

63rd ISI World Statistics Congress (WSC) / IFC-sponsored Invited Paper Sessions (IPS) related to new developments in central bank statistics  
July 2021, The Hague, Netherlands, virtual format

## Digital advertising activities in Japan's services producer price index<sup>1</sup>

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<sup>1</sup> This presentation was prepared for the WSC. The views expressed are those of the author and do not necessarily reflect the views of the BIS, the IFC or the central banks and other institutions represented at the event.

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BANK OF JAPAN

## 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").

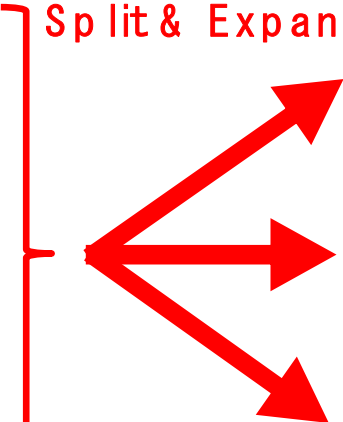

## Rebasing

- 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 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	
Item s	W eights		Item s	W eights
Internet related services	9.2	<b>Split &amp; Expand</b> 	Web portals	14.3
			Internet support services	4.1
			Internet data centers	1.2
Internet advertising	6.8	<b>Expand</b> 	Internet advertising	10.9



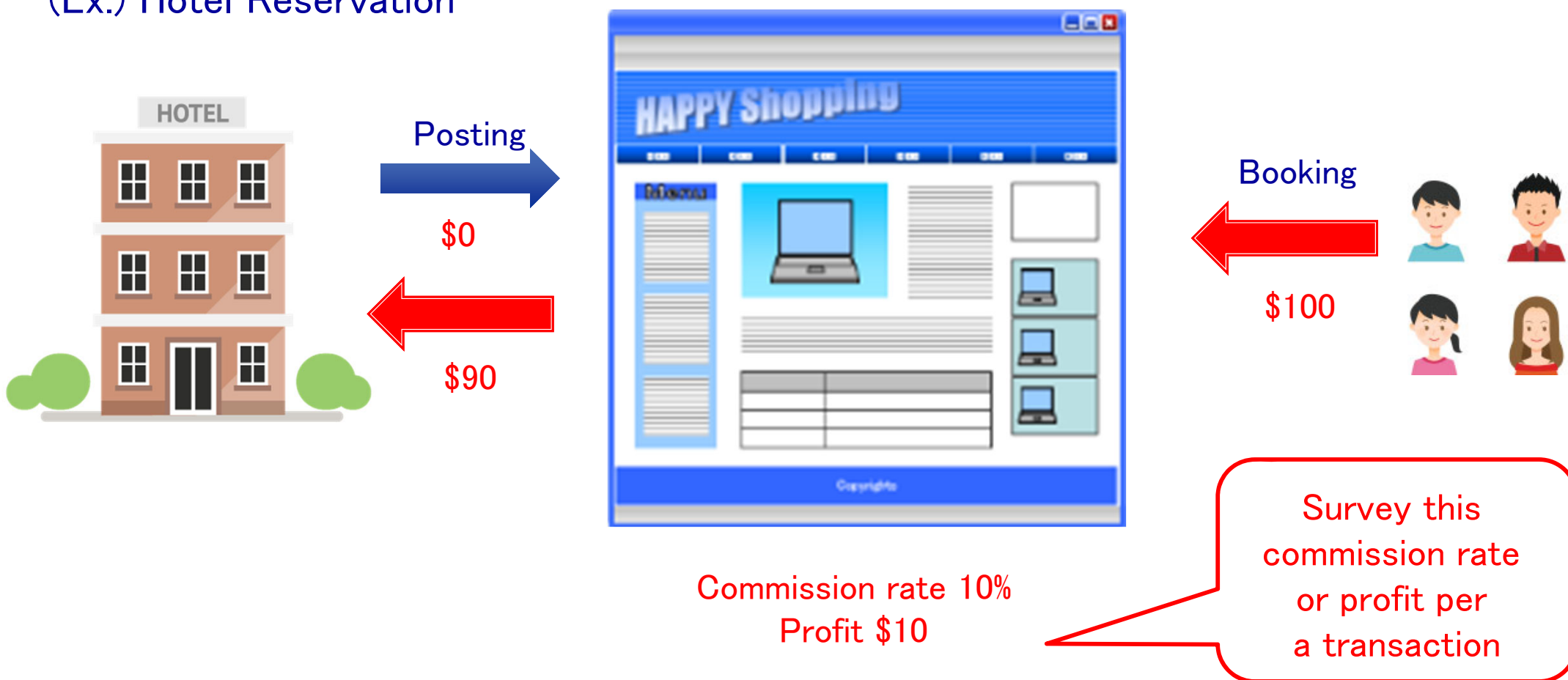
# Web Portals



# 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.

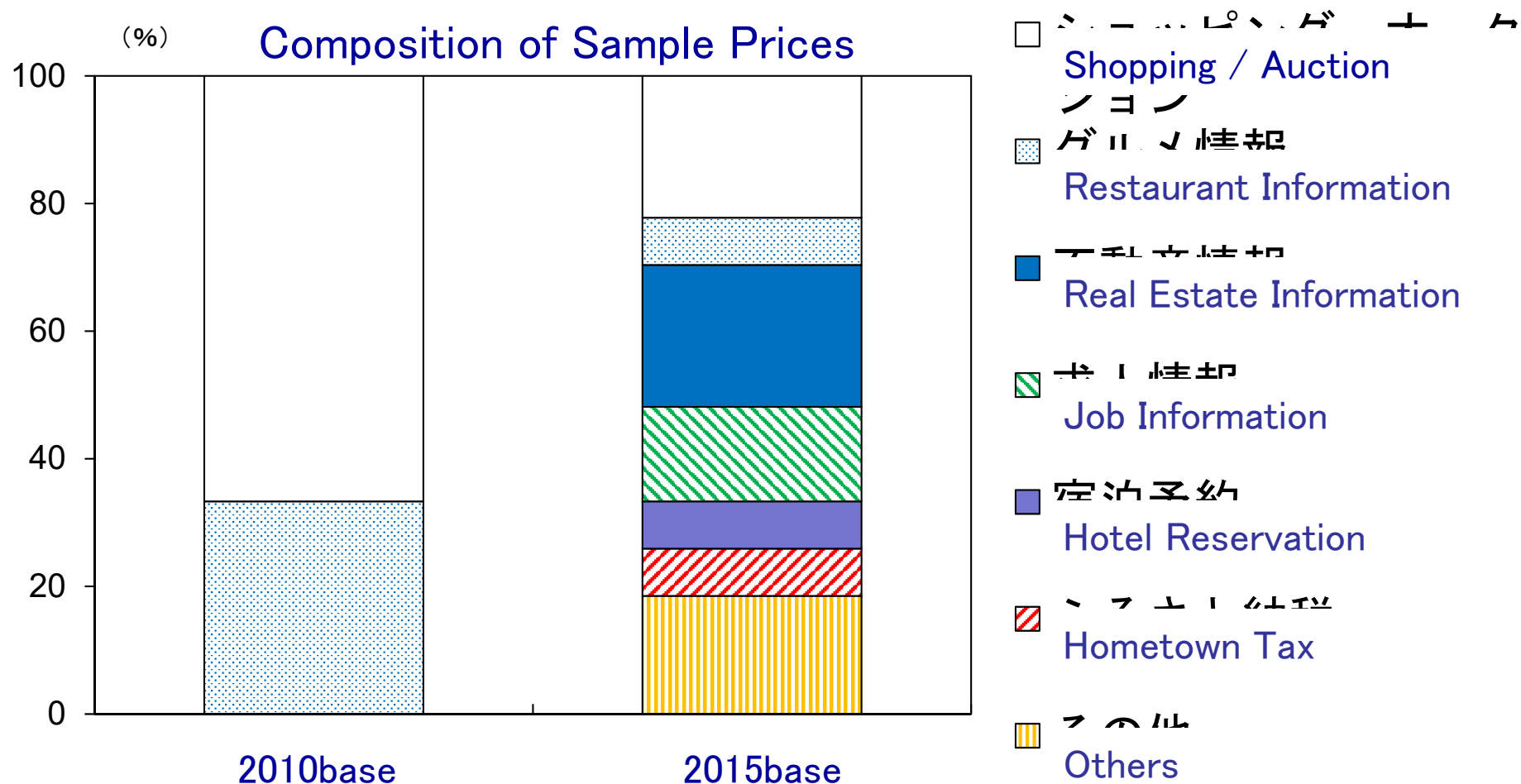
Web Portal Categories	Fixed Fee		Fee according to the Volume of the Purchase		Mixed Fee
	Per Shop	Per transaction	Fixed Unit Price	Percentage Fee	
Shopping / Auction				✓	✓
Restaurant Information					✓
Real Estate Information	✓	✓			
Job Information		✓			
Hotel Reservation				✓	
Hometown Tax	✓			✓	
Others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

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

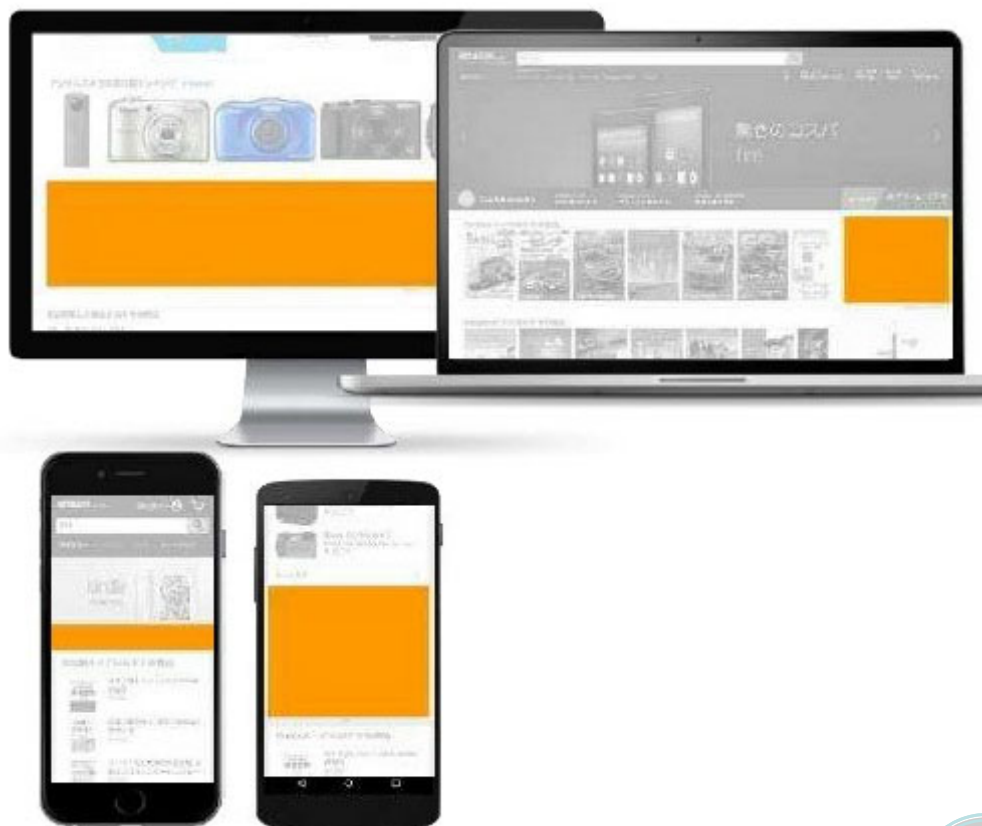
- ✓ “Internet advertising” provides advertising space via ad network operated by web portals.

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 consumer using auction method.
	Display Ad	Advertisement whose effect is assumed to be high based on the content of website and the consumer’s browsing history, etc. using auction method.
	Video Ad	
Affiliate Advertising		Advertisement whereby if a consumer views an Internet advertisement and then performs some predetermined action, the media or consumer is paid some remuneration.



# Internet Advertising

(Ex.) Reservation advertising



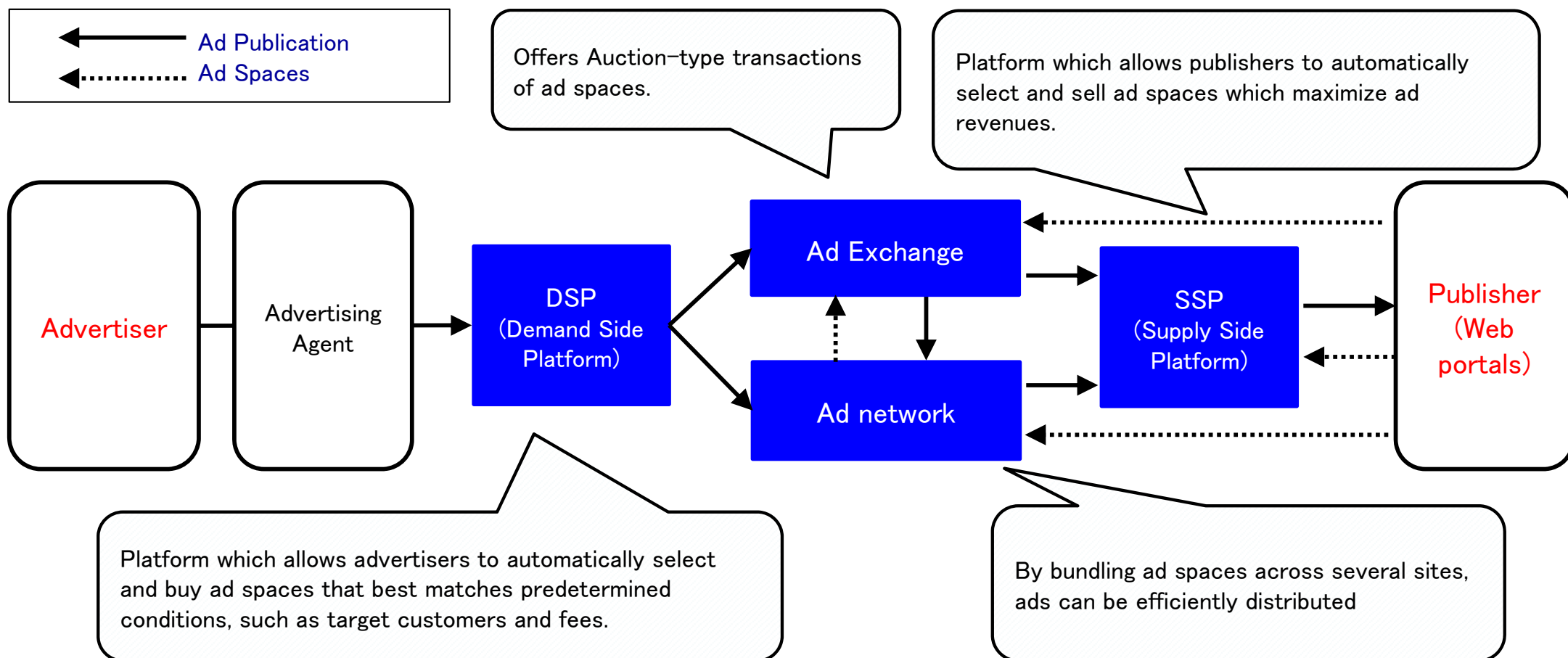
## Media Sheet

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



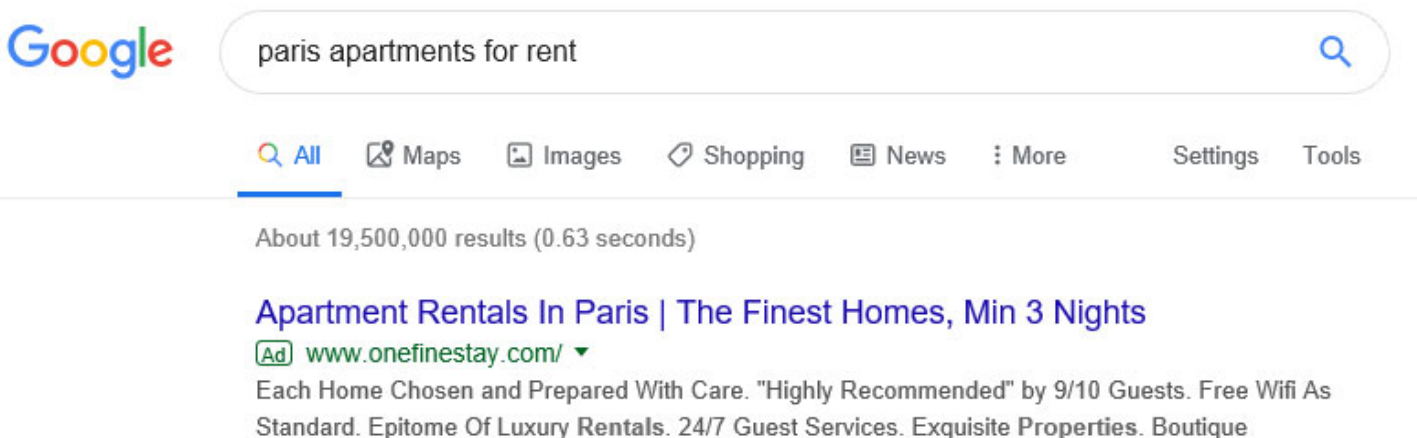
# Internet Advertising

## (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/](http://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

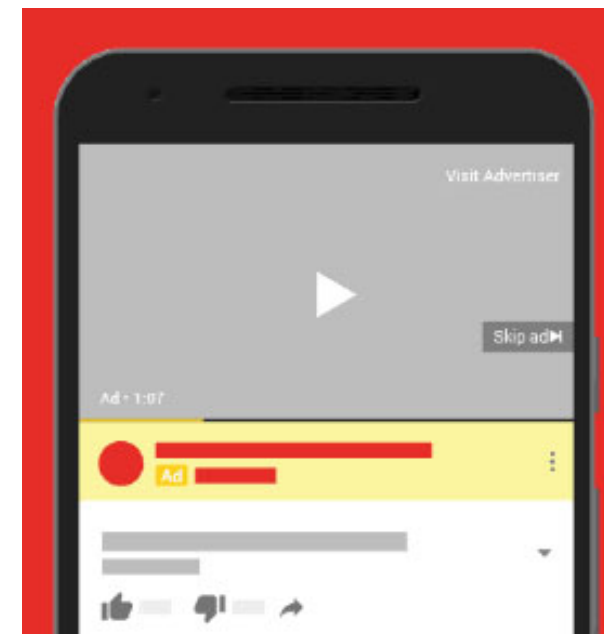


**Featuring Izu's Fishermen Inns**

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

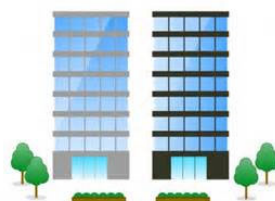
Advertisers



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/**

Conversion

Track activities

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



# Internet Advertising

✓ Our pricing method is as below.

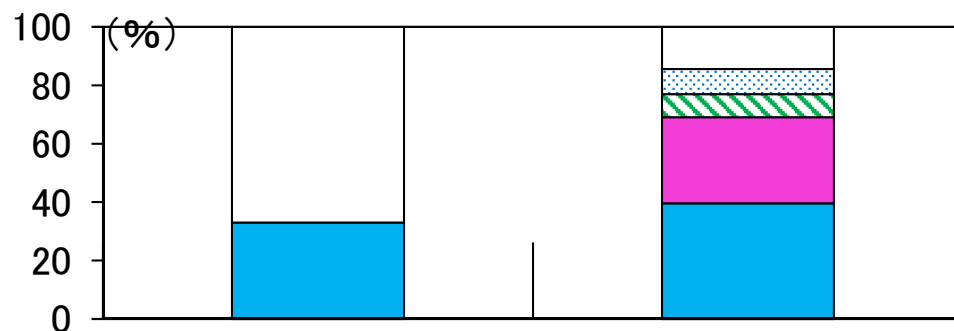
Advertising Categories		Pricing Method	Unit
Reservation Advertising		List Price – Specify the media and ad space	Impression
Programmatic Advertising	Listing Ad	Unit Value Method – Specify the search engine and advertiser's industry	Click
	Display Ad	Unit Value Method – Specify the ad network and advertiser's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



2010年基準

2015年基準

2010base

2015base

Reservation Advertising

Affiliate Advertising

予約型広告

Programmatic Advertising  
(Video Ad)

Programmatic Advertising  
(Display Ad)

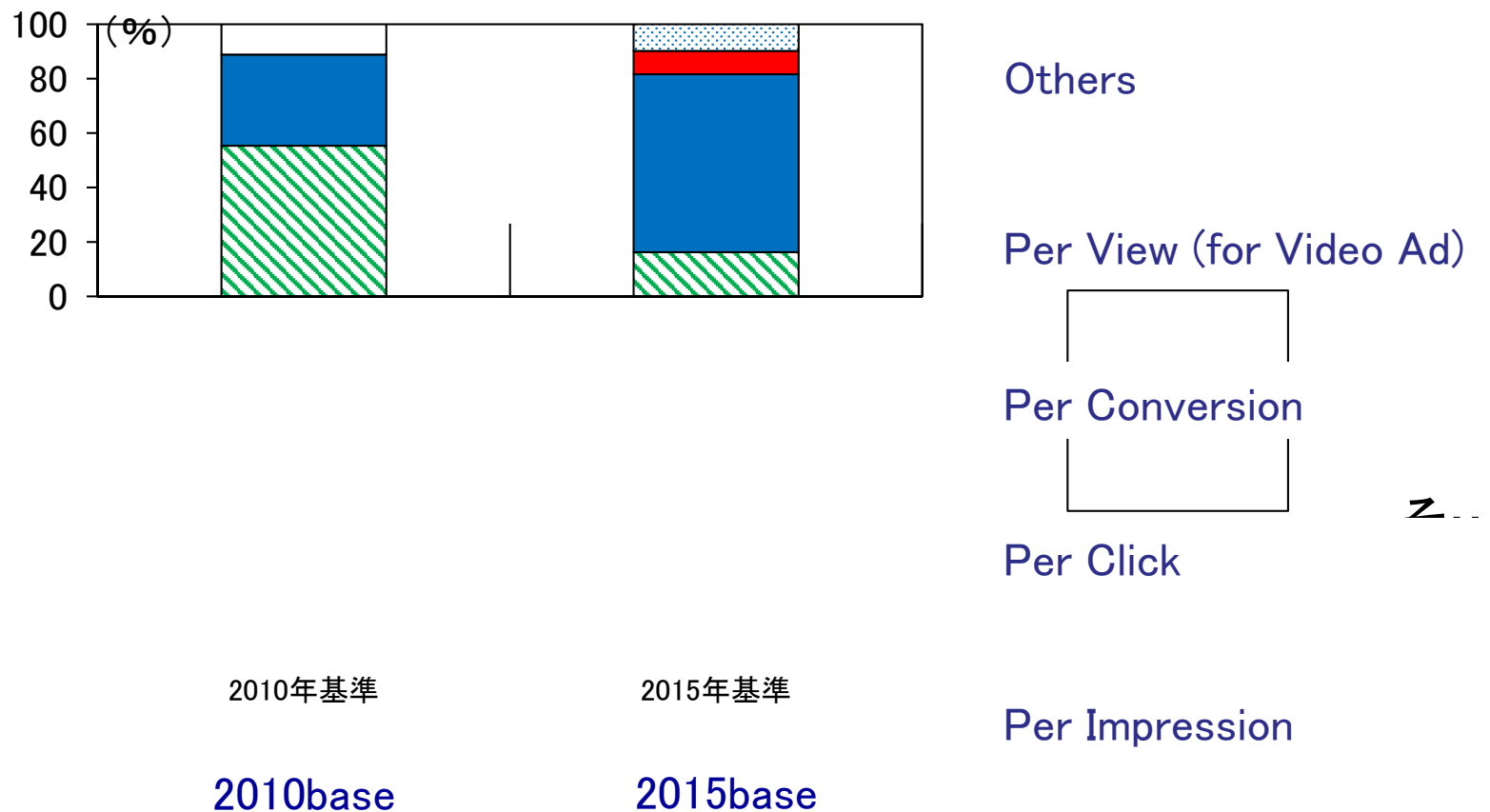
Programmatic Advertising  
(Listing Ad)



# 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



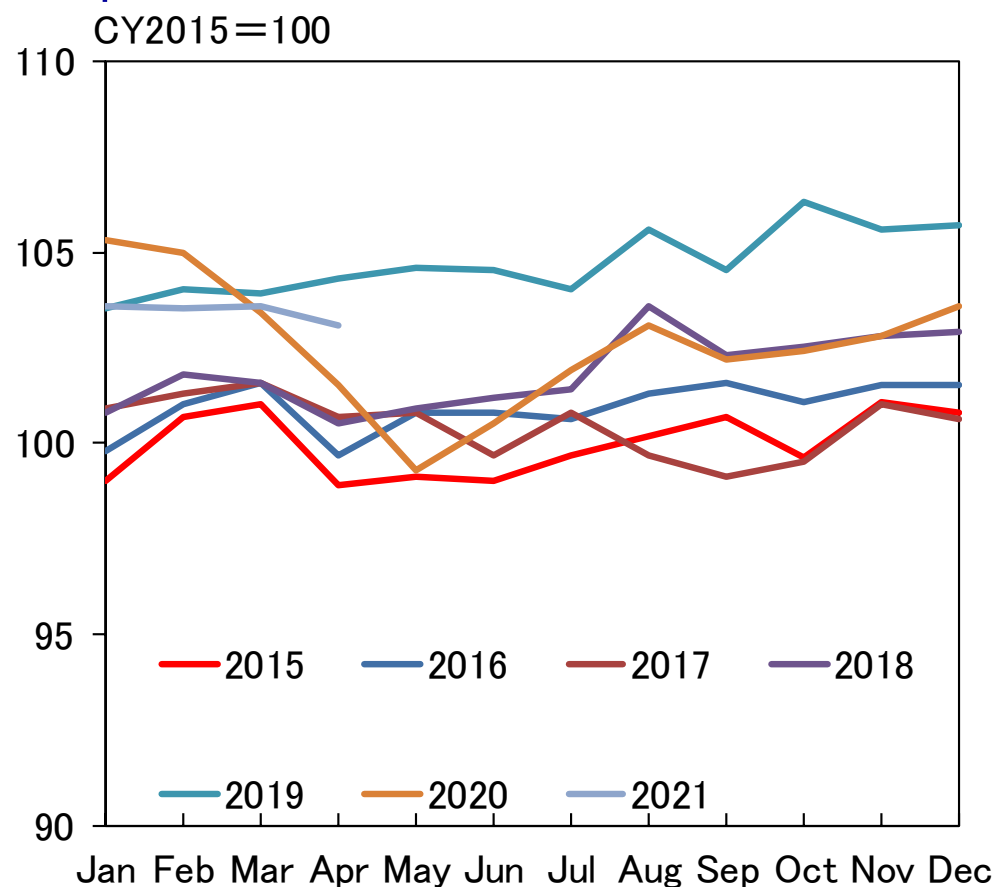
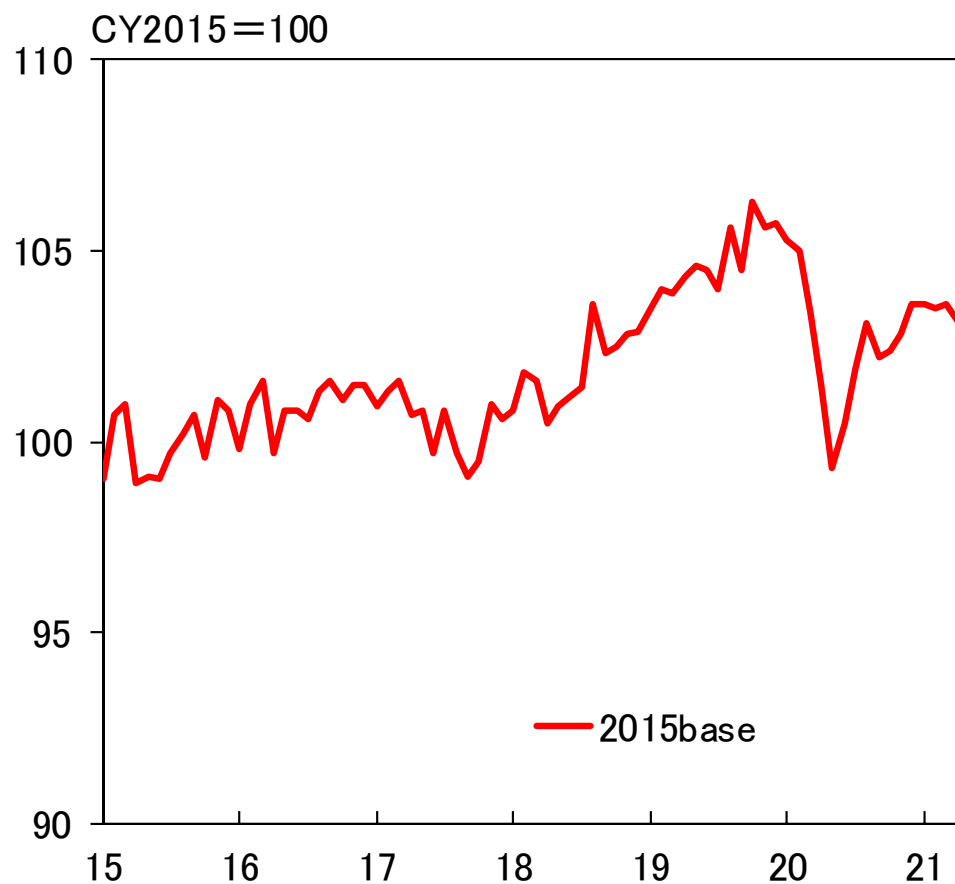
# Price Trends in Digital Activities



# 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.

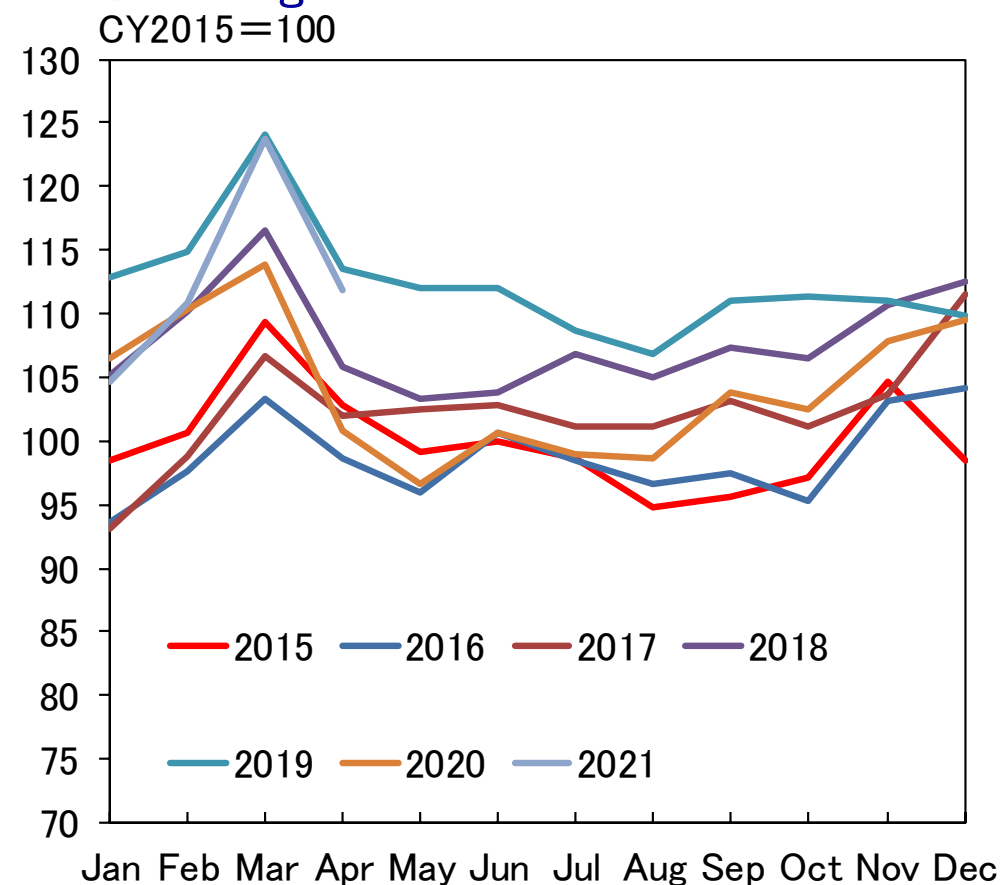
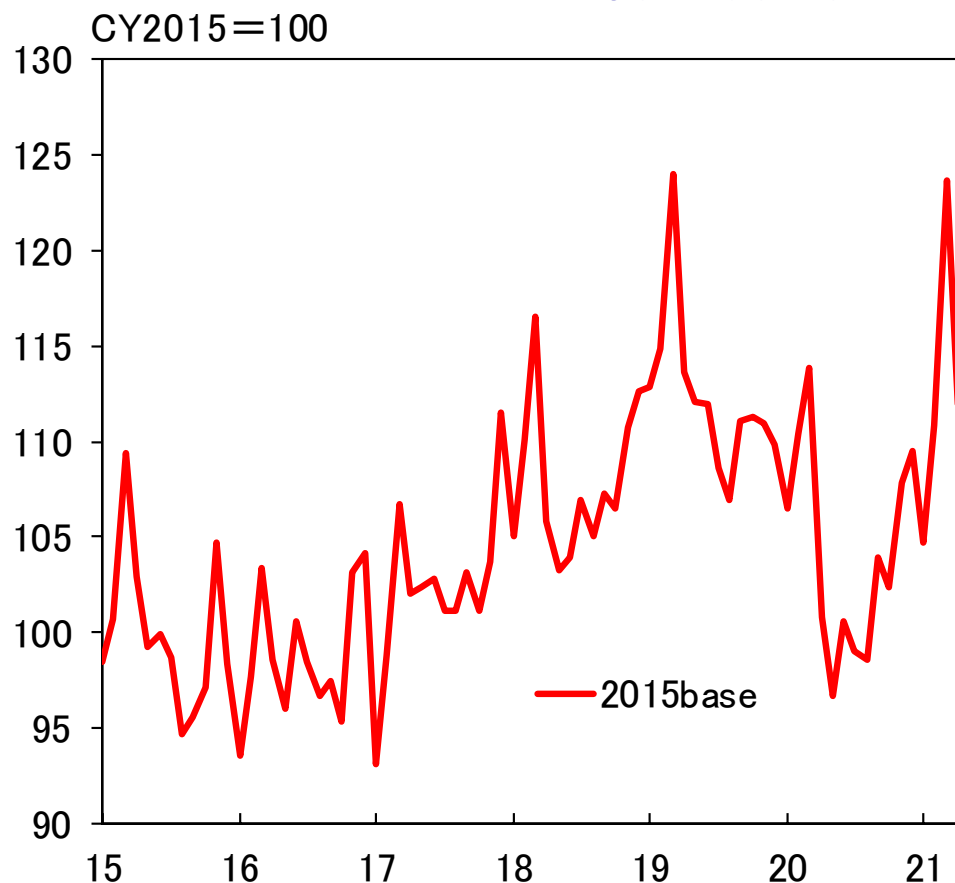
## Price Index of “Web portals”



# 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”







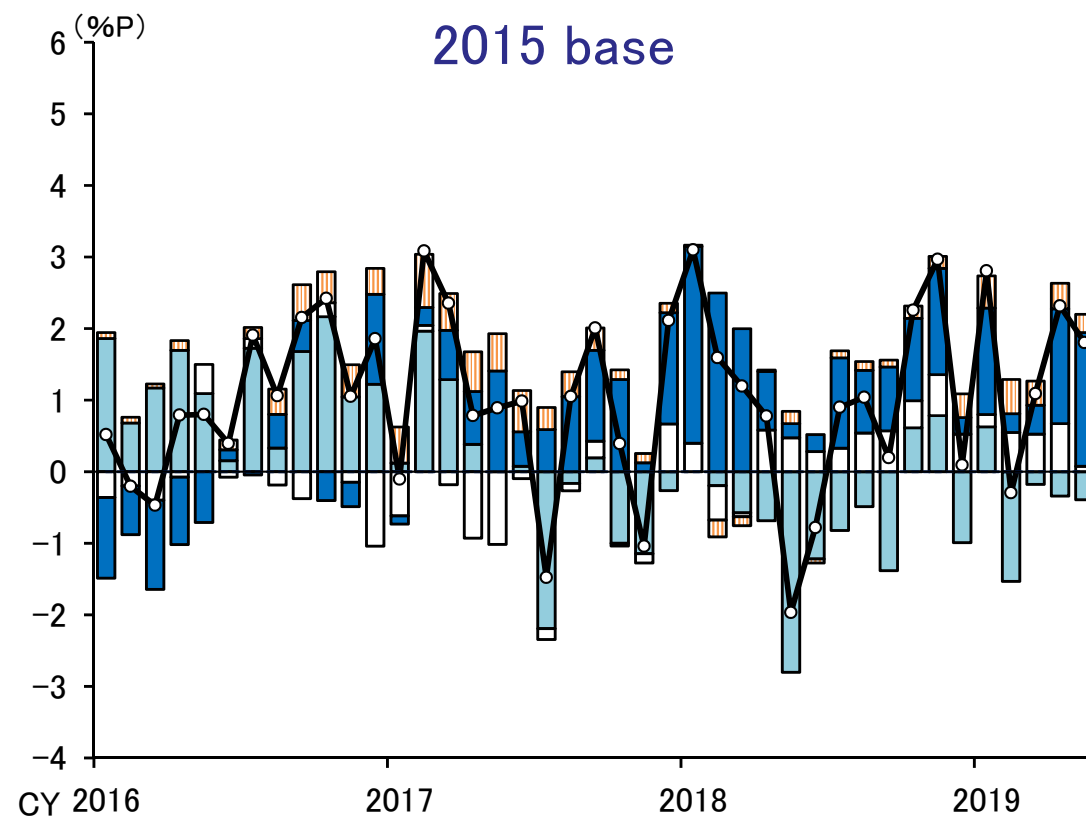
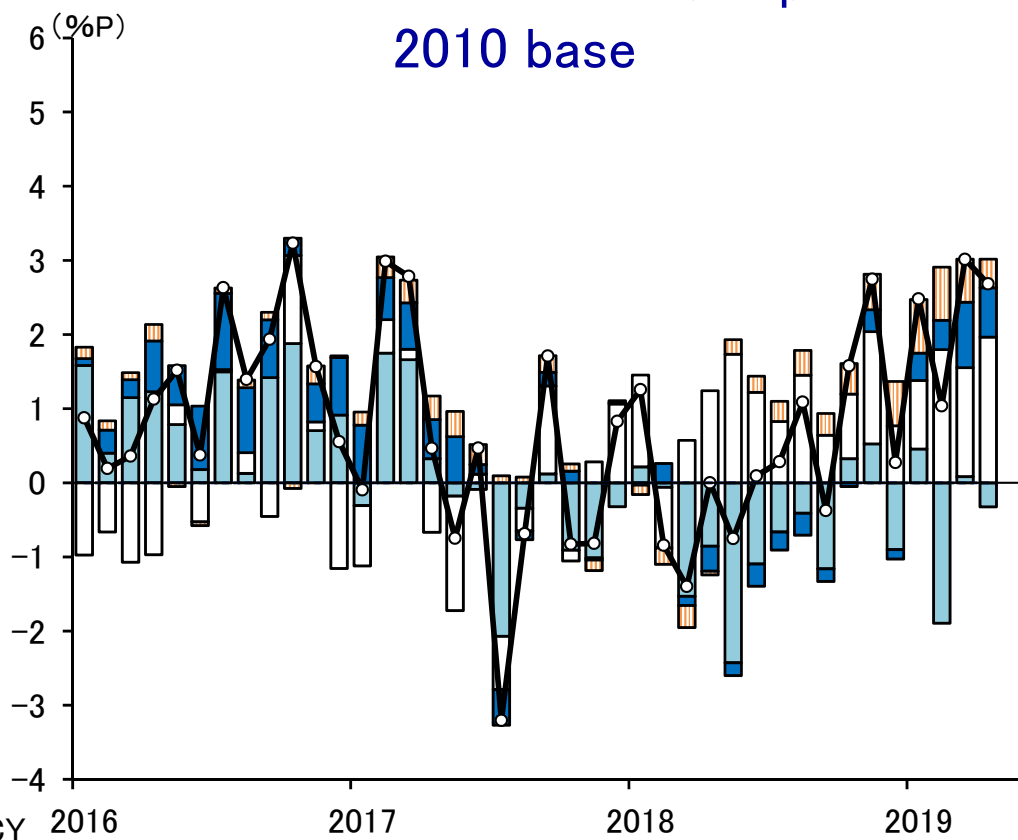
# Price trend of Internet Advertising

- ✓ 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

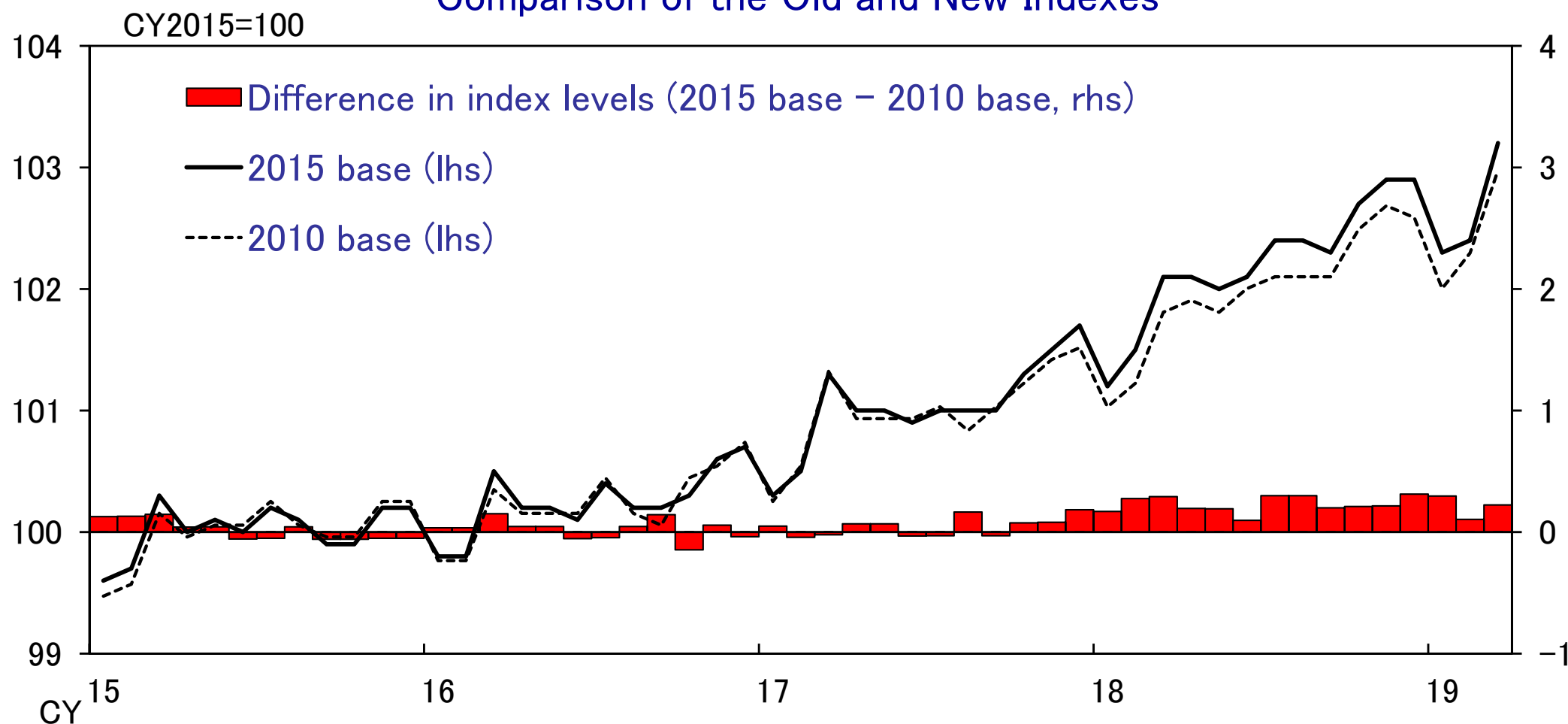
Note: "Papers" include newspaper, magazine, and leaflet.



# 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.



# Thank you for your attention



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