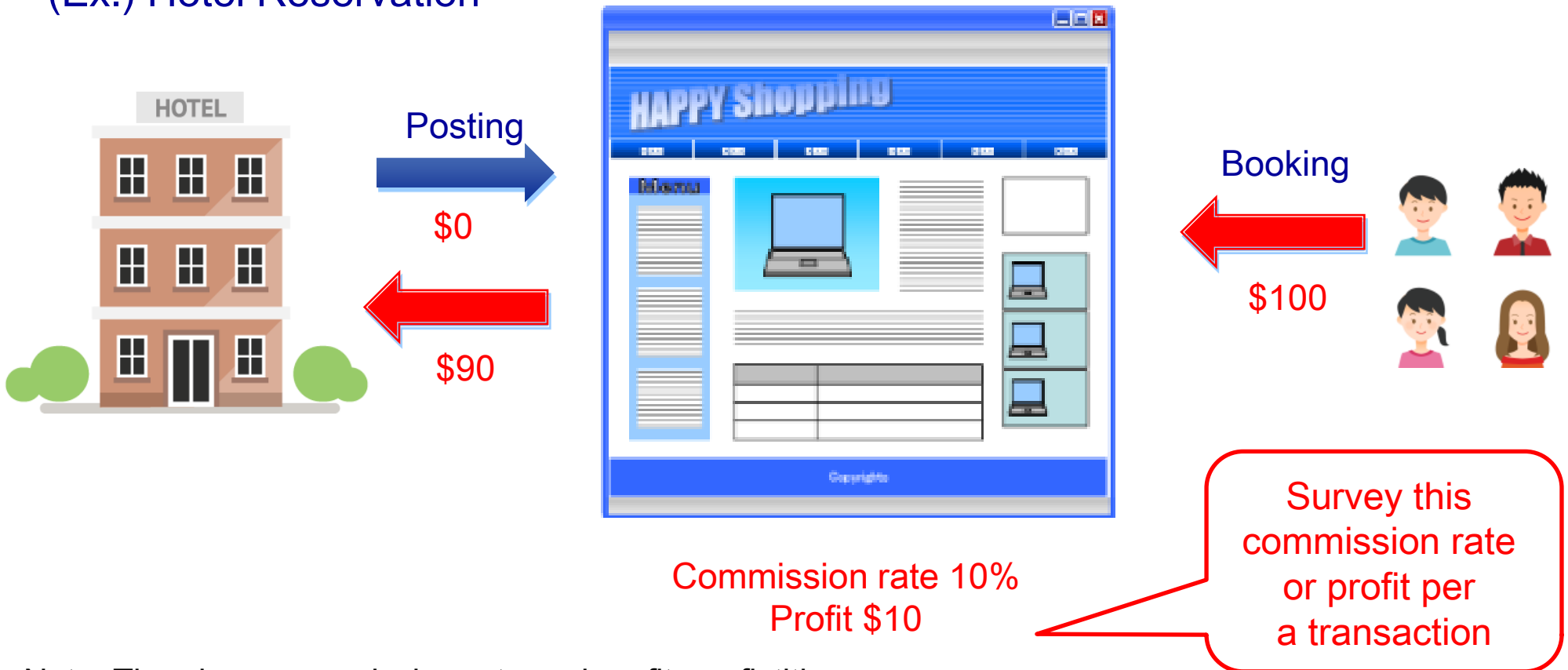
Web Portals



Web Portals

- ✓ “Web portals” offers searching function by intermediating companies and customers online.

(Ex.) Hotel Reservation



Note: The above commission rate and profit are fictitious.



Web Portals

(Ex.) Restaurant Information



Survey posting & booking fee

Note: The above commission rate and profit are fictitious.



Web Portals

- ✓ Each web portal has a different business model, even though they deal with the same products or services.

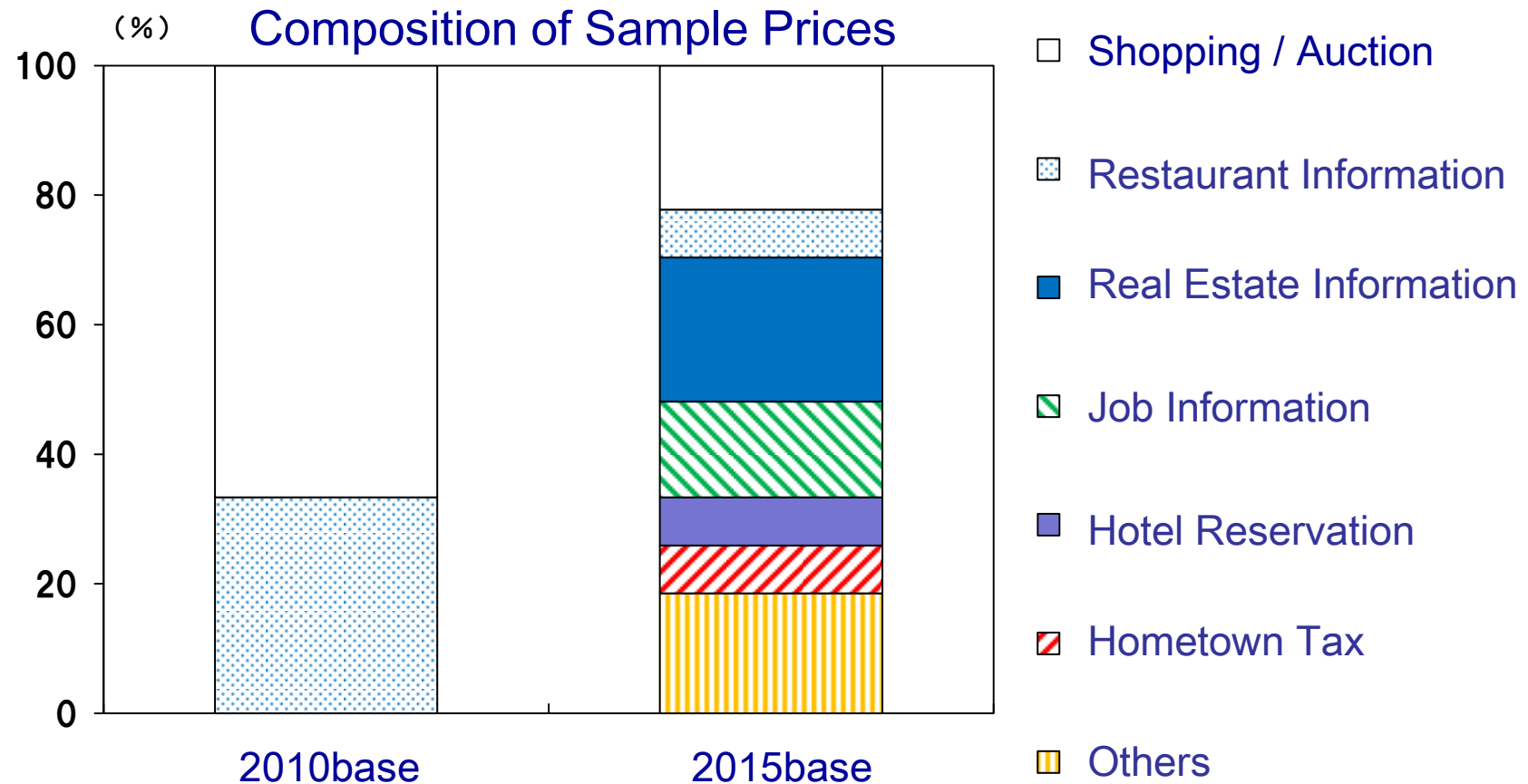
Web Portal Categories	Fixed Fee		Fee according to the Volume of the Purchase		Mixed Fee
	Per Shop	Per transaction	Fixed Unit Price	Percentage Fee	
Shopping / Auction				✓	✓
Restaurant Information					✓
Real Estate Information	✓	✓			
Job Information		✓			
Hotel Reservation				✓	
Hometown Tax	✓			✓	
Others	✓		✓		✓

Note: Not all the web portals are included to the above table.



Web Portals

✓ Many kinds of web portals are newly incorporated to our new index (2015 base).



Internet Advertising



Internet Advertising

- ✓ “Internet advertising” provides advertising space via ad network operated by web portals.

Advertising Categories		Definition
Reservation Advertising		Advertisement transacted with fixed price using a non-auction method.
Programmatic Advertising	Listing Ad	Advertisement on the search screen linked to the keyword searched by the user using auction method.
	Display Ad	Advertisement whose effect is assumed to be high based on the content of website and the user's browsing history, etc. using auction method.
	Video Ad	
Affiliate Advertising		Advertisement whereby if a user views an Internet advertisement and then performs some predetermined action, the media or user is paid some remuneration.



Internet Advertising

(Ex.) Reservation advertising



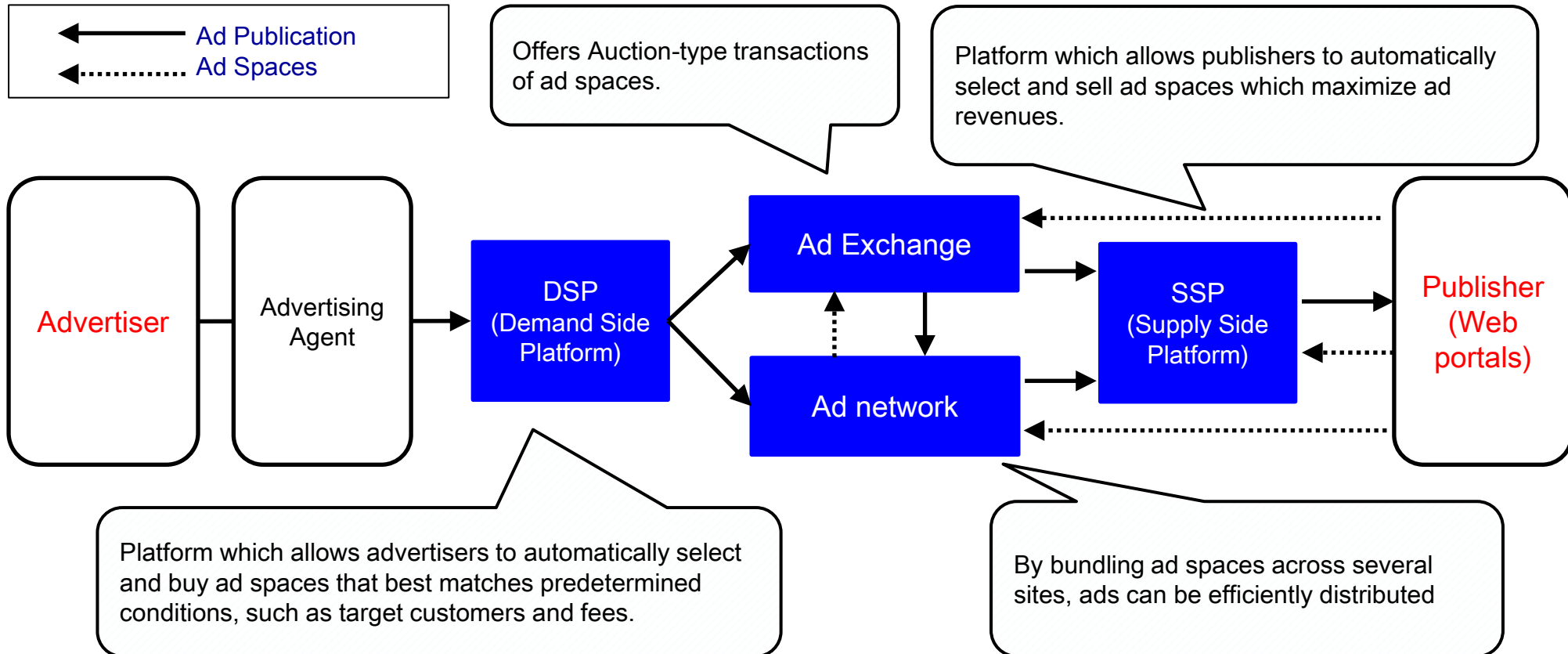
Media Sheet

Listing fee	\$15,000
CPM(Cost Per Miles)	\$0.8
Guaranteed impressions	1,875,000
Assumed CTR (Click Through Rate)	0.29%
Listing Period	1 week
Listing page	Top Page



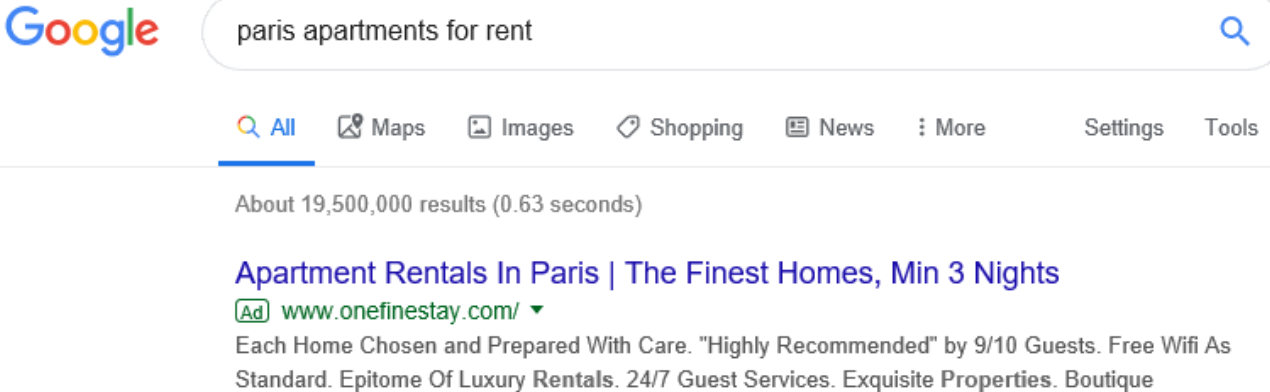
Internet Advertising

(Ex.) Programmatic advertising



Internet Advertising

(Ex.) Listing ads



Google

paris apartments for rent

All Maps Images Shopping News More Settings Tools

About 19,500,000 results (0.63 seconds)

Apartment Rentals In Paris | The Finest Homes, Min 3 Nights
 Ad www.onefinestay.com/

Each Home Chosen and Prepared With Care. "Highly Recommended" by 9/10 Guests. Free Wifi As Standard. Epitome Of Luxury Rentals. 24/7 Guest Services. Exquisite Properties. Boutique

(Ex.) Display ads

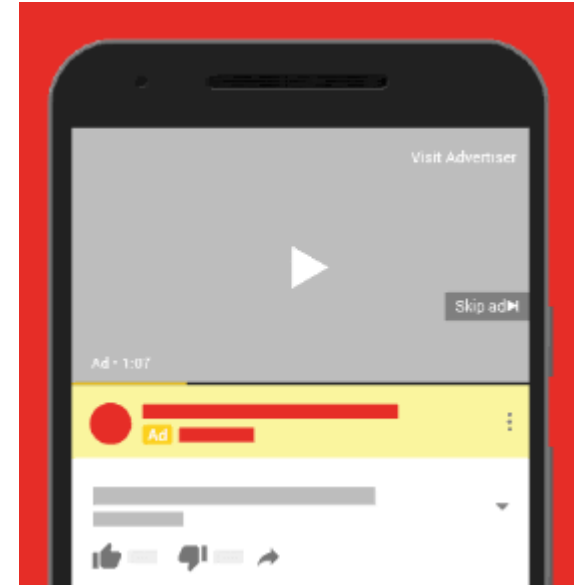


Featuring Izu's Fishermen Inns

Introducing 8 Quality Lodges Where You Can Eat Fresh, Luxurious Seafood at Izu!

Rakuten Travel

(Ex.) Video ads



Visit Advertiser

Skip ad

Ad - 1:07

Ad

If you click,
 "Ads by Google" is displayed



Internet Advertising

(Ex.) Affiliate advertising

Advertisers



Resister

Affiliate agency



Listing ads

Media



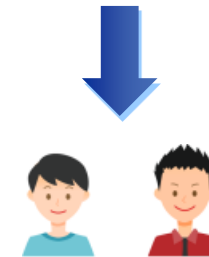
Once the audience click the ads, jump to the link and put tag

Pay the fee based on the amount of conversion.

<https://track.affiliate-b.com/>

Track activities

- Conversion {
- ✓ Purchase products
 - ✓ Resister membership
 - ✓ Download apps



Internet Advertising

✓ Our pricing method is as below.

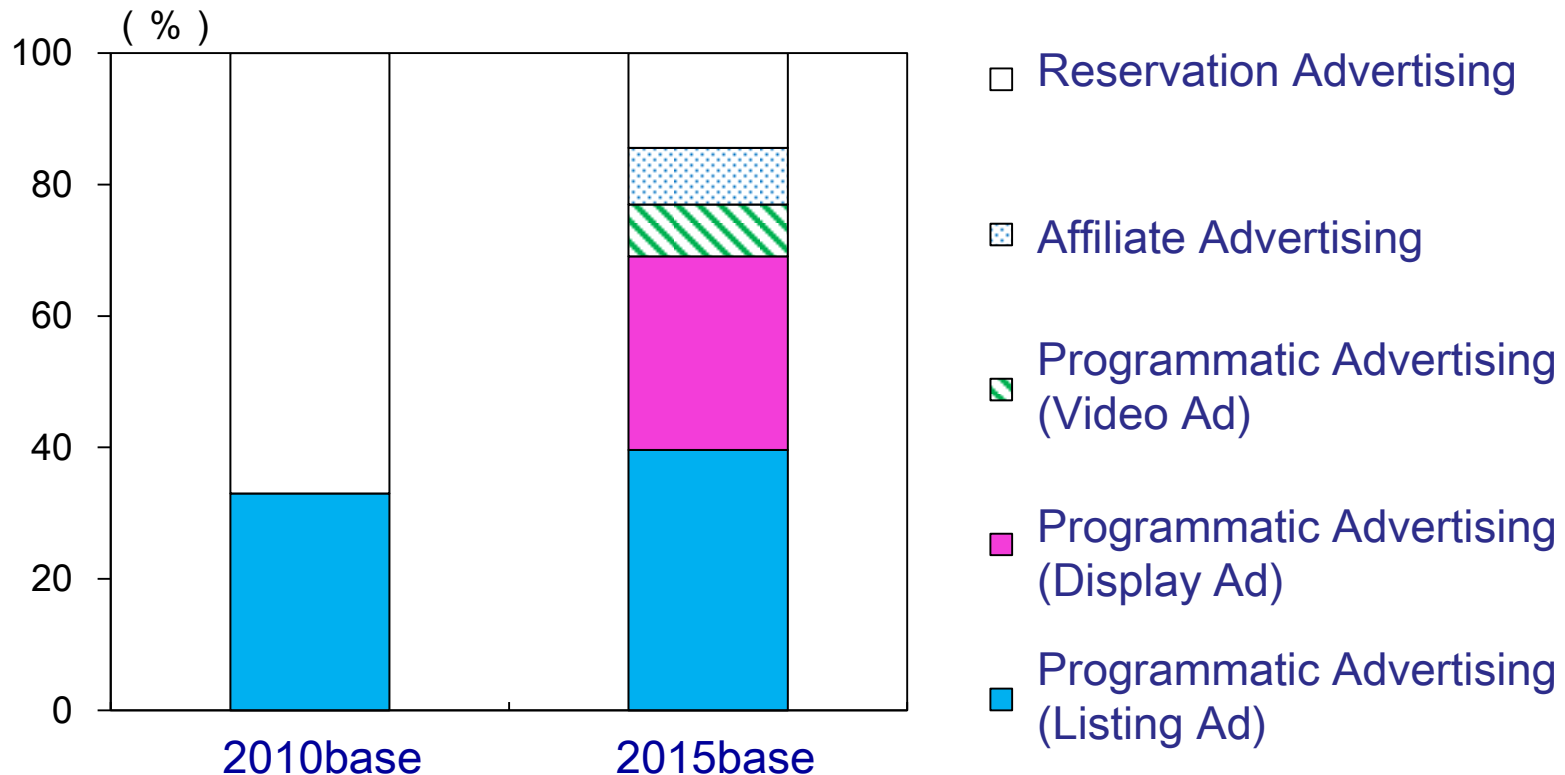
Advertising Categories		Pricing Method	Unit
Reservation Advertising		List Price - Specify the media and ad space	Impression
Programmatic Advertising	Listing Ad	Unit Value Method - Specify the search engine and advertiser's industry	Click
	Display Ad	Unit Value Method - Specify the ad network and advertiser's industry	Click
	Video Ad	Unit Value Method - Specify the ad network and advertiser's industry	View
Affiliate Advertising		Unit Value Method - Specify the advertiser's industry	Conversion



Internet Advertising

- ✓ We designed the composition of sample prices based on the amount of real transaction value, which is published by one of the biggest agencies in Japan.
- ✓ Programmatic and affiliate ads are expanded in 2015 base index.

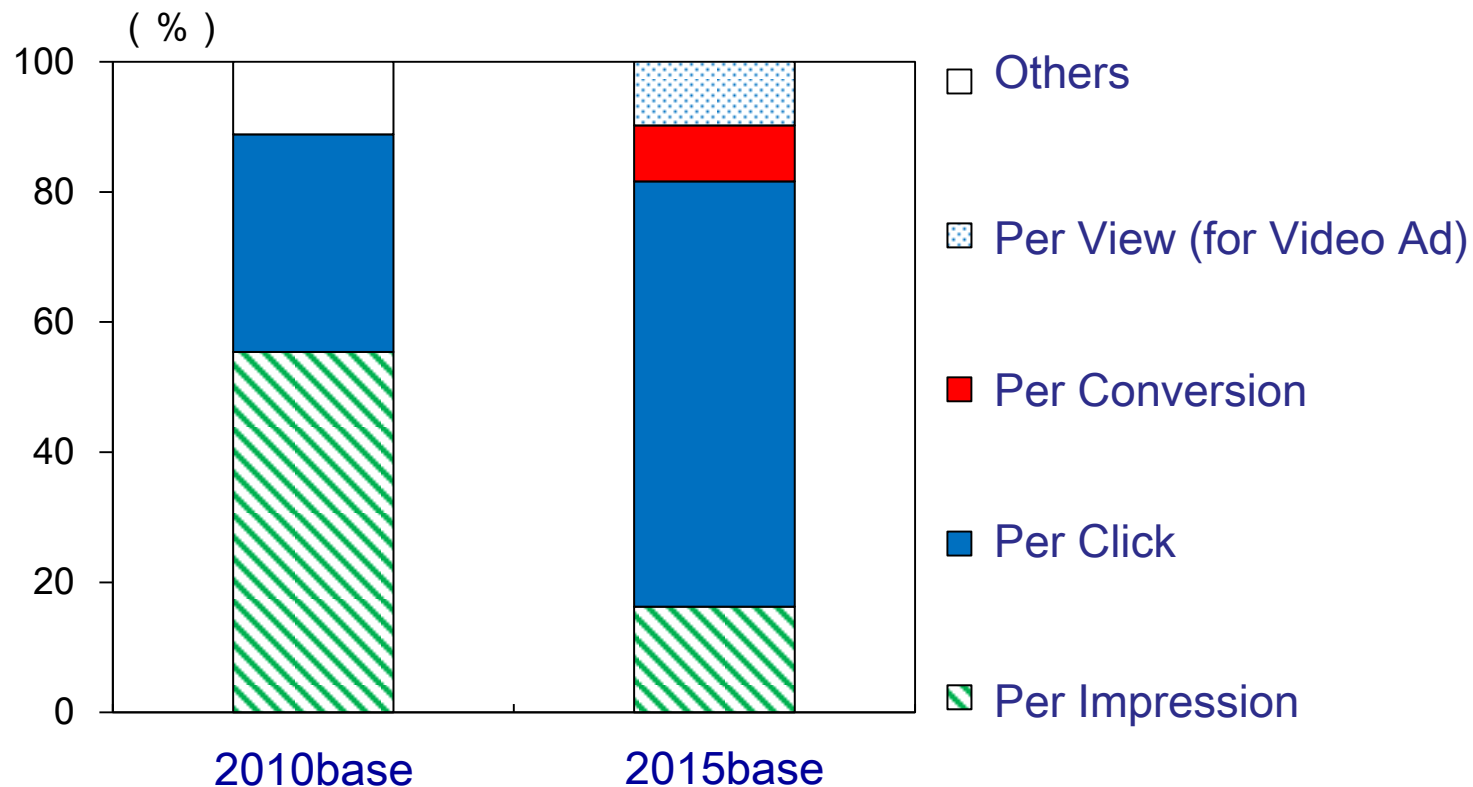
Composition of Sample Prices by Type of Advertising



Internet Advertising

- ✓ The Cost per click is expanded in 2015 base index.
- ✓ The Cost per conversion and cost per view are newly incorporated.

Composition of Sample Prices by Unit of Sample Prices



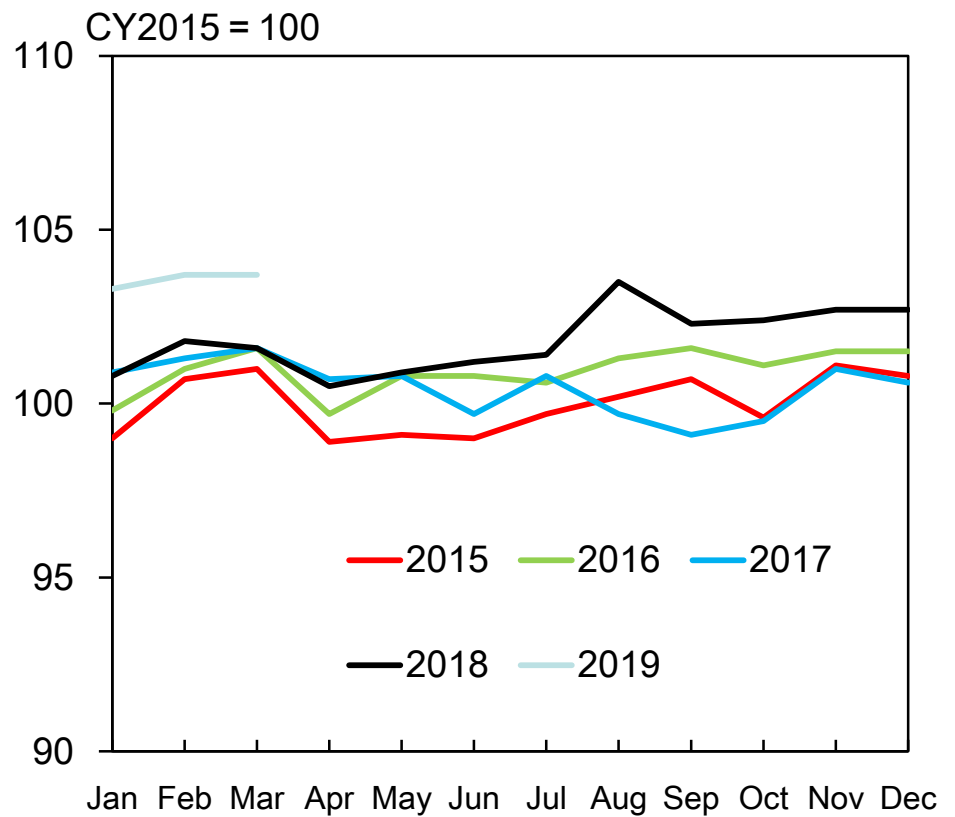
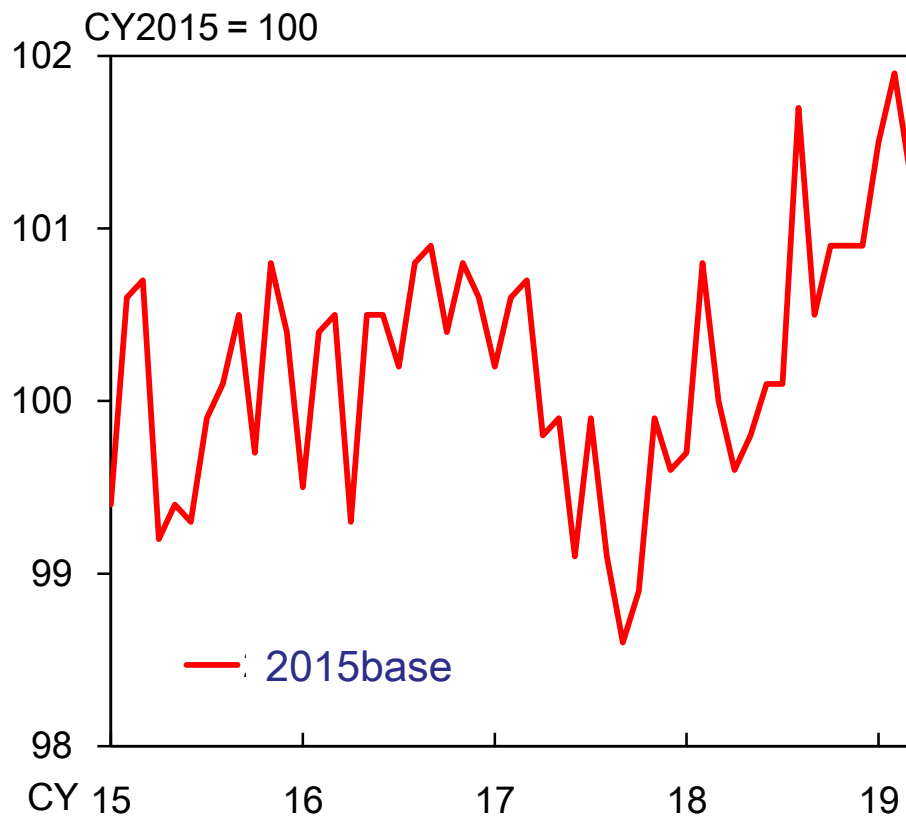
Price Trends in Digital Activities



Price trend of Web Portals

- ✓ The index of “Web portals” is rising especially these days reflecting increase in listing fees at real estate and job search web portals.
- ✓ Gradual seasonal trends can be observed.

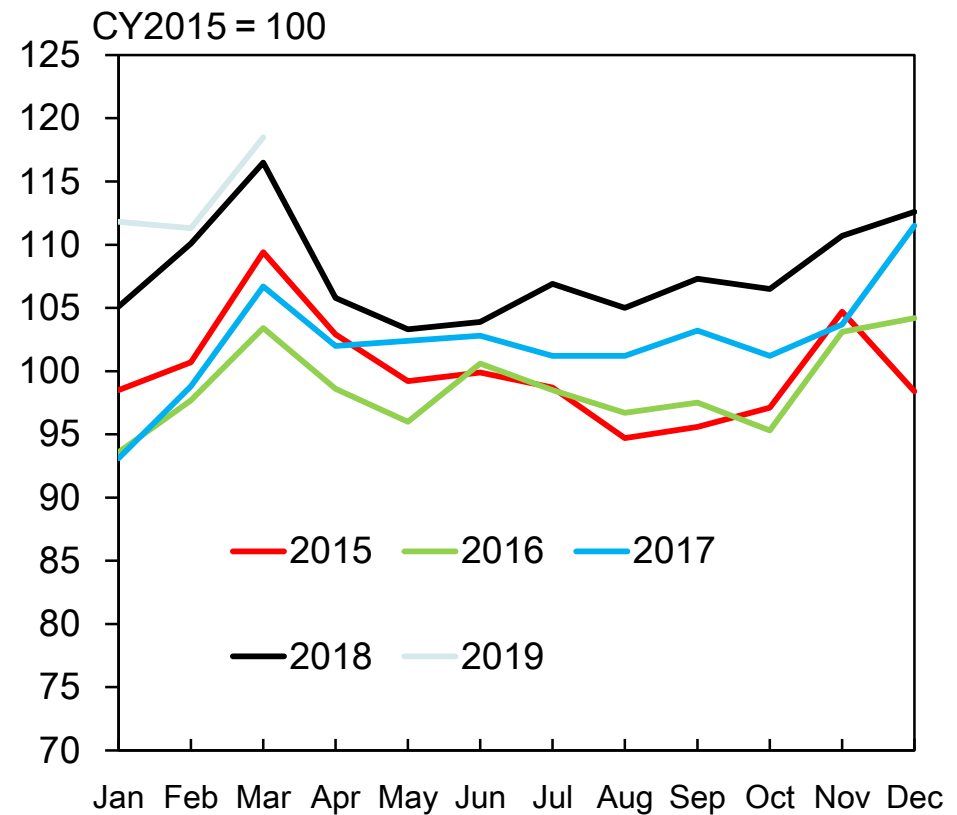
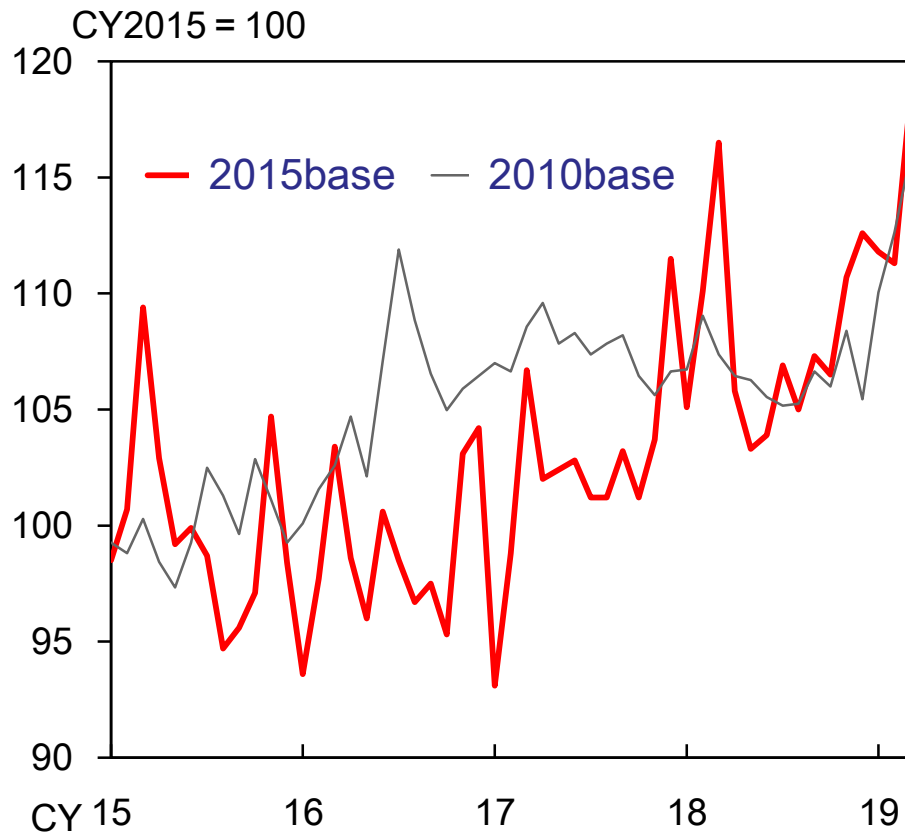
Price Index of “Web portals”



Price trend of Internet Advertising

- ✓ The index of “Internet advertising” is rising reflecting increase in demand.
- ✓ Seasonal trend is clear like TV and newspaper advertising.

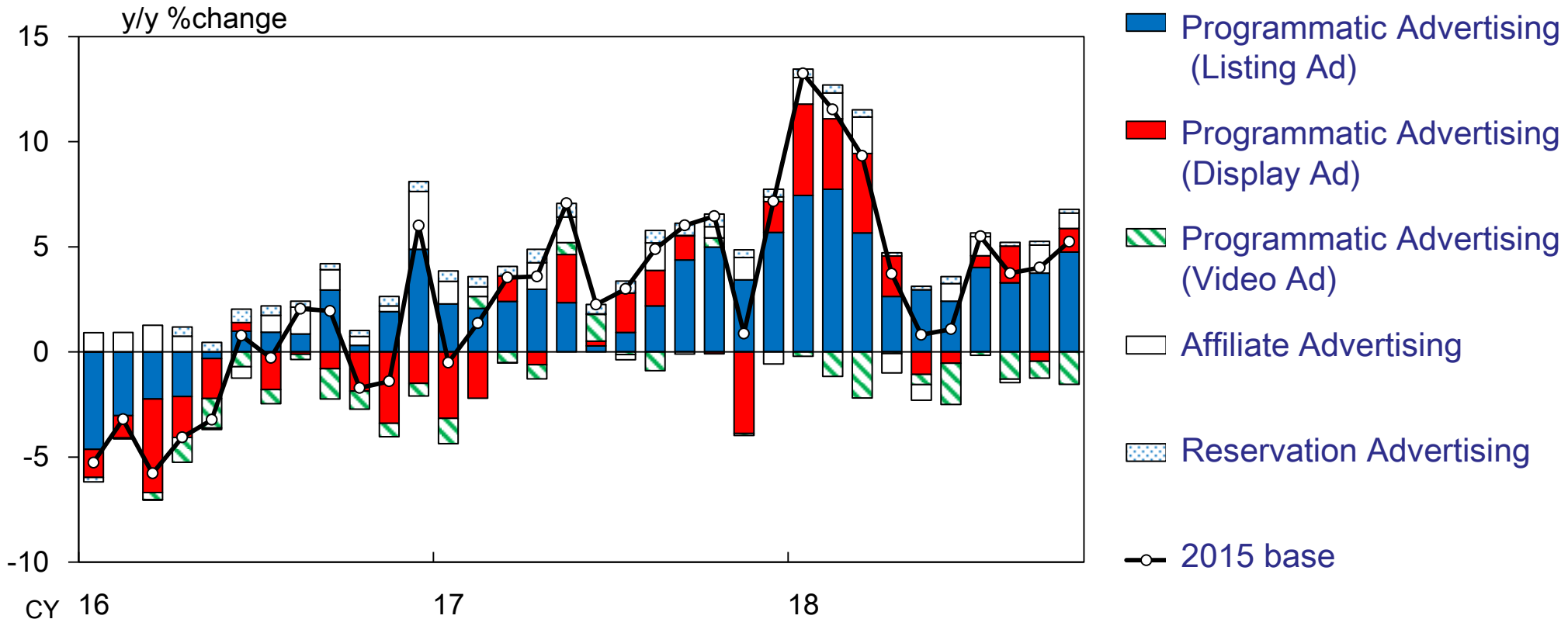
Price Index of “Internet advertising”



Price trend of Internet Advertising

✓ Looking at the Decomposition of Year-on-Year Change, the price of listing ads has been rising due to increase in demand under the situation that the ads space are comparably limited.

Decomposition of Year-on-Year Change : Internet Advertising in 2015 base

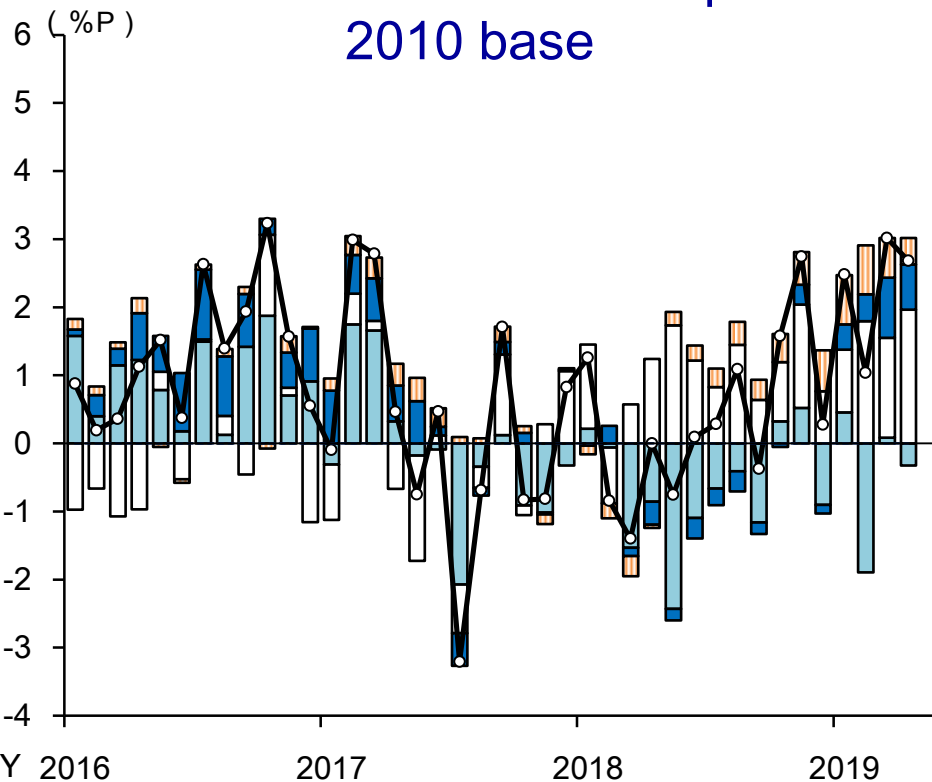


Price trend of Internet Advertising

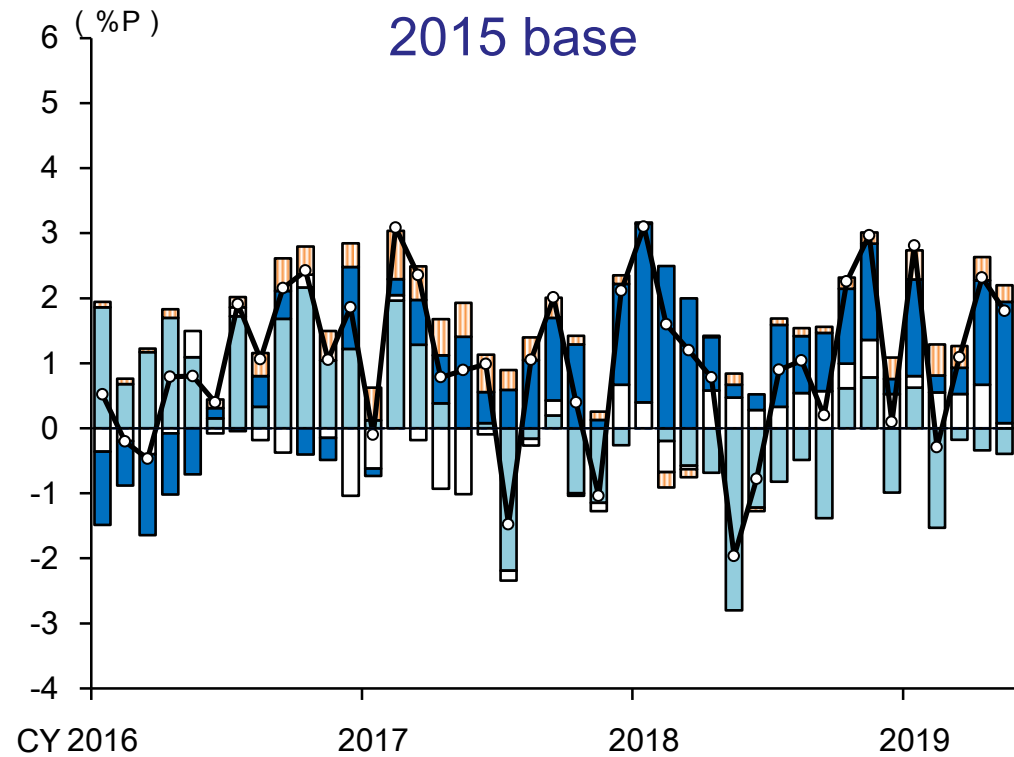
- ✓ Comparing the decomposition of Y/Y change in 2015 base and that in 2010, the impact of the Internet is greater and that of papers is smaller.

Decomposition of Year-on-Year Change

2010 base



2015 base



Others

Internet

Papers

TV

Advertising

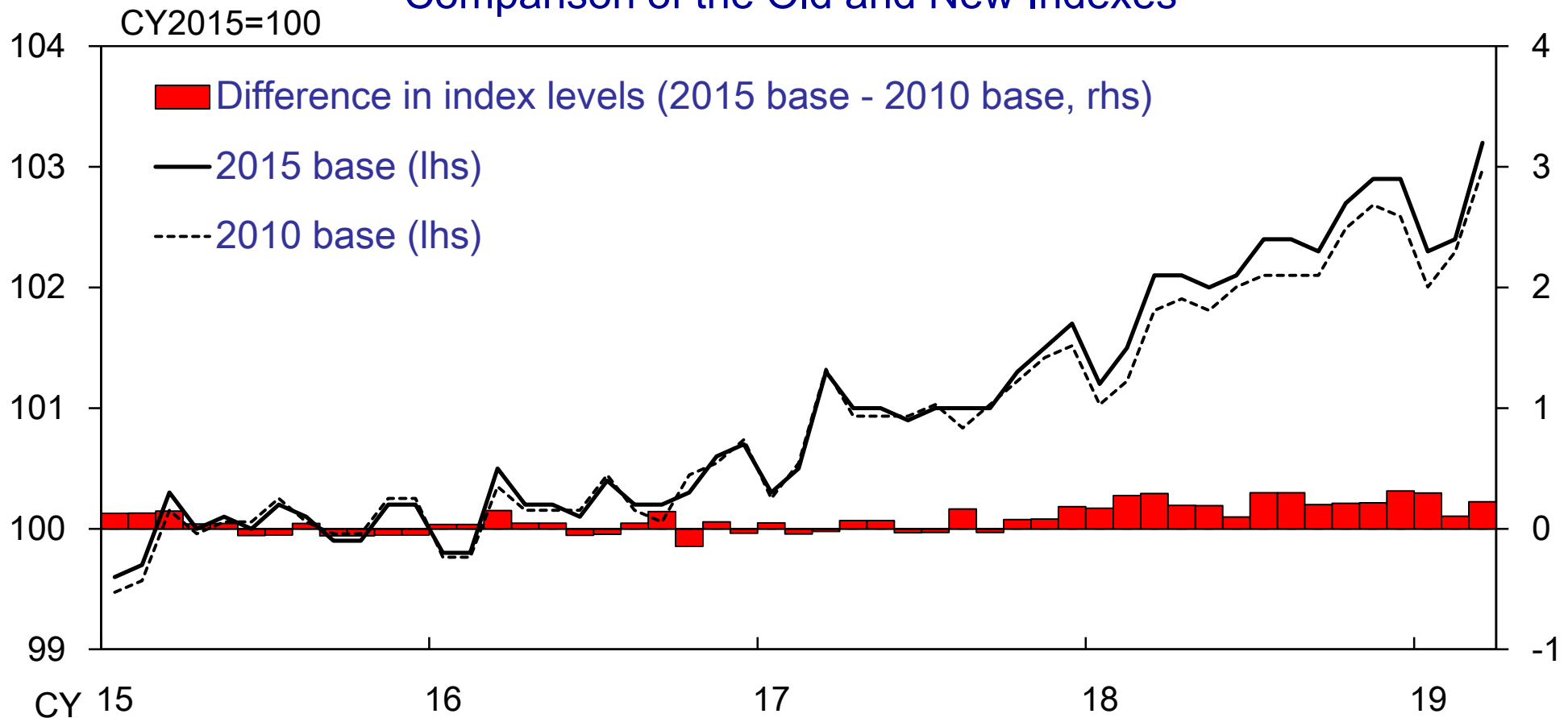
Note: "Papers" include newspaper, magazine, and leaflet.



Impact to all item index

- ✓ The all item index shifted upward after late 2017 because of the price increase in “Web portals” and “Internet advertising”.

Comparison of the Old and New Indexes



Impact to all item index

New Findings

- ✓ This index implies that the price has been rising at least B to B transaction as opposed to the discussions that the price tends to decrease under digitalization.
- ✓ As these digital services only charge the fee on businesses, not on consumers, these price trends can be observed only in SPPI, not in CPI. It is important to capture the price trend of digital services in SPPI.



Further Issues



Further Issues: Internet Advertising

✓ As for programmatic ad, the price (CPC) is determined via auction.

(Ex.) Auction System

Advertiser	Quality Score	Bid	Ad Rank	Rank	Cost Per Click
AAA inc.	4	\$2.00	8	1	\$1.50
BBB inc.	2	\$3.00	6	2	\$2.00
CCC inc.	1	\$4.00	4	3	\$3.00
DDD inc.	3	\$1.00	3	4	\$0.70

(Ex.) Bid Price

Cost Per Click
(CPC)

=

Bid

×

Competitor's Ad Rank

Ad Rank



Further Issues: Internet Advertising

- ✓ “Quality score” is one of the important factors to determine the price.
- ✓ However, it is very difficult to survey the price specifying “Quality score”.

Advertiser	<i>Quality Score</i>	Bid	Ad Rank	Rank	CPC
AAA inc.	4	\$2.00	8	1	\$1.50
BBB inc.	2	\$3.00	6	2	\$2.00
CCC inc.	1	\$4.00	4	3	\$3.00
DDD inc.	3	\$1.00	3	4	\$0.70

“Quality Score” is determined based on Click-through rate(CTR), Ad copy relevance, and so on. It is set by ad network systematically.



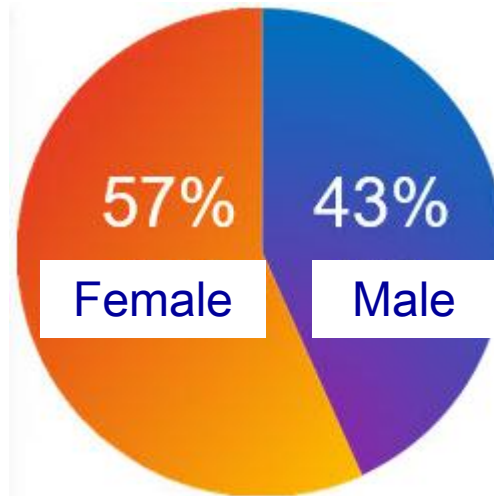
Further Issues: Internet Advertising

- ✓ Specifying advertiser's industry type can be alternative because "Quality Score" is determined by CTR (Click Through Rate) which can be related to industry type.

(Ex.) Instagram 



Distribution of Active Accounts



As of May and June 2018

Contents of Ads

Cosmetics

Fitness

Food and Drink

Computers

Games

CTR(Click Through Rate)

High

Low

Source: Facebook and Instagram Media Gide, Kantar Japan, Grow Epic



Conclusion



Conclusion

Category & Sample Prices

- The Bank has significantly expanded two digital activities; “Web portals” and “Internet advertising” at the time of rebasing.
- We adopt various types of sample prices to capture the real transaction prices.

Price Trends

- As opposed to existing discussion, both price indexes of digital services; “Web portals” and “Internet advertising” have been rising, which shifted all item index upward.
- It is important to capture the price developments of these services in SPPI because they can not be observed in CPI.

Further Issues

- There are still some quality issues among digital services.
- It is really difficult to survey the price with perfectly specifying quality characteristics.



Thank you for your attention



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