

# Japanese Economy: Analysis and Forecasts No.135

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A Macroeconomic Analysis Project

▶ This report is a summary of the economic analyses and forecasts put together by APIR's macroeconomic analysis project team.

▶ The project team consists of young professionals from member companies and APIR researchers, and is headed by Yoshihisa Inada, Director of the APIR Center for Quantitative Economic Analysis and Professor Emeritus of Konan University.

▶ This report and the forecasts in it were co-authored by Yoshihisa Inada and Mitsuru Shimoda from the Japan Applied Research Institute.

▶ This project is part of a 40-year research collaboration between young business professionals and academics, and its forecasts are widely used.

▶ The project was originally established by Chikashi Moriguchi and Kanemi Ban, Professors Emeritus of Osaka University. Since 2005 it has evolved into an endeavor to incorporate Current Quarter Model forecasts into the existing quarterly macroeconomic forecast model.

▶ Aiming to provide a timely response to changes in the economy, the report has been published quarterly since 2004.

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## Forecast Highlights

### Recovery at crossroads: supply shocks and a sixth wave of infections - Real GDP projected at +2.8% in FY 2021, +2.6% in FY 2022 and +1.4% in FY 2023 -

- ◆ According to the first advance GDP estimate released on November 15, Japan's Q2 real GDP shrank an annualized -3.0% (-0.8% QoQ), marking the first decline in two quarters and performing substantially worse than the market consensus final forecast of -0.56%. CQM final forecasts of the expenditure-side was -0.7%, the production-side one -3.8% and the average -2.2%. The production-side forecast, which is more easily influenced by fluctuations in production data, was rather close to the actual figure. Normally, by the time we release our final forecast, the expenditure-side and production-side forecasts converge. However, this time they kept diverging, reflecting the significant impact of supply constraints.
- ◆ The declaration of a fourth state of emergency pushed down private final consumption expenditure, thereby lowering Q3 economic performance. The contribution of domestic demand to real GDP growth (-0.8% QoQ) was -0.9%pt. Therein, the contribution of private demand was -1.4%pt, turning negative for the first time in two quarters. All headline indicators (private final consumption expenditure, private housing, and private non-residential investment) fell sharply. On the other hand, net exports made a positive contribution for the first time in three quarters, but only by a modest +0.1%pt, reflecting the significant impact of supply constraints, including the prolonged declaration of a state of emergency and semiconductor shortages.
- ◆ Reflecting the first advance Q3 GDP estimate and changes in exogenous variables, we have updated our forecasts for FY 2021-22, and we have released our first forecast for FY 2023. Our latest real GDP growth forecast is +2.8% in FY 2021, +2.6% in FY 2022 and +1.4% in FY2023. Compared to our previous forecast, the FY 2021 figure is -0.5%pt lower, while the FY 2022 figure is +0.3%pt higher. The forecast for FY2021 was revised downward to reflect the significant negative growth in Q3 caused by supply constraints and the declaration of a state of emergency, while the forecast for FY2022 was revised upward to reflect the delayed acceleration of growth.
- ◆ The contributions to real GDP growth by major components in FY 2021 are estimated at +1.6%pt by private demand, +0.8%pt by net exports and +0.4%pt by public demand. Although all contributions are positive, they will fail to offset the slump in private demand in FY 2020. The contributions are expected to remain essentially the same in FY 2022, but all of them are expected to decline in FY 2023.
- ◆ On a quarterly basis, private final consumption expenditure is expected to expand rapidly in Q4, due to the accumulation of savings caused by the pandemic and the easing of restrictions (a trend called "revenge consumption"). As a result, we expect real GDP to exceed its pre-pandemic level in 2022 Q1, and to surpass its pre-pandemic peak in 2023 Q1. Due to the negative growth in 2021 Q3, these events are now expected to occur one quarter later than our previous forecast.
- ◆ With regard to the outlook for the CPI, accommodation and communication charges are likely to be disturbing factors of the basic trend. From the second half of 2021 onwards, the CPI is expected to turn and stay positive due to the surge in energy prices. However, the basic CPI trend will remain weak due to downward pressure by service prices. We forecast a core CPI inflation rate of 0.0% in FY 2021, +0.8% in FY 2022 and +0.7% in FY 2023.

## Forecast Summary

	Current forecast (2021/11/30)				Previous forecast (2021/8/31)			
	2020	2021	2022	2023	2019	2020	2021	2022
Real GDP (%)	▲ 4.4	2.8	2.6	1.4	▲ 0.5	▲ 4.5	3.3	2.3
Private demand (contribution)	▲ 4.7	1.6	1.7	0.9	▲ 0.6	▲ 4.7	2.3	1.8
Private final consumption expenditure (%)	▲ 5.8	2.8	2.2	0.7	▲ 1.0	▲ 5.9	3.1	2.0
Private residential investment (%)	▲ 7.2	▲ 0.7	▲ 1.5	0.4	2.5	▲ 7.2	2.1	▲ 0.3
Private non-residential investment (%)	▲ 6.9	1.1	3.2	3.3	▲ 0.6	▲ 6.8	3.3	3.4
Change in private inventories (contribution)	▲ 0.2	▲ 0.1	0.1	▲ 0.1	0.1	▲ 0.2	0.0	0.2
Public demand (contribution)	0.9	0.4	0.5	0.3	0.5	0.9	0.3	0.3
Government final consumption expenditure (%)	3.4	2.7	1.8	0.9	2.0	3.3	1.4	1.1
Government investment expenditure (%)	4.2	▲ 3.3	2.4	2.0	1.5	4.2	▲ 0.6	1.8
Change in government inventories (contribution)	0.0	▲ 0.0	0.0	▲ 0.0	0.0	▲ 0.0	▲ 0.0	▲ 0.0
External demand (contribution)	▲ 0.6	0.8	0.4	0.2	▲ 0.2	▲ 0.7	0.7	0.2
Exports of goods and services (%)	▲ 10.4	11.6	4.5	4.5	▲ 2.2	▲ 10.4	14.2	4.1
Imports of goods and services (%)	▲ 6.8	6.7	2.6	3.3	0.2	▲ 6.8	9.6	3.0
Nominal GDP (%)	▲ 3.9	1.9	3.2	2.0	0.3	▲ 3.9	2.8	3.0
GDP deflator (%)	0.6	▲ 0.8	0.7	0.6	0.9	0.6	▲ 0.5	0.7
Domestic corporate goods price index (%)	▲ 1.4	6.5	1.7	0.6	0.1	▲ 1.4	5.3	1.1
Core consumer price index (%)	▲ 0.4	0.0	0.8	0.7	0.6	▲ 0.4	▲ 0.1	0.7
Industrial production index (%)	▲ 9.5	6.1	3.6	2.6	▲ 3.8	▲ 9.5	9.7	2.7
New housing starts (%)	▲ 8.1	6.3	▲ 2.0	▲ 1.3	▲ 7.3	▲ 8.1	7.6	▲ 3.6
Unemployment rate (%)	2.9	2.8	2.8	2.6	2.3	2.9	2.9	2.8
Current account balance (JPY trillion)	16.3	12.8	11.6	12.9	18.9	18.3	18.4	17.7
% of nominal GDP	3.0	2.3	2.1	2.2	3.4	3.4	3.3	3.1
Crude oil price (USD/barrel)	44.1	74.6	73.4	68.6	58.7	44.1	67.8	64.3
USD/JPY exchange rate	106.0	112.2	115.3	116.5	108.7	106.0	110.2	111.3
USA real GDP (% , calendar year)	▲ 3.4	5.5	4.3	2.8	2.2	▲ 3.5	6.5	4.5

Note: Figures on private consumption, government spending, changes in private and government inventories and external demand represent contribution ratios. The rest of the figures reflect YoY changes. The crude oil price is the average of the WTI, Dubai and Brent Blend benchmarks. Highlighted columns represent actual values.

## Detailed Forecasts

Table 1. Main economic indicators

	Quarter												Fiscal year			
	21Q2	21Q3	21Q4	22Q1	22Q2	22Q3	22Q4	23Q1	23Q2	23Q3	23Q4	24Q1	2020	2021	2022	2023
Real GDP (JPY trillion)	538.8	534.7	545.5	548.3	552.2	554.6	556.5	559.5	561.4	563.0	564.3	565.4	527.1	541.8	555.7	563.5
	0.4	-0.8	2.0	0.5	0.7	0.4	0.3	0.5	0.3	0.3	0.2	0.2	-4.4	2.8	2.6	1.4
	7.7	1.3	0.5	2.1	2.5	3.7	2.0	2.0	1.7	1.5	1.4	1.1				
Nominal GDP (JPY trillion)	543.8	540.4	549.4	554.8	560.7	562.9	565.6	569.9	572.6	575.4	577.2	579.1	536.7	547.1	564.8	576.1
	-0.2	-0.6	1.7	1.0	1.1	0.4	0.5	0.8	0.5	0.5	0.3	0.3	-3.9	1.9	3.2	2.0
	6.5	0.3	-0.4	1.8	3.1	4.2	3.0	2.7	2.1	2.2	2.1	1.6				
GDP deflator (2011=100)	100.9	101.1	100.7	101.2	101.5	101.5	101.6	101.9	102.0	102.2	102.3	102.4	101.8	101.0	101.6	102.2
	-0.6	0.1	-0.4	0.5	0.4	-0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.6	-0.8	0.7	0.6
	-1.1	-1.0	-0.9	-0.3	0.6	0.4	0.9	0.7	0.4	0.7	0.7	0.5				
Index of industrial production (2015=100)	97.7	94.1	95.0	97.0	98.2	99.1	99.8	100.4	101.1	101.6	102.2	102.7	90.4	95.9	99.4	101.9
	1.2	-3.7	1.0	2.1	1.2	0.9	0.7	0.6	0.7	0.6	0.5	0.5	-9.5	6.1	3.6	2.6
	19.9	5.9	1.2	0.4	0.5	5.3	5.0	3.5	2.9	2.6	2.4	2.3				
New housing starts (thousands)	219	219	213	212	215	213	210	208	207	208	210	211	812	863	846	835
	5.5	0.1	-2.6	-0.5	1.2	-0.9	-1.2	-1.2	-0.6	0.6	0.8	0.6	-8.1	6.3	-2.0	-1.3
	8.2	7.6	6.0	2.3	-1.8	-2.8	-1.4	-2.1	-3.8	-2.3	-0.3	1.5				
Domestic corporate goods price index (2015=100)	104.0	106.2	108.4	108.4	108.6	108.3	108.4	108.9	109.6	109.1	108.9	109.3	100.2	106.8	108.6	109.2
	2.5	2.2	2.0	0.0	0.2	-0.2	0.1	0.4	0.6	-0.4	-0.2	0.4	-1.4	6.5	1.7	0.6
	4.6	6.0	8.5	6.8	4.5	2.0	0.0	0.4	0.9	0.7	0.4	0.4				
Core consumer price index (2015=100)	99.4	99.8	100.1	100.3	100.4	100.7	100.9	101.1	101.2	101.4	101.4	101.7	99.9	99.9	100.8	101.4
	-0.5	0.4	0.3	0.2	0.1	0.3	0.2	0.2	0.1	0.3	0.0	0.3	-0.4	0.0	0.8	0.7
	-0.6	0.0	0.5	0.4	1.0	0.9	0.8	0.8	0.8	0.7	0.6	0.6				
Wage earnings per worker (JPY thousand)	4033	4046	4034	4119	4091	4103	4089	4165	4150	4167	4161	4224	4010	4058	4112	4175
	-1.1	0.3	-0.3	2.1	-0.7	0.3	-0.3	1.9	-0.4	0.4	-0.1	1.5	-1.1	1.2	1.3	1.5
	1.3	1.3	1.2	1.1	1.5	1.4	1.4	1.1	1.4	1.6	1.8	1.4				
Unemployment rate (%)	2.9	2.8	2.8	2.8	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.6	2.9	2.8	2.8	2.6
CD interest rate (%)	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.003	0.002	0.002	0.002	0.003
10-year government bond yields (%)	0.073	0.037	0.079	0.083	0.077	0.145	0.173	0.201	0.231	0.237	0.235	0.240	0.041	0.068	0.149	0.236
Current account balance (JPY trillion)	4.7	2.9	2.5	2.7	3.0	2.6	2.8	3.2	3.2	3.3	3.3	3.1	16.3	12.8	11.6	12.9
% of nominal GDP	3.5	2.1	1.8	1.9	2.1	1.8	2.0	2.3	2.2	2.3	2.3	2.2	3.0	2.3	2.1	2.2
Crude oil price (USD/barrel)	67.35	71.77	82.36	76.83	74.22	75.85	74.22	69.34	70.64	68.28	67.71	67.59	44.11	74.58	73.41	68.55
USD/JPY exchange rate	109.5	110.1	114.0	115.2	115.3	115.3	115.3	115.3	116.5	116.5	116.5	116.5	106.0	112.2	115.3	116.5
Government debt (JPY trillion)	1206.0	1208.0	1221.8	1233.3	1241.4	1251.0	1262.3	1273.1	1283.5	1294.7	1306.0	1317.7	1204.0	1233.3	1273.1	1283.5
	0.2	0.2	1.1	0.9	0.7	0.8	0.9	0.9	0.8	0.9	0.9	0.9	8.9	2.4	3.2	0.8
	6.7	4.6	3.6	2.4	2.9	3.6	3.3	3.2	3.4	3.5	3.5	3.5				
% of GDP	221.8	223.5	226.3	227.9	228.8	230.1	232.0	234.0	236.2	238.6	241.3	244.3	224.4	225.4	225.4	222.8
Fiscal balance (JPY trillion)	-49.8	-54.5	-52.7	-55.6	-56.2	-57.7	-57.9	-59.4	-59.9	-61.0	-61.4	-63.2	-52.8	-53.1	-57.8	-61.4

Notes: In the quarterly statistics, the figures in the first and second rows below the main series represent QoQ changes (%) and YoY changes (%) respectively. In the annual statistics, the figures under the main series represent YoY changes (%). In the GDP statistics (real, nominal, deflator), the first and second rows represent QoQ and YoY growth rates (%) respectively. The YoY values were calculated using seasonally adjusted data, so they might differ from the official figures, which are not seasonally adjusted. Highlighted columns represent actual values.

Table 2. Gross domestic expenditure (real)

JPY trillion (2015 chain prices), %

	Quarter												Fiscal year			
	21Q2	21Q3	21Q4	22Q1	22Q2	22Q3	22Q4	23Q1	23Q2	23Q3	23Q4	24Q1	2020	2021	2022	2023
Private final consumption expenditure	288.9	285.6	292.9	293.3	295.8	296.6	296.8	297.1	297.8	298.5	299.2	299.6	282.3	290.2	296.6	298.8
	0.9	-1.1	2.6	0.1	0.9	0.3	0.1	0.1	0.2	0.2	0.2	0.1	-5.8	2.8	2.2	0.7
	7.2	0.7	1.0	2.5	2.4	3.8	1.3	1.3	0.7	0.6	0.8	0.8				
Private residential investment	19.2	18.7	18.7	18.6	18.4	18.5	18.6	18.5	18.6	18.6	18.5	18.6	18.9	18.8	18.5	18.6
	2.0	-2.6	0.2	-0.7	-0.9	0.5	0.5	-0.5	0.5	0.1	-0.4	0.4	-7.2	-0.7	-1.5	0.4
	-2.8	0.4	0.6	-1.1	-4.0	-0.9	-0.7	-0.5	0.9	0.5	-0.4	0.5				
Private non-residential investment	86.8	83.5	84.9	85.9	86.7	87.7	88.4	89.3	90.1	90.5	91.1	91.8	84.3	85.3	88.0	90.9
	2.2	-3.8	1.8	1.1	1.0	1.1	0.8	1.1	0.8	0.5	0.7	0.8	-6.9	1.1	3.2	3.3
	3.2	1.4	-1.0	1.1	0.0	5.0	4.0	4.0	3.9	3.3	3.1	2.8				
Change in private inventories	-0.6	1.1	1.7	1.6	1.6	1.3	1.2	1.1	1.0	1.0	1.0	1.0	1.3	1.0	1.3	1.0
Government final consumption expenditure	116.2	117.5	118.3	118.8	119.3	119.6	119.9	120.2	120.5	120.7	121.0	121.2	114.6	117.7	119.8	120.8
	1.1	1.1	0.6	0.5	0.5	0.2	0.2	0.2	0.2	0.2	0.2	0.2	3.4	2.7	1.8	0.9
	4.1	2.4	1.1	3.3	2.7	1.8	1.4	1.2	1.0	0.9	0.9	0.8				
Government investment expenditure	28.5	28.1	28.1	28.4	28.7	28.9	29.0	29.2	29.3	29.4	29.6	29.7	29.2	28.3	28.9	29.5
	-2.1	-1.5	0.1	1.0	1.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	4.2	-3.3	2.4	2.0
	-1.5	-4.2	-4.8	-2.5	0.8	2.8	3.2	2.7	2.0	2.0	2.0	2.0				
Change in government inventories	-0.03	-0.06	0.00	0.00	0.00	-0.01	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.02	0.00	0.00
Exports of goods and services	103.5	101.3	102.2	103.7	104.7	106.3	107.9	110.2	111.1	112.0	112.6	113.0	92.0	102.7	107.3	112.1
	3.2	-2.1	0.8	1.5	1.0	1.5	1.5	2.2	0.8	0.8	0.5	0.4	-10.4	11.6	4.5	4.5
	26.8	15.5	4.3	3.4	1.1	4.9	5.6	6.3	6.1	5.3	4.3	2.5				
Imports of goods and services	104.1	101.2	101.6	102.1	103.3	104.4	105.4	106.3	107.1	107.9	108.8	109.7	95.8	102.2	104.9	108.4
	5.3	-2.7	0.3	0.5	1.2	1.0	1.0	0.9	0.7	0.7	0.8	0.9	-6.8	6.7	2.6	3.3
	5.3	11.6	6.8	3.3	-0.7	3.1	3.8	4.1	3.7	3.3	3.2	3.2				
GDP	538.8	534.7	545.5	548.3	552.2	554.6	556.5	559.5	561.4	563.0	564.3	565.4	527.1	541.8	555.7	563.5
	1.5	-3.0	8.3	2.1	2.9	1.8	1.4	2.1	1.3	1.2	1.0	0.8	-4.4	2.8	2.6	1.4
	0.4	-0.8	2.0	0.5	0.7	0.4	0.3	0.5	0.3	0.3	0.2	0.2				
	7.7	1.3	0.5	2.1	2.5	3.7	2.0	2.0	1.7	1.5	1.4	1.1				
Contribution of domestic demand	0.7	-0.9	1.9	0.3	0.7	0.3	0.2	0.3	0.3	0.3	0.3	0.3	-3.8	2.0	2.2	1.2
of which, private demand	0.6	-1.0	1.8	0.2	0.6	0.3	0.2	0.2	0.3	0.2	0.2	0.2	-4.7	1.6	1.7	0.9
of which, public demand	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.9	0.4	0.5	0.3
Contribution of net exports	-0.4	0.1	0.1	0.2	0.0	0.1	0.1	0.3	0.0	0.0	-0.1	-0.1	-0.6	0.8	0.4	0.2

Notes: In the quarterly statistics, the figures in the first and second rows below the main series represent QoQ changes (%) and YoY changes (%) respectively. In the GDP quarterly series, the first row below the main series represents annualized QoQ changes (%), the second and third rows are QoQ and YoY changes (%), respectively. In the annual statistics, the figures under the main series represent YoY changes (%). Highlighted columns represent actual values.

## Forecast at a glance

