

【Fundamentals Navigator】**Japan's CPI base year change: Non-phone trend remains intact**

(original Japanese report issued on August 12, 2021)

Revision in CPI forecast; stark drop in FY21 on mobile phone impact, modest rise in FY22

The adoption of a new base year in Japan's CPI led to a sharp downward revision in core CPI inflation from +0.2% to -0.5% for June, sending the index back into the negative. This was due primarily to the reduction in mobile phone fees in April, which drove the figure down by an additional 0.50ppt compared to the old index, with a change in the calculation method on top of changes in the weighting and the base year. Still, price levels were not notably different between the old and new indexes other than the plunge in April from the mobile phone fees, and the revised CPI does not appear to be trending downward. We believe the large negative impact of the phone fee changes will wane after FY21, though that depends to an extent on policy measures. We have lowered our core CPI inflation forecast for FY21 to negative growth but maintain our forecast of a modest gain in FY22 and FY23.

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1. Base year change spurs cut in CPI growth, amplifies negative impact of mobile phone fees

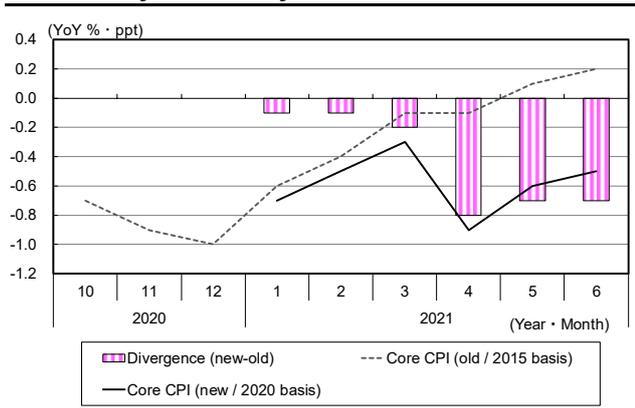
CPI shifts to new base, June core CPI revised to YoY decline

The base year used for the CPI has been switched from 2015 to 2020. The first release under the new standard will be the July nationwide CPI on 20 August, but the government earlier released a revision of historical data using the 2020 base year. The new base year was applied to data from January 2020, and resulting growth YoY was disclosed beginning with the January 2021 results. The YoY percentage changes were lowered, with an especially stark revision since April. Core CPI inflation was positive in May and June under the old standard, but both have now returned to the negative.

Phone fees are clear negative driver

A breakdown by item of the extent of the June revision finds that transportation & communication hurt growth by the greatest amount among ten major spending categories, including a particularly steep negative contribution from telecom charges (mobile phones). Data by the Ministry of Internal Affairs and Communications (MIC) reveal that CPI YoY inflation overall was reduced by 0.64ppt. Fully 0.55ppt of that total came from transportation & communication, including 0.50ppt from mobile phone charges alone. Prime Minister Yoshihide Suga called for mobile phone fee cuts as one of his key policy goals upon taking office last year, and carriers responded with a succession of cheap rate plans. This was already reflected in the index since April under the old base year, but the negative impact was amplified under the new standard.

Figure 1. Divergence in CPI YoY change caused by the base-year revision



Source: MUMSS, from MIC data

Figure 2. Divergence in CPI caused by the base-year revision by category

	Weight		YoY		Contributions(Comparison with all items)		
	2020	2015	2020	2015	2020	2015	Gap
All items	10000	10000	-0.5	0.2	-0.45	0.18	-0.64
All items, less fresh food	9604	9586	-0.5	0.2	-0.48	0.16	-0.64
Food	2626	2623	0.0	0.1	0.00	0.04	-0.03
Food, less fresh food	2230	2209	-0.1	0.1	-0.02	0.01	-0.04
Housing	2149	2087	0.6	0.6	0.13	0.13	0.00
Fuel, light and water charges	693	745	1.0	0.6	0.07	0.04	0.02
Furniture and household utensils	387	348	1.6	1.6	0.06	0.06	0.01
Clothes and footwear	353	412	0.6	0.4	0.02	0.02	0.00
Medical care	477	430	-0.6	-0.3	-0.03	-0.01	-0.02
Transportation and communication	1493	1476	-5.4	-1.8	-0.80	-0.25	-0.55
Telephone charges(mobile phone)	271	230	-38.5	-27.9	-1.04	-0.54	-0.50
Education	304	316	1.4	1.5	0.04	0.04	0.00
Culture and recreation	911	989	0.0	0.5	0.00	0.05	-0.04
Miscellaneous	607	574	1.0	1.4	0.06	0.08	-0.02

Source: MUMSS, from MIC data

Changes in revised figures attributable to numerous factors

The disparity caused by the base year revision is attributable to several factors. The most notable are the weight and reset effects. The weight effect indicates the different contribution of each item with the change in weightings brought about by the revision. The reset effect addresses items of which the level of index has starkly shifted from the level as of the base year due to intervening price changes. When the level is reset to the price level of the new base year, the contribution to the index changes. Other factors include changes in the price calculation method itself and a switch in items used in the index (referred to by the MIC respectively as the model calculation effect and item replacement effect).

Negative impact from mobile phone heightened by revised calculation method

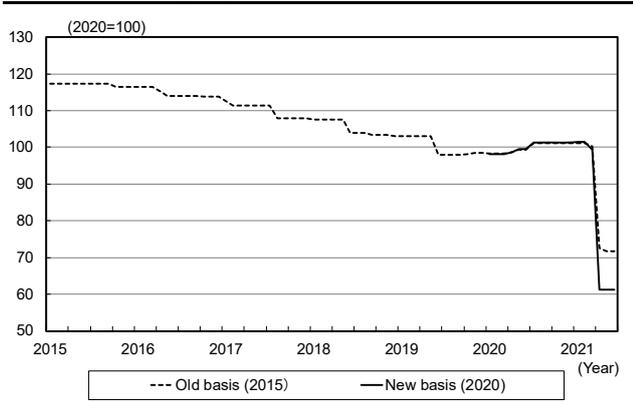
The negative contribution from mobile phone charges was enlarged by the confluence of all but the item replacement effect. The weight and reset effects had been anticipated to some extent. The weighting of this item was expected to rise under the new base year, thus amplifying the impact of the cuts in phone charges. As the index level would be much lower under the new base year, a pronounced reset effect was also expected. In the end, the negative contribution from both factors proved considerable. In addition, the change in the very means of calculating mobile phone charges exacerbated the degree of the falloff, putting further downward pressure on

the index. Mobile phone charges in the CPI are based on various pricing plans put in place at multiple carriers, and the MIC says that it recently adjusted its calculation method to account for this. Mobile phone charges were already down 27.9% YoY in June under the old base year, but the revised method heightened the decline to 38.5% under the new base year. A MIC analysis finds that the overall negative 0.50ppt contribution from mobile phone charges includes 0.13ppt from the reset effect, 0.12ppt from the weight effect, and 0.24ppt from the calculation model change.

Minimal decrease from non-phone factors

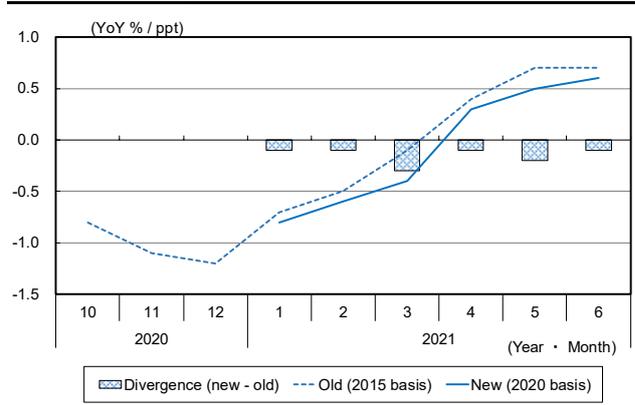
Items other than mobile phone charges had minimal downward impact on the index overall. We estimate that core CPI inflation excluding mobile phone charges remains positive under the new base year, buoyed by rising energy prices.

Figure 3. CPI telecom fees (mobile phone charges)



Note: Old basis (2015) reindexed as 2020 = 100
Source: MUMSS, from MIC data

Figure 4. Core CPI excluding mobile phone charges



Note: MUMSS estimates
Source: MUMSS, from MIC data

Downturns often accelerated in past base year revisions

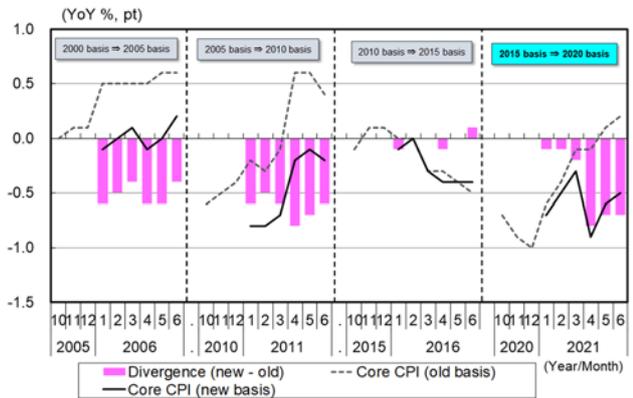
2. No change in underlying trend under new index excluding mobile phones

In past base year revisions, the YoY change under the new index was often revised downward. Let us consider the effect on YoY growth in the core CPI in the past four base year revisions, including the latest one (Figure 5). The revisions in 2006 and 2011 led to a falloff in the index from positive to negative growth. The CPI in the latter case remained negative through 2012. The downward revision from the adoption of a new base year acted to reaffirm the strength of deflationary pressure at the time. The main driver of the downturn was information appliances (e.g. PCs, televisions), whose prices had skidded rapidly and continuously due to competition and technological innovation. The sustained price decline had a clear reset effect, and televisions also had a conspicuous weighting effect in the 2011 revision.

Index trend little changed this time by base year revision

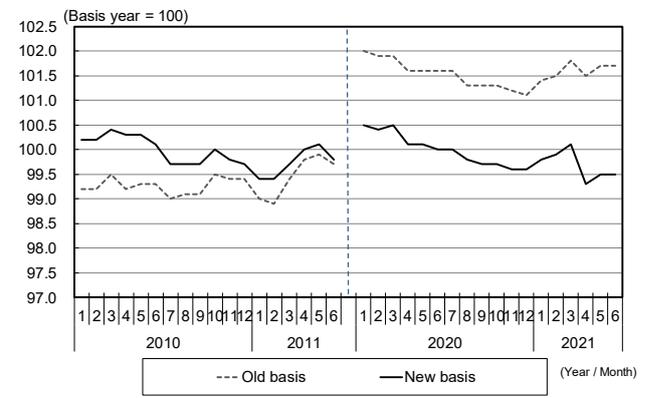
The downward revision in CPI YoY growth with the latest base year change was around the same as in 2006 and 2011. However, a slight difference is evident in the movement of the index, i.e., price levels. For example, consider the movement in the indexes before and after the base year revisions in 2011 and this year (Figure 6). The 2011 index had been largely moving sideways under the old base year but shifted to a downtrend when the new base year was adopted. In contrast, the movement following the revision this year shows a greater drop for April when the new mobile phone charges were launched but little change otherwise.

Figure 5. Divergence in CPI YoY change due to base-year revisions



Source: MUMSS, from MIC data

Figure 6. Divergence in CPI due to base-year revisions

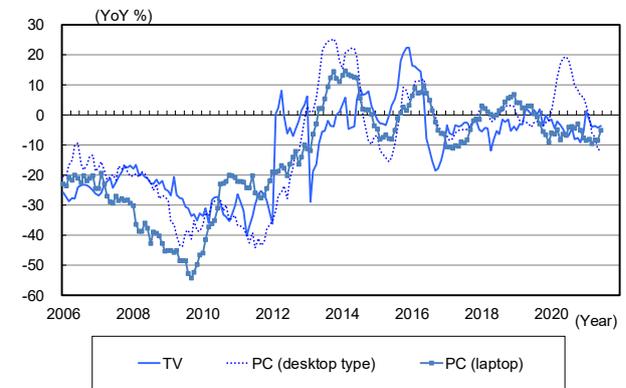


Source: MUMSS, from MIC data

Stabilization of falling appliance prices reduced disparity between old/new indexes

The new and old figures did not diverge significantly in the previous base year revision in 2016. Information appliance prices had stabilized, and price hikes in some products largely offset the downward pressure from the reset effect. Information appliance prices benefited from a slowdown in the rapid pace of quality improvements in PCs and such as well as the rising ratio of imported goods, which made it easier to incorporate foreign exchange fluctuations into prices. That situation remains in force, keeping the overall trend excluding mobile phone fees virtually unchanged even with the shift to the new base year.

Figure 7. CPI (information appliances)



Note: Adjusted for impact of consumption tax hike
Source: MUMSS, from MIC data

3. Core CPI forecast cut for FY21, mild positive growth seen for FY22-23

Less negative impact from phone charges foreseen in FY22

We have revised our core CPI forecasts in light of the base year change. We have reduced our FY21 forecast to a 0.2% decline (previously: +0.5%) while keeping our projections for FY22 and FY23 each at a 0.3% rise. The boost from energy prices on FY21 CPI growth will be outweighed by the negative effect of mobile phone charges. Though the rise in commodity prices has spread to energy and certain food items, the boost to prices from a cost standpoint remains minimal compared to 2013-15, when the yen weakened so dramatically, and we believe the rise in food prices will be smaller this time around. The smaller adverse impact from mobile phone charges should ensure an upturn in core CPI inflation to positive territory in FY22, though the pace of growth looks to be mild.

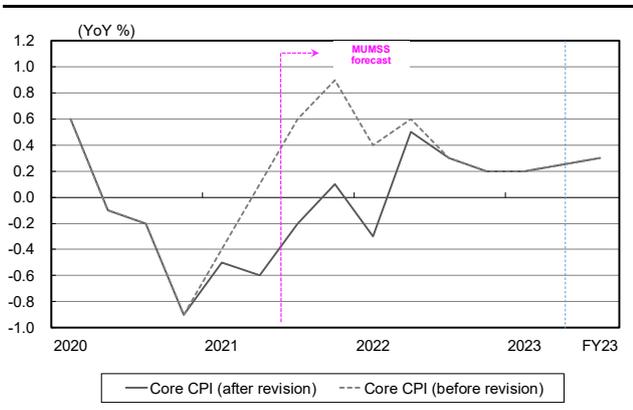
Risk is sustained decline in mobile phone charges

We assume an annual drop of around 3% in mobile phone charges in FY22 and beyond based on past trends. This would mean that the impact on inflation will linger throughout FY21 and shrink in FY22. Given the events leading up to the introduction of the cheaper rate plans this April, the carriers could very well offer further plans that cause another large slump in the CPI. The MIC has expressed its intention to promote further competition in the mobile phone market, but we consider this a risk scenario for now in light of the ministry's satisfaction with the latest rate plans¹.

Reaffirm view of prolonged accommodative monetary policy

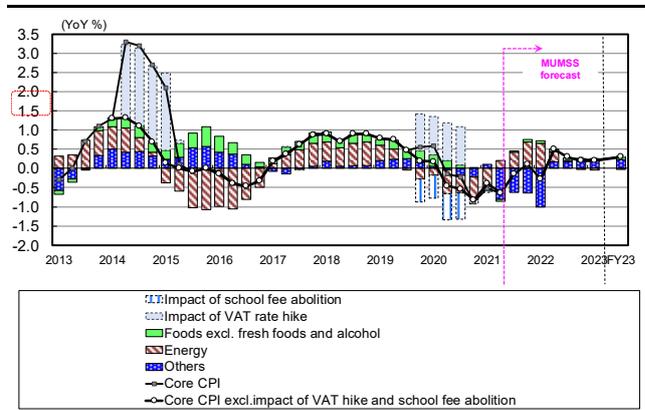
The BoJ's quarterly Outlook Report of July predicts core CPI inflation of +0.6% YoY in FY21, +0.9% in FY22, and +1.0% in FY23. These figures use the old 2015 base year and will likely be revised downward with the shift to the new base year. Still, the possibility of a substantial base-year-related reduction in the forecast, including the altered calculation method that led to the latest disappointing results, was already touched upon in the April Outlook Report. Even before the revision, inflation was expected to remain short of the 2% target in FY23. As such, we believe the BoJ will remain firmly committed to its accommodative monetary policy stance.

Figure 8. Core CPI forecast



Source: MUMSS, from MIC data (MUMSS forecasts)

Figure 9. Core CPI forecast, category contributions



Source: MUMSS, from MIC data (MUMSS forecasts)

¹ Materials released at end-June by MIC, the Consumer Affairs Agency and Fair Trade Commission indicate that 15.70mn people as of May had shifted to new mobile phone rate plans introduced in February, reducing household costs by an estimated annual total of JPY430bn. The *Mainichi Shimbun* reported on 7 August that the ministry is expecting further declines in the household burden, backed by a finding in one survey that nearly 30% more are planning to shift to the cheaper schemes. The material says approvingly that the new rate plans have made phone charges inexpensive even from a global perspective. It will now seek to verify that users are indeed moving to the new plans.

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Appendix A

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