

July 29, 2025

Results of Rebasing the Final Demand-Intermediate Demand Price Indexes to the Base Year 2020

The Bank of Japan has been publishing the Final Demand-Intermediate Demand price indexes (hereinafter referred to as the "FD-ID price indexes"), which integrate prices of goods and services by demand stage, as satellite series since June 2022.¹ The Bank begins monthly releases of the FD-ID price indexes with the base year updated from 2015 to 2020, starting on July 29. This note presents the results of the rebasing to the base year 2020.

1. Overview of the rebasing

In the FD-ID price indexes, goods and services sectors are assigned to one of the four stages of intermediate demand in a way that is consistent with the production flow in Japan as indicated in the Input-Output Tables.² Additionally, the Bank calculates weights used in aggregation for compiling the Intermediate Demand price indexes and the Final Demand price index. Following the publication of the 2020 Input-Output Tables, the Bank has assigned sectors to four stages of intermediate demand and calculated weights. Accordingly, the base year will be updated from 2015 to 2020.

In the base year 2020, the COVID-19 pandemic had a significant impact on the transaction value. Taking that into consideration, the Bank adopted the average value of 2019-2020 for stage assignments and weight calculation.³

2. Results of stage assignments

The cut-off variables used to determine the thresholds between stages in the new base indexes, which are most consistent with the production flow based on the Input-Output

¹ The details of the FD-ID price indexes, including the methods for stage assignments and weight calculation, are explained in the following document:
Bank of Japan, "Explanation of Final Demand-Intermediate Demand price indexes (FD-ID price indexes) (2020 base)."

² The Input-Output Tables are published by the Ministry of Internal Affairs and Communications.

³ For details, refer to the explanation described in Footnote 1. This approach is similar to that used for the Corporate Goods Price Index (CGPI, 2020 base) and Services Producer Price Index (SPPI, 2020 base).

Tables, have changed from X=70, Y=65, and Z=60 to X=75, Y=70, and Z=55, respectively.⁴ The brief results of the stage assignments are as follows: Out of the 394 sectors, 326 sectors remains unchanged from the 2015 base indexes, 66 sectors experienced changes (of which 62 sectors were classified into adjacent stages), and 2 sectors were newly added in the aggregation for the FD-ID price indexes.⁵

3. Results of weight calculation

In all demand stages of the 2020 base indexes, weights for goods decreased and those for services increased (Chart 1).

4. The number of commodity-level indexes

In the FD-ID price indexes, commodity-level indexes within the Corporate Goods Price Index, the Services Producer Price Index, and the Consumer Price Index that correspond to the row sectors in the Input-Output Tables are used as price data.⁶ In comparison with the 2015 base indexes, the number of corresponding commodity-level indexes for the 2020 base indexes decreased in all demand stages, influenced by the consolidation of sectors carried out in the 2020 Input-Output Tables and the rebasing of the price statistics used as price data (Chart 2).

5. Coverage

The coverage refers to the share of transaction values for each stage of intermediate demand and the final demand stage, accounted for by the transaction values in sectors where corresponding commodity-level indexes exist. The coverages of the 2020 base indexes are as follows: 88% for Stage 1 (unchanged compared to the coverage of the 2015 base), 81% for Stage 2 (up from 79%), 87% for Stage 3 (up from 86%), 88% for Stage 4 (up from 87%), 69% for final demand (including exports) (up from 63%).⁷ Consequently, the overall coverage for the FD-ID price indexes is 76% (up from 72%).

⁴ The four stages of intermediate demand are defined as follows:

Stage 4: Sectors in which X% or more of the value of output is sold to final demand.

Stage 3: Sectors in which Y% or more of the value of output is sold to final demand or Stage 4 and which are not classified into Stage 4.

Stage 2: Sectors in which Z% or more of the value of output is sold to final demand, Stage 4 or Stage 3 and which are not classified into Stage 3 or Stage 4.

Stage 1: Sectors which do not meet either of the above conditions.

⁵ The details of the stage assignments are published in the *FD-ID Stage assignments* on the website of the Bank.

https://www.boj.or.jp/en/statistics/outline/exp/pi/fdid_2020/index.htm

⁶ The Consumer Price Index is published by the Ministry of Internal Affairs and Communications.

⁷ The coverages are calculated using the transaction values after deducting transactions within the same stage.

6. Comparison between the 2015 and 2020 base indexes

A comparison of the differences between 2015 and 2020 base indexes is as follows (Chart 3):

(1) Stage 1

The index level has generally shifted upward since 2021 onward. On average, the 2020 base index is 3.5 points higher than the 2015 base index. The year-on-year growth has also increased between 2021 and 2022.

(2) Stage 2

The index level has shifted upward between 2021 and 2023. On average, the 2020 base index is 0.7 points higher than the 2015 base index. The year-on-year growth has also increased between 2021 and 2022, but has decreased since 2023 onward.

(3) Stage 3

The index level has generally shifted downward since 2021 onward. On average, the 2020 base index is 2.1 points lower than the 2015 base index. The year-on-year growth has decreased between 2021 and early 2023.

(4) Stage 4

The index level has generally shifted upward since 2022 onward. On average, the 2020 base index is 0.7 points higher than the 2015 base index. The year-on-year growth has generally increased.

(5) Final Demand (excluding exports)

The index level has generally shifted downward since 2021 onward. On average, the 2020 base index is 0.3 points lower than the 2015 base index. The year-on-year growth has decreased between the second half of 2021 and early 2023.

(6) Final Demand (including exports)

The index level has generally shifted downward since 2021 onward. On average, the 2020 base index is 0.8 points lower than the 2015 base index. The year-on-year growth has generally decreased until middle of 2023.

(Chart 1)

Weights in the Intermediate Demand Stages and the Final Demand Stage

(Percentage)

	2020 base (a)	2015 base (b)	Difference (a) - (b)
Stage 1	100.000	100.000	0.000
Goods	67.584	68.573	- 0.989
Domestic goods	24.725	22.258	+ 2.467
Foods	0.929	0.949	- 0.020
Energy	6.693	4.256	+ 2.437
Goods less foods and energy	17.103	17.053	+ 0.050
Import goods	42.859	46.315	- 3.456
Foods	1.894	1.666	+ 0.228
Energy	29.286	32.358	- 3.072
Goods less foods and energy	11.679	12.291	- 0.612
Services	32.416	31.427	+ 0.989
Trade services	6.183	3.720	+ 2.463
Transportation services	3.268	6.423	- 3.155
Services less trade and transportation	22.965	21.284	+ 1.681
Stage 2	100.000	100.000	0.000
Goods	40.947	46.248	- 5.301
Domestic goods	20.011	23.999	- 3.988
Foods	1.866	1.908	- 0.042
Energy	6.317	7.809	- 1.492
Goods less foods and energy	11.828	14.282	- 2.454
Import goods	20.936	22.249	- 1.313
Foods	0.819	0.932	- 0.113
Energy	9.694	11.893	- 2.199
Goods less foods and energy	10.423	9.424	+ 0.999
Services	59.053	53.752	+ 5.301
Trade services	0.682	6.481	- 5.799
Transportation services	10.047	4.725	+ 5.322
Services less trade and transportation	48.324	42.546	+ 5.778
Stage 3	100.000	100.000	0.000
Goods	55.029	62.336	- 7.307
Domestic goods	43.886	48.709	- 4.823
Foods	7.580	8.202	- 0.622
Energy	4.699	6.470	- 1.771
Goods less foods and energy	31.607	34.037	- 2.430
Import goods	11.143	13.627	- 2.484
Foods	1.748	2.049	- 0.301
Energy	0.093	0.784	- 0.691
Goods less foods and energy	9.302	10.794	- 1.492
Services	44.971	37.664	+ 7.307
Trade services	7.308	6.054	+ 1.254
Transportation services	5.279	4.893	+ 0.386
Services less trade and transportation	32.384	26.717	+ 5.667

Weights in the Intermediate Demand Stages and the Final Demand Stage
(Continued)

(Percentage)

	2020 base (a)	2015 base (b)	Difference (a) - (b)
Stage 4	100.000	100.000	0.000
Goods	53.981	57.408	- 3.427
Domestic goods	46.198	47.831	- 1.633
Foods	4.730	5.816	- 1.086
Energy	4.347	4.962	- 0.615
Goods less foods and energy	37.121	37.053	+ 0.068
Import goods	7.783	9.577	- 1.794
Foods	1.648	1.712	- 0.064
Energy	0.231	0.217	+ 0.014
Goods less foods and energy	5.904	7.648	- 1.744
Services	46.019	42.592	+ 3.427
Trade services	7.222	9.007	- 1.785
Transportation services	5.284	4.302	+ 0.982
Services less trade and transportation	33.513	29.283	+ 4.230
Final demand (excluding exports)	84.065	80.371	+ 3.694
Goods	30.860	34.412	- 3.552
Domestic goods	23.964	26.359	- 2.395
Foods	8.020	8.271	- 0.251
Energy	3.260	3.935	- 0.675
Goods less foods and energy	12.684	14.153	- 1.469
Import goods	6.896	8.053	- 1.157
Foods	0.531	0.623	- 0.092
Energy	0.072	0.103	- 0.031
Goods less foods and energy	6.293	7.327	- 1.034
Services	53.205	45.959	+ 7.246
Trade services	5.756	6.075	- 0.319
Transportation services	3.880	4.741	- 0.861
Services less trade and transportation	43.569	35.143	+ 8.426
Final demand (including exports)	100.000	100.000	0.000
Goods	46.795	54.041	- 7.246
Domestic goods	23.964	26.359	- 2.395
Foods	8.020	8.271	- 0.251
Energy	3.260	3.935	- 0.675
Goods less foods and energy	12.684	14.153	- 1.469
Import goods	6.896	8.053	- 1.157
Foods	0.531	0.623	- 0.092
Energy	0.072	0.103	- 0.031
Goods less foods and energy	6.293	7.327	- 1.034
Export goods	15.935	19.629	- 3.694
Foods	0.000	0.000	0.000
Energy	0.336	0.477	- 0.141
Goods less foods and energy	15.599	19.152	- 3.553
Services	53.205	45.959	+ 7.246
Trade services	5.756	6.075	- 0.319
Transportation services	3.880	4.741	- 0.861
Services less trade and transportation	43.569	35.143	+ 8.426

(Chart 2)

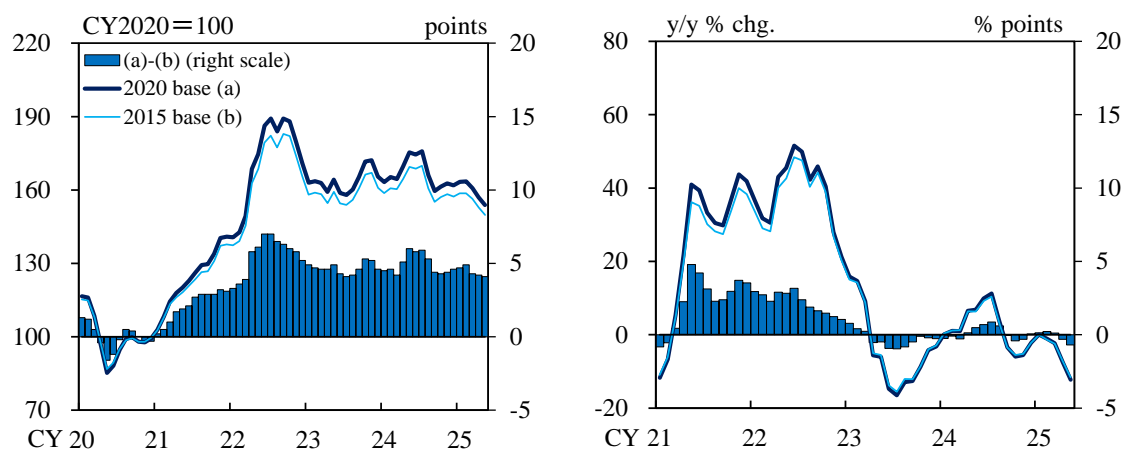
The Number of Commodity-Level Indexes Used for the FD-ID Price Indexes

	Stage 1			Stage 4		
	2020 base (a)	2015 base (b)	Changes in the number (a) - (b)	2020 base (a)	2015 base (b)	Changes in the number (a) - (b)
PPI	420	559	- 139	360	523	- 163
IPI	176	205	- 29	171	203	- 32
EPI	0	0	0	0	0	0
SPPI	86	108	- 22	139	143	- 4
CPI	71	38	+ 33	22	8	+ 14
Total	753	910	- 157	692	877	- 185
	Stage 2			Final demand (including exports)		
	2020 base (a)	2015 base (b)	Changes in the number (a) - (b)	2020 base (a)	2015 base (b)	Changes in the number (a) - (b)
PPI	255	396	- 141	339	459	- 120
IPI	163	199	- 36	133	169	- 36
EPI	0	0	0	183	207	- 24
SPPI	101	82	+ 19	62	54	+ 8
CPI	62	41	+ 21	165	126	+ 39
Total	581	718	- 137	882	1,015	- 133
	Stage 3			Final demand and Intermediate demand		
	2020 base (a)	2015 base (b)	Changes in the number (a) - (b)	2020 base (a)	2015 base (b)	Changes in the number (a) - (b)
PPI	322	437	- 115	515	743	- 228
IPI	165	202	- 37	209	256	- 47
EPI	0	0	0	183	207	- 24
SPPI	121	117	+ 4	152	151	+ 1
CPI	50	31	+ 19	166	126	+ 40
Total	658	787	- 129	1,225	1,483	- 258

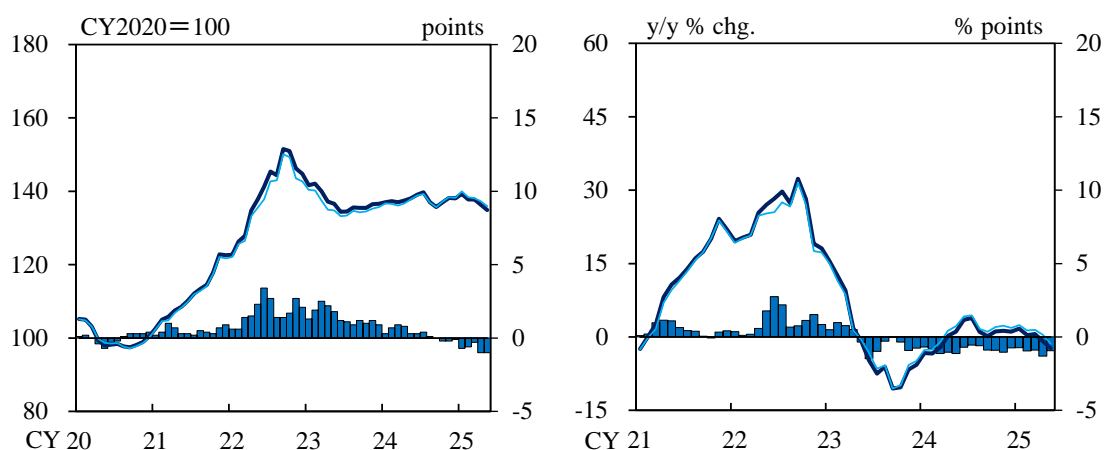
Note: The number of commodity-level indexes in 2015 base is the number of those that corresponded to the 2015 base as of its release.

Comparison between the 2015 and 2020 base Indexes

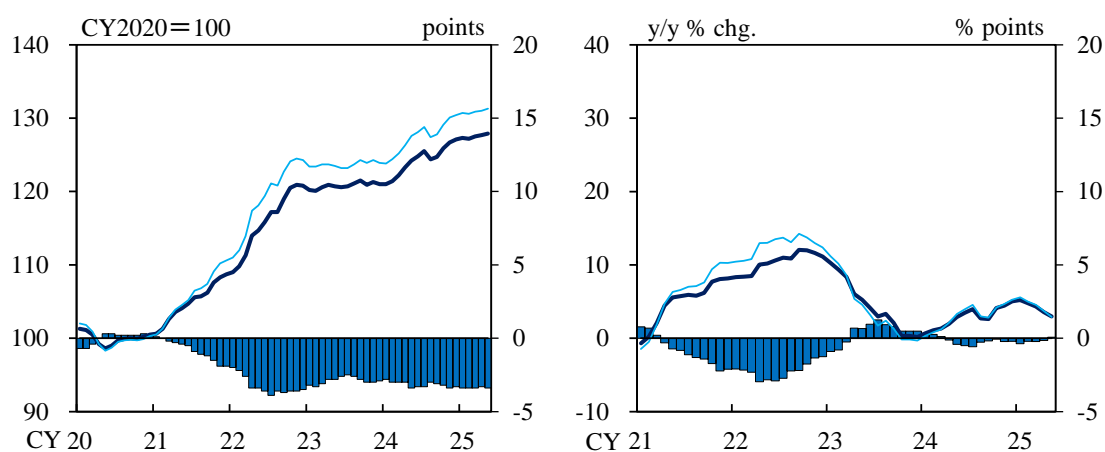
(1) Intermediate Demand (Stage 1)



(2) Intermediate Demand (Stage 2)

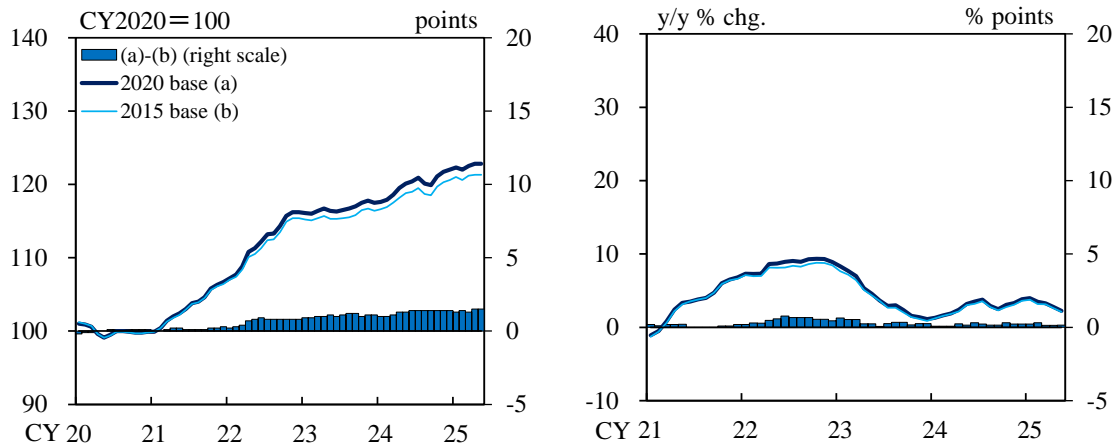


(3) Intermediate Demand (Stage 3)

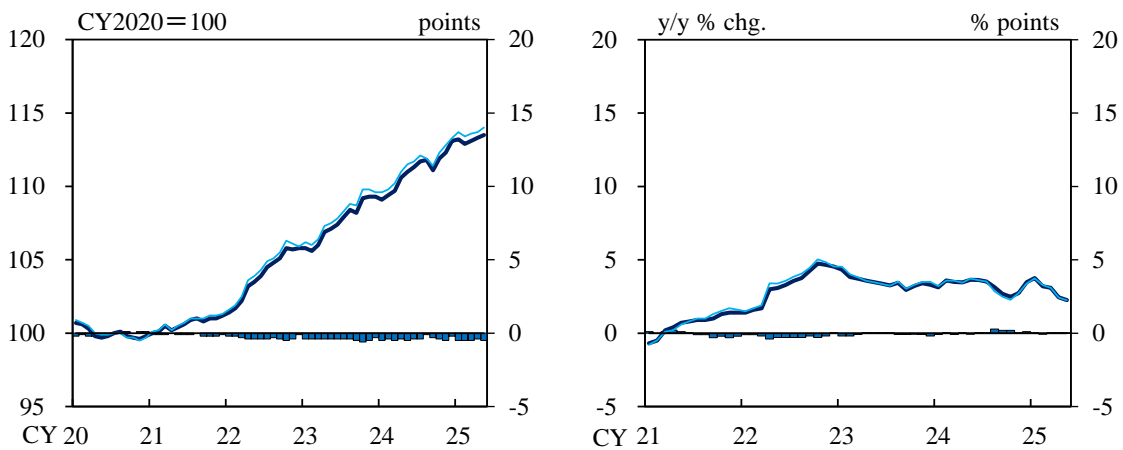


Comparison between the 2015 and 2020 base Indexes (Continued)

(4) Intermediate Demand (Stage 4)



(5) Final Demand (excluding exports)



(6) Final Demand (including exports)

