Chapter 2

The Economies of Japan and Kansai: A Retrospective and Outlook

Section 1
The Japanese Economy: Recent Developments and Short-Term Forecasts

INADA, Yoshihisa; SHIMIDA, Mitsuru

Chapter 2 is structured as follows. In Sections 1 and 2, the first half provides a retrospective look at the economies of Japan and Kansai in FY 2021 and the first half of FY 2022, and the second half presents our forecasts for FY 2022-24. In Section 2, we also present our estimates GRPs for the six prefectures of the Kansai region in FY 2019-21, and compare their recoveries from the COVID-19 pandemic. In addition, we analyze the impact of China's zero-COVID policy on the Kansai economy. Section 3 sheds light on the decline of the middle class, which was exacerbated by the pandemic. Finally, in Column 2-A, we analyze the various risks to the Japanese and Kansai economies that have emerged from the Russian invasion of Ukraine from the perspective of trade relations.

1. Retrospective of the Japanese economy in FY 2021

(1) Stagnation of world trade in the second half of 2022 is inevitable

According to the CPB World Trade Monitor, world trade (in volume terms, 2010=100) increased slightly by +0.1% MoM in September 2022, marking the third consecutive monthly increase. As a result, Q3 saw a +1.2% QoQ increase, marking the third consecutive quarter of positive growth. Advanced economies accelerated their growth to +1.4% QoQ, while emerging economies barely grew at +0.9% QoQ (Figure 2-1-1). China's zero-COVID policy and rapid monetary tightening in China caused real GDP growth in China and the U.S. to fall into negative territory in Q2. In Q3 in major countries saw a recovery, but there is a strong possibility that the global economy will slow down from 2022 Q4 to the first half of 2023. This is because the U.S. and European economies have

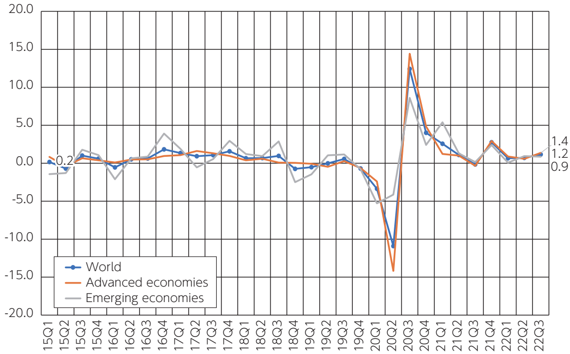

Figure 2-1-1 **Change in World Trade Volume: 2010=100: QoQ: %.**

Source: CPB World Trade Monitor, 21 October 2022

entered recession and the Chinese economy is expected to decelerate further. Therefore, a slowdown in global trade is inevitable in the second half of FY 2022.

Next, we discuss the outlook for export markets using a different statistic. According to the Cabinet Office, Japan's Q3 machinery orders (foreign demand) fell for the first time in two quarters, falling -16.5% QoQ. According to a survey conducted at the end of September, Q4 is expected to see a recovery for the first time in two quarters, +16.5% QoQ. However, if Q3 and Q4 are averaged out, the trend is flat. The global economy is expected to enter a recession in the second half of 2022 and the first half of 2023, and the capital goods export market is expected to enter an adjustment phase in the second half of 2022. According to the Global Semiconductor Market Statistics, global semiconductor sales (3-month moving average) in September were down for the second consecutive month, -3.0% YoY. By region, sales in Asia shrank -11.5% YoY, down for the second consecutive month (Figure 2-1-2). Considering this, demand for semiconductors is unlikely to pick up in the second half of 2022 or 2023.

(2) Current state of the Japanese economy

Second Advance Estimate of Q3 GDP

According to the second preliminary GDP report for July-September 2022 released on December 8, real GDP growth was -0.2% QoQ and -0.8% QoQ, somewhat upwardly revised from the first preliminary report (-0.3% QoQ and -1.2% QoQ). Due to the large downward revision in 2022 Q1, the clog in the 2022 growth rate fell 0.2 %pt (from +0.4% to +0.2%) from the first preliminary estimate. Thus, Q3 was the first time in two quarters that the economy has posted a negative growth rate, after four quarters of negative growth. The Japanese

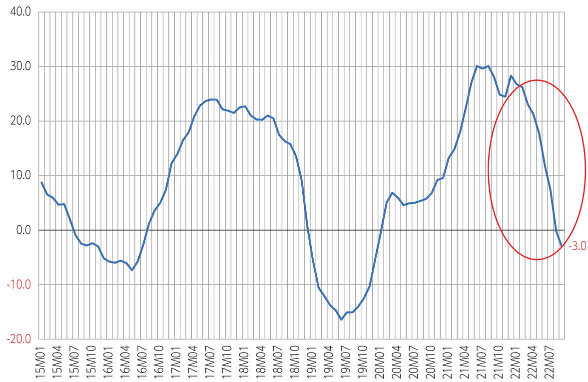

Figure 2-1-2 Global Semiconductor Sales: YoY Change: % (%)

Source: World Semiconductor Trade Statistics, September 2022

economy's real growth rate has alternated between positive and negative in FY 2021 and the first half of FY 2022, and the momentum of recovery has been weak compared to other major economies.

Looking at the contribution to real GDP growth (-0.2% QoQ) in Q3, domestic demand increased for the fourth consecutive quarter, +0.4%pt QoQ. Therein, private demand increased for the fourth consecutive quarter (+0.4%pt), and public demand increased for the second consecutive quarter (+0.0%pt). On the other hand, net exports declined for the first time in two quarters (-0.6%pt). The large negative contribution from net exports was due to a large increase in imports, which was in turn caused by a temporary spike in services imports.

The growth rate of gross domestic income (GDI), which reflects gains/losses from changes in the terms of trade (export price index/import price index) to GDP, was -0.9% for the seventh consecutive quarter, below the growth rate of real GDP. In FY 2021-22, the rapid deterioration in terms of trade caused income outflows for both households and firms (Table 2-1-1).

Trends in GDP components in Q3

Private final consumption expenditure increased for the second consecutive quarter, +0.1% QoQ. Despite a sharp increase in the number of COVID-19 infections in July-August, private consumption did not decline, partly because no restrictions on economic activities were imposed.

Within fixed capital formation, real private residential investment fell for the fifth consecutive quarter, -0.5% QoQ. Real private capital investment increased for the second consecutive quarter, +1.5% QoQ. Investment demand seems to

Table 2-1-1 Real GDP and each demand item: QoQ: %, % points

	Annu-alized GDP	GDP	Domestic demand	Private demand	Private final con-sumption expendi-ture	Private resi-dential invest-ment	Private non-res-idential invest-ment	Private inventory changes	Public demand	Govern-ment final con-sumption expendi-ture	Public invest-ment	Public inventory changes	Net exports	Exports	Imports	GDI
			*	*				*	*			*	*			
19Q2	1.2	0.3	0.5	0.3	0.1	0.1	-0.1	0.2	0.2	0.1	0.1	0.0	-0.2	0.1	-0.3	0.1
19Q3	0.9	0.2	0.5	0.4	0.5	0.0	0.4	-0.5	0.2	0.2	0.0	0.0	-0.3	0.1	-0.4	0.3
19Q4	-10.4	-2.7	-2.9	-2.9	-1.8	-0.1	-1.2	0.2	0.1	0.1	0.0	0.0	0.1	-0.2	0.4	-2.7
20Q1	1.8	0.4	0.5	0.5	0.4	-0.2	0.7	-0.4	0.0	0.0	0.0	0.0	-0.1	-0.8	0.7	0.6
20Q2	-28.2	-8.0	-5.2	-5.4	-4.6	0.0	-1.2	0.4	0.2	0.0	0.2	0.0	-2.8	-2.9	0.1	-6.9
20Q3	24.2	5.6	2.8	2.2	2.9	-0.2	0.0	-0.5	0.5	0.5	0.0	0.0	2.8	1.5	1.3	5.4
20Q4	7.9	1.9	1.4	1.2	1.1	0.0	0.3	-0.2	0.2	0.2	0.1	0.0	0.5	1.5	-1.0	1.9
21Q1	-0.6	-0.1	-0.2	-0.2	-0.9	0.1	0.2	0.4	0.0	0.0	0.0	0.0	0.1	0.4	-0.3	-0.8
21Q2	1.3	0.3	0.5	0.2	0.1	0.1	0.2	-0.1	0.3	0.4	-0.1	0.0	-0.2	0.5	-0.7	-0.1
21Q3	-1.8	-0.5	-0.6	-0.7	-0.7	-0.1	-0.3	0.3	0.1	0.3	-0.2	0.0	0.1	-0.1	0.2	-1.2
21Q4	4.9	1.2	1.2	1.6	1.7	0.0	0.1	-0.2	-0.4	-0.2	-0.2	0.0	0.0	0.1	-0.1	0.5
22Q1	-1.8	-0.5	0.0	0.1	-0.6	-0.1	-0.1	0.8	-0.1	0.1	-0.2	0.0	-0.5	0.2	-0.7	-0.8
22Q2	4.5	1.1	1.0	0.8	0.9	-0.1	0.3	-0.3	0.2	0.2	0.0	0.0	0.1	0.3	-0.2	0.3
22Q3	-0.8	-0.2	0.4	0.4	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.0	-0.6	0.4	-1.0	-0.9

Note: Domestic demand, private demand, private inventory change, public demand and net exports are contributions. Others are year-on-year changes. * means contribution.
Source: National Accounts, Economic and Social Research Institute, Cabinet Office, Government of Japan, "Preliminary Quarterly GDP Report for July-September 2022 (2nd Preliminary Figures)

have reappeared. The contribution of changes in real private inventories to real GDP growth was +0.1 %pt QoQ, the first increase in two quarters.

Within public demand, real government final consumption expenditure increased for the third consecutive quarter, +0.1% QoQ. Real public fixed capital formation increased for the second consecutive quarter, up +0.9% QoQ.

Real exports of goods and services increased for the fourth consecutive quarter, up +2.1% QoQ. Therein, goods exports increased for the fourth consecutive quarter (+1.6% QoQ), while services exports increased for the second consecutive quarter (+4.6% QoQ). On the other hand, real imports of goods and services increased for the fourth consecutive quarter, +5.2% QoQ. Therein, goods imports increased for the fourth consecutive quarter, up +1.8% QoQ, while services imports increased for the first time in two quarters, up +18.6% QoQ.

Looking at deflators, the domestic demand deflator rose for the seventh consecutive quarter, +0.6% QoQ. In terms of external demand deflators, the export deflator for goods and services was +3.3% QoQ (up for the seventh consecutive quarter), while the import deflator was +6.5% QoQ (up for the seventh

Table 2-1-2 Adjustment process from the COVID-19 pandemic: Real GDP and each demand item: Peak=100

	GDP	Goods imports	Services imports	Private final consumption expenditure	Private invest-ment	Government spending	Goods exports	Services exports
19Q2	99.8	98.6	95.6	99.1	100.5	99.4	98.8	102.2
19Q3	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
19Q4	97.3	98.6	96.1	96.7	94.7	100.3	98.4	100.2
20Q1	97.7	93.9	94.8	97.4	95.3	100.3	95.7	88.3
20Q2	89.9	94.8	88.8	89.1	91.5	101.2	78.1	76.6
20Q3	95.0	87.2	84.9	94.0	88.5	103.1	88.8	73.2
20Q4	96.8	94.1	84.4	95.8	88.8	104.0	98.9	75.0
21Q1	96.6	96.1	85.5	94.2	92.3	103.8	100.9	78.3
21Q2	97.0	99.1	93.2	94.4	92.9	105.1	104.3	79.6
21Q3	96.5	98.4	90.5	93.2	92.9	105.5	103.8	80.1
21Q4	97.7	99.1	89.8	96.2	92.3	103.9	104.6	79.5
22Q1	97.2	103.0	92.1	95.2	95.3	103.7	106.8	77.2
22Q2	98.3	105.2	89.4	96.7	95.2	104.5	107.6	81.1
22Q3	98.1	107.1	106.0	96.8	96.7	104.6	109.3	84.9

Source: Authors' calculations based on National Accounts, Economic and Social Research Institute, Cabinet Office, Government of Japan, and "Preliminary Report on Quarterly GDP for July-September 2022 (2nd Preliminary Report)

consecutive quarter). As the latter exceeded the former, the terms of trade deteriorated for the seventh consecutive quarter. As a result, the GDP deflator fell for the second consecutive quarter to -0.5% QoQ. Thus, nominal GDP growth in Q3 was -0.7% QoQ (or an annualized -2.9%), marking the first decline in four quarters.

Real GDP peaked in 2019 Q3, just before the outbreak COVID-19 pandemic. 2022 Q3 GDP remains -1.9% below that peak. Recovery has been particularly slow in private final consumption expenditure (-3.2% lower than its peak), private capital formation (private residential investment + private capital investment + private inventory changes, -3.3% lower than its peak) and service exports (-15.1% lower than its peak, Table 2-1-2).

2. Japan Economic Forecast: FY 2022-24

(1) Assumptions about exogenous variables

Real public fixed capital formation in 2022 Q3 grew +0.9% QoQ, marking the second consecutive quarterly increase. According to the Ministry of Land, Infrastructure, Transport and Tourism, public works (volume basis) in September 2022 (seasonally adjusted, APIR estimate) decreased for the first time in seven months, -0.0% MoM. As a result, the 2022 Q3 period saw a +3.2%

QoQ increase, the second consecutive quarterly increase. As a result, we assume that real public fixed capital formation growth will be -2.8% in FY 2022, +2.1% in FY 2023, and +1.5% in FY 2024.

Real government final consumption expenditure in 2022 Q3 increased for the third consecutive quarter, by +0.1% QoQ. On November 8, 2022, the Cabinet approved the FY 2022 supplementary budget. Of the 28.9 trillion-yen budget, 7.8 trillion yen is allocated for measures to cope with soaring prices and wage hikes. These measures will somewhat ease the burden of higher prices on households. Reflecting these factors, we assume that real government consumption expenditures will grow by +1.2% in FY 2022, +0.8% in FY 2023, and +0.5% in FY 2024. No major changes in monetary policy are assumed.

An important assumption for the overseas environment is the price of crude oil. The crude oil price (average price of WTI, Dubai, and North Sea Brent) has been above $100 for five consecutive months until July 2022, as Russia's invasion of Ukraine further accelerated the rise in the crude oil price. In August, the price fell below $100 as the global economy slowed down. In the current forecast, we assume that crude oil prices peaked in the 2022 Q2 (at $109.41 per barrel) and will decline but remain high from 2023 onward, reaching $83.33 per barrel in the 2024 Q1 and around $85.52 per barrel in the 2025 Q1. Therefore, we assume $94.8 for FY 2022, $82.5 for FY 2023, and $83.3 for FY 2024.

Our assumptions concerning world trade is based on S&P Global's Global Economic Outlook, November 2022. We assume that real world exports of goods and services will slow sharply from +9.7% YoY in 2021 to +5.7% YoY in 2022 and +2.0% YoY in 2023, but will recover to +3.5% YoY in 2024.

Regarding exchange rate assumptions, we assume that the U.S. Fed will take a tighter monetary policy stance from March 2022, raising its policy rate to 4.75-5.00% in March 2023 and stopping thereafter. On the other hand, we assume that Japan will maintain an accommodative monetary policy, and as a result, the exchange rate will be influenced by the U.S. monetary policy. We assume exchange rates of 137.3 yen in FY 2022, 133.9 yen in FY 2023, and 128.3 yen in FY 2024 (Table 2-1-3).

(2) Projected real GDP growth rate: +1.5% in FY 2022, +1.1% in FY 2023, +1.4% in FY 2024

We have revised our outlook for the Japanese economy for FY 2022-24, reflecting the second advance estimate of GDP for Q3 2022 and incorporating our new assumptions about exogenous variables (fiscal and monetary policy and variables related to overseas economies). We now forecast real GDP growth of +1.5% in FY 2022, +1.1% in FY 2023, and +1.4% in FY 2024 (Table 2-1-3), and

Table 2-1-3 Summary of Forecast Results

	2021	2022	2023	2024
Real GDP (%)	2.5	1.5	1.1	1.4
Private demand (contribution)	1.4	2.0	0.9	1.2
Private final consumption expenditure (%)	1.5	2.5	1.4	1.3
Private residential investment (%)	▲ 1.1	▲ 4.2	0.9	0.8
Private non-residential investment (%)	2.1	3.3	2.9	2.7
Private inventory changes (contribution)	0.1	0.3	▲ 0.4	0.0
Public demand (contirbution)	0.4	0.1	0.3	0.2
Government final consumption expenditure (%)	3.4	1.2	0.8	0.4
Public investment expenditure (%)	▲ 6.4	▲ 2.8	2.1	1.5
Public inventory changes (contribution)	0.0	▲ 0.0	0.0	▲ 0.0
External demand (contribution)	0.8	▲ 0.6	▲ 0.0	0.1
Exports of goods and services (%)	12.3	4.6	0.3	3.4
Imports of goods and services (%)	7.1	7.9	0.5	2.9
Nominal GDP (%)	2.4	1.6	2.8	2.6
GDP deflator (%)	▲ 0.1	0.1	1.6	1.1
Domestic corporate price index (%)	7.1	8.9	1.6	0.1
Core consumer price index (%)	0.0	3.0	1.9	1.2
Industrial production index (%)	5.8	1.4	2.1	2.0
New housing starts (%)	6.6	▲ 0.5	1.4	0.4
Unemployment rate (%)	2.8	2.5	2.4	2.3
Current account balance (JPY trillion)	20.3	6.3	6.8	6.1
% of nominal GDP	3.7	1.1	1.2	1.0
Crude oil price (USD/barrel)	78.3	94.8	82.5	83.3
USD/JPY exchange rate	112.4	137.3	133.9	128.3
USA real GDP (%, calendar year)	5.9	1.9	0.5	1.8

Note: YoY %, others are notes.

+1.2% in 2022, +1.2% in 2023, and +1.4% in 2024 on a calendar-year basis.

Looking at the contribution to real GDP growth by major item in FY 2022, the contribution of private demand and public demand will boost the economy by +2.0%pt and +0.1%pt, respectively, while net exports will suppress growth by -0.6%pt. In FY 2023, the contribution of public demand will increase slightly to +0.3 %pt, while that of private demand will decrease to 0.9%pt. In FY 2024, private demand will contribute +1.2 %pt, public demand +0.2 %pt, and net exports +0.1 %pt (Figure 2-1-3).

Looking at the components of private demand, in FY 2022 all components are expected to make positive contributions to growth, except private residential investment. Real private final consumption expenditures are expected to boost growth by +1.3 %pt, real private residential investment are expected to suppress

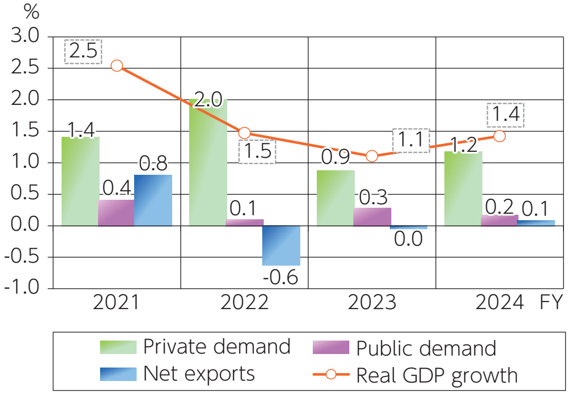

Figure 2-1-3 Real GDP Growth Rate and Itemized Contribution: %.

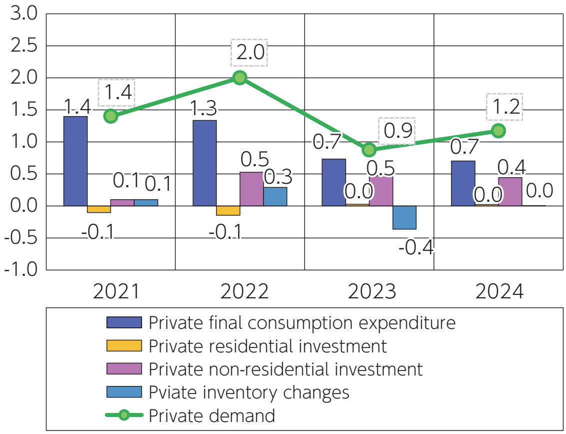

Figure 2-1-4 Contribution of private sector demand by item: %.

growth by -0.1 %pt, real private capital investment are expected to contribute +0.5 %pt, and real private inventory changes are expected to contribute +0.3 %pt.

In FY 2024, the contributions to growth are projected to be + 0.7%pt by real private final consumption expenditure, +0.0%pt by real private residential investment, +0.5%pt by real private capital investment by, and +0.4 %pt by real private inventory changes by. (Figure 2-1-4).

Looking at real GDP (actual and forecast) on a quarterly basis, 2022 Q3 real GDP remains -1.9% below the pre-COVID-19 pandemic peak. If no new restrictions of economic activities are imposed during the forecast period, households'

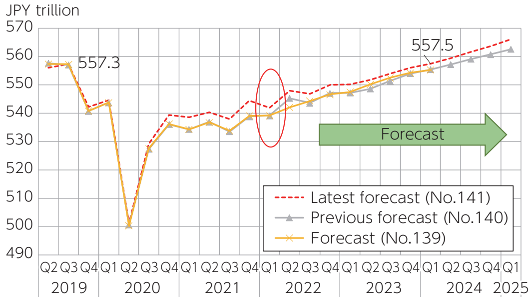

Figure 2-1-5 Quarterly GDP: Actual and Forecast: trillion yen

Note: Actual through Q3 2022; forecast thereafter.

accumulated forced savings will be unleashed in the second half of FY 2022, and a recovery led by private final consumption expenditures, especially service expenditures, can be expected. Since the contribution of private demand will decelerate in FY 2023, the overall growth rate will decline. Therefore, real GDP is not expected to exceed the pre-COVID-19 pandemic peak until 2024 Q1 or later. Since the second advance GDP estimate revised the historical data upward, real GDP is now expected to exceed the pre-COVID-19 pandemic peak two quarters earlier than in our previous forecast (Figure 2-1-5).

(3) Household sector: Wage hikes and recovery in consumption propensity essential for a recovery in private consumption

The trends in private final consumption expenditure in terms of disposable income and propensity to consume (Q1 1994 to April-June 2022). Real disposable income in the April-June period remained slightly higher (0.4%) than its peak (April-June 2019). Meanwhile, the propensity to consume is 3%pt below its peak (from 97.6% to 94.6%). For private final consumption expenditure to recover, a steady increase in disposable income and a recovery in the propensity to consume are necessary (Figure 2-1-6).

The household savings rate, which is the mirror image of consumption propensity, declined to an average of 5.2% from 1994 Q1 to Jan-Mar 2014 Q1 and 0.8% from 2014 Q2 to 2019 Q3, but since then the average savings rate has remained high at 9.7%. Households accumulated forced savings during the COVID-19 disaster and have not been able to withdraw them even after the infection situation subsided. The figure shows that a portion of the fixed benefit payments has gone into savings (Figure 2-1-7, “Other Benefits”). The high savings rate (sluggish propensity to consume) seems to be influenced by the worsening expectations of lifetime income. In addition, consumer price inflation,

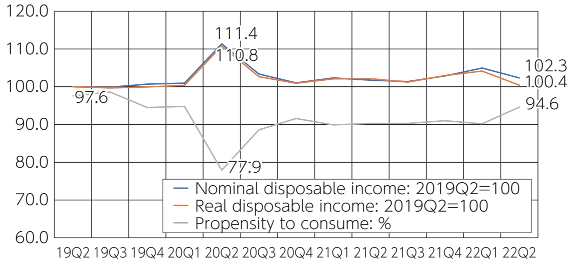

Figure 2-1-6 Disposable income and propensity to consume: seasonally adjusted, trillions of yen, %.

Source: Cabinet Office, “Advance Quarterly Report on Household Disposable Income and Household Saving Ratio.”

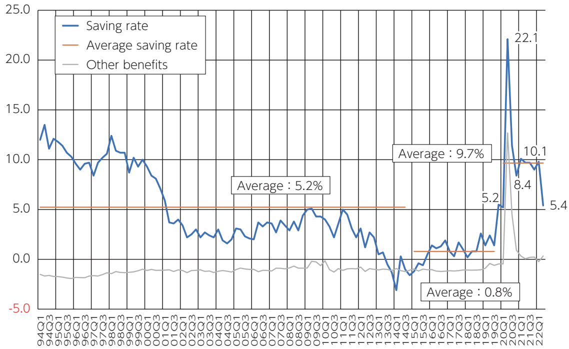

Figure 2-1-7 Household Savings Rate: GDP basis: %.

Source: Calculations based on "Advance Quarterly Report on Household Disposable Income and Household Savings Ratio," Cabinet Office, Government of Japan

which has become more pronounced in recent years, has increased uncertainty about the future and has further suppressed the propensity to consume. In this sense, the government’s efforts to address price inflation should not be short-term (subsidies), but rather medium- to long-term (policies that contribute to higher wages, centered on base wage increases).

If no restrictions are imposed on economic activities during the forecast period, expansion is expected mainly in face-to-face services. In FY 2022, households’ forced savings are expected to be unleashed, leading to a recovery in private final consumption expenditures, mainly service expenditures. As a result, real private final consumption expenditure is expected to grow by +2.5% YoY in FY 2022, but this will be followed by a slowdown to +1.4% YoY in FY 2023 and +1.3% YoY in FY 2024.

According to the Ministry of Land, Infrastructure, Transport and Tourism, new residential investment starts in September increased for the second consecutive month, up 1.0% YoY. The seasonally adjusted figure was -5.1% MoM, the first decline in two months, while the Q3 figure was +1.0% QoQ, the first increase in two quarters. By type of use (seasonally adjusted), owner-occupied houses increased for the second consecutive month in September, up 1.9% from the previous month. Rental residential investment declined for the first time in two months, falling 1.3%. Houses for sale decreased for the first time in two months, -13.7% MoM. Compared to the previous quarter, in Q3, owner-occupied residential investment declined -1.0% (fourth consecutive quarterly decline), while rental residential investment increased +1.8% (first increase in two quarters) and for-sale residential investment increased +1.7% (first increase in two quarters).

Planned construction spending (residential +0.7* combined residential-industrial), which often explains GDP-based private residential investment, increased for the third consecutive month, +2.8% YoY in September. Seasonally adjusted (APIR estimate) was -2.9% MoM, the first decline in three months. As a result, the Q3 period saw a +2.5% QoQ increase, the first positive growth in two quarters. Meanwhile, the August residential investment construction cost deflator (2015 average=100) rose +6.5% YoY for the 19th consecutive month, with the July-August average rising +5.9% over the Q3 average. Building construction costs (residential) in real terms remain sluggish.

Reflecting the current increase in the residential investment construction cost deflator, real private residential investment in FY 2022 is projected to decline by -4.2% YoY, and then increase slightly by +0.9% YoY in FY 2023 and +0.8% YoY in FY 2024.

(4) Corporate Sector: Investment plans expected to remain at high levels; risks include supply constraints and growing uncertainty

According to the Ministry of Economy, Trade and Industry's Industrial Production Index (quarterly data: 2015=100), the industrial production index (quarterly data: 2015=100) declined in September for the first time in four months, falling -1.7% MoM. Due in part to easing supply constraints, the index rose +5.8% QoQ in Q3, the first increase in two quarters (Figure 2-1-8). METI kept its assessment of production ("gradually recovering") unchanged from the previous month. According to the Survey of Industrial Production Forecasts, industrial production in October declined -0.4% MoM (revised estimate: -3.7% MoM), but it is expected to inch up +0.8% MoM in November.

As a result, the industrial production index for FY 2022 is projected to increase +1.4% YoY in FY 2022, +2.1% in FY 2023, and +2.0% in FY 2024. Considering the current situation, our forecast for FY 2022 has been revised

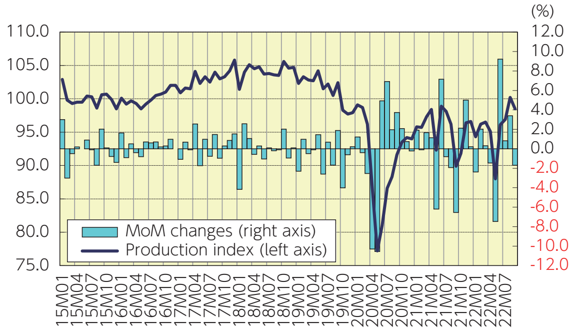

Figure 2-1-8 Industrial Production Index: seasonally adjusted: 2015=100

Source: Ministry of Economy, Trade and Industry, "Index of Mining and Manufacturing"

upward somewhat from the previous forecast, while the forecast for FY 2023 has been revised downward.

The tertiary industrial activity index (seasonally adjusted; 2015 average = 100) for September decreased -0.4% MoM, marking the first decline in two months. METI maintained its assessment from the previous month. As a result, the Q3 quarter saw a slight decline of -0.1% QoQ, the first decline in two quarters (Figure 2-1-9).

Of these, the September face-to-face service index (2015 average = 100) fell -1.2% MoM, the first decline in two months. As a whole, Q3 saw a +1.1% QoQ increase, the second consecutive quarter of positive growth, but a slowdown from the previous quarter (+6.2% QoQ) due in part to the impact of the surge in infections. The index for the face-to-face service sector is expected to recover in Q4, partly due to the impact of the national travel support program.

According to the Corporate Statistics Survey, 2022 Q2 corporate profits (seasonally adjusted, excluding financial and insurance industries) for all industries increased by +5.5% QoQ, marking the third consecutive quarterly improvement (Q1: +0.6% QoQ). Therein, profits in the manufacturing sector increased by +1.6% QoQ, the third consecutive quarterly increase, and profits in the non-manufacturing sector increased by +8.1% QoQ, the first increase in two quarters. Growth in labor costs has been weak, so corporate cash flows are at their highest levels. (Figure 2-1-10). Conditions are ripe for increased investment. Certainly, the worsening terms of trade are unfavorable for corporate earnings, but the weak yen continues to be a tailwind for export-oriented manufacturing firms. Corporate investment plans (BOJ's Tankan September survey)

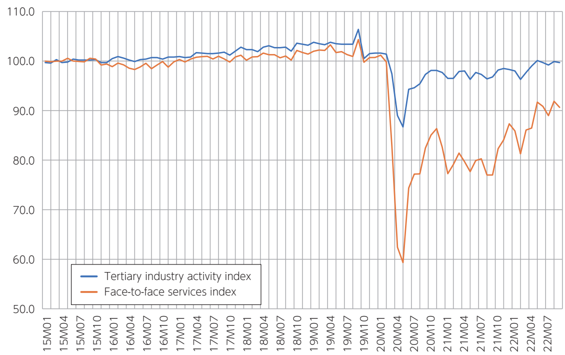

Figure 2-1-9 Face-to-face Services vs. Tertiary Industry Activity Index: 2015=100

Note: The face-to-face services index is a weighted average of the transportation, accommodation, restaurants, food services, other lifestyle-related services, and entertainment industry indexes; the tourism-related index is a weighted average of the tourism-related index among face-to-face services. 2015 average = 100.
Source: "Tertiary Industry Activity Index," Ministry of Economy, Trade and Industry

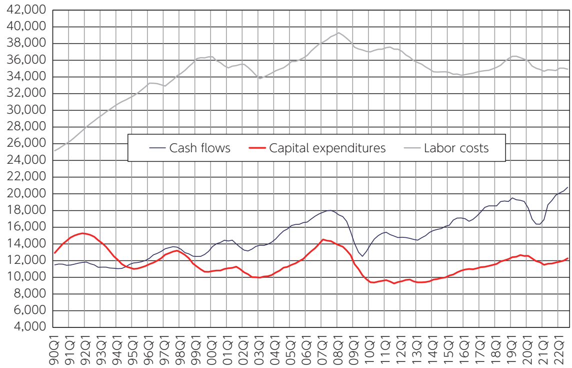

Figure 2-1-10 Cash flow, capital expenditures, and labor costs: billion yen (quarterly average)

Source: "Quarterly Survey of Corporate Business Enterprises (April-June 2022)," Ministry of Finance

have been revised upward, and the potential for investment expansion is strong. Downside risks include supply constraints and growing uncertainty about the economic outlook due to the slowdown in overseas economies.

Looking at investment-related indicators, the September capital goods shipments index decreased -4.0% MoM, the first decline in four months. As a result, Q3 saw a significant increase of -11.5% QoQ, the first increase in three quarters.

Core machinery orders (private-sector demand excluding ships and electric power: seasonally adjusted), a leading indicator of private capital investment, fell -4.6% MoM in September, the second consecutive monthly decline. As a result, the Q3 period saw a -1.6% QoQ decline, the first decline in two quarters. The Cabinet Office downgraded its assessment of the underlying tone of machinery orders from the previous month. According to the survey as of the end of September, core machinery orders for Q4 are expected to increase for the first time in two quarters, +3.6% QoQ. The outlook for external demand is also up for the first time in two quarters at +16.5% QoQ. Investment demand, which stagnated due to the COVID-19 pandemic, appears to remain strong, but there are concerns about a global economic slowdown.

Real private capital investment is projected to expand +3.3% YoY in FY 2022, +2.9% in FY 2023, and +2.7% in FY 2024. Our forecast for FY 2022 has been revised upward to reflect upward revisions in corporate investment plans.

(5) External Sector: Downward revision in FY 2023 trade due to slowdown in global economy

According to advance trade statistics released by the Ministry of Finance, the trade balance for October was -2,162.3 billion yen, the 15th consecutive monthly deficit. The deficit expanded by +2,283.5% YoY. This was the largest single-month deficit on record since 1979, when statistics were first available. It was also the third consecutive month that the trade deficit exceeded 2 trillion yen. On a seasonally adjusted basis, the deficit expanded for the 17th consecutive month, up +12.9% MoM, the first increase in two months. As a result, the trade deficit in October expanded +5.3% relative to the Q3 average (Q3: +20.9% QoQ).

Exports increased for the second consecutive month, up +2.2% from the previous month, and imports increased for the first time in two months, up +4.2%. Compared to the Q3 average, exports and imports increased by +4.2% and +4.5%, respectively.

On a volume basis, the October export volume index fell for the first time in two months to -4.5%MoM, while the import volume index declined for the second consecutive month, by-0.6%. Compared to the Q3 average, the export volume index fell -4.5% and the import volume index fell -3.0%.

Looking at October trends by region (seasonally adjusted data: APIR estimates), exports to Asia were down -7.2% from the previous month, exports to China were down -14.1%, exports to the U.S. were down -5.4%, and exports to the EU were down -1.7%. Exports to major regions were down across the board (Figure 2-1-11). Meanwhile, imports from Asia were -1.2%MoM, from China +1.8% MoM, from the US -12.8% MoM, and from the EU +4.9% MoM. Comparing October to the Q3 average, imports from Asia were down -3.5%, from China -2.8%, from the US -11.7%, and from the EU, up +16.3%. The impact of China's zero-COVID-19 policy and the economic slowdown in the U.S. and Europe is

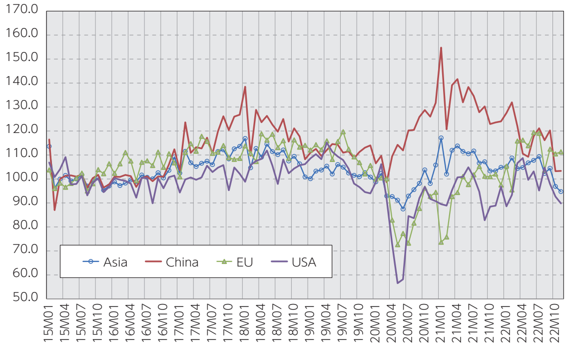

Figure 2-1-11 Export Volume Index by Region: 2015=100

Source: Trade Statistics, Ministry of Finance; seasonally adjusted values are APIR estimates.

clearly visible in exports (Figure 2-1-11).

Considering these factors, real exports of goods and services are projected to increase +4.6% YoY in FY 2022, +0.3% in FY 2023, and +3.4% in FY 2024. In contrast, real imports of goods and services are projected to increase +7.9% in FY 2022, +0.5% in FY 2023, and +2.9% in FY 2024. Our forecast for the exports of goods and services for FY 2023 has been revised downward from the previous forecast.

The terms of trade will worsen, resulting in a deficit trend in the trade balance. Since the recovery of inbound tourism will be only moderate, the services balance deficit will not escape the expansionary trend. On the other hand, although the primary income balance will remain high due to the weak yen, the current account balance is projected to be +6.3 trillion yen in FY 2022, +6.8 trillion yen in FY 2023, and+ 6.1 trillion yen in FY 2024.

(6) Price Trends: Wage hikes centered on base increases are necessary for consumer price inflation to become sustainable.

According to the Bank of Japan, the domestic corporate goods price index (2020 average = 100) rose for the 20th consecutive month in October to +9.1% YoY (Figure 2-1-12). The impact of Russia's invasion of Ukraine has kept resource prices high. In addition, the accelerating depreciation of the yen has led to widespread price pass-through, particularly in the case of electricity and gas.

The yen-based export price index (2020 average = 100) rose 18.8% YoY in October for the 20th consecutive month of increase. The yen-based import price index (2020 average=100) was +42.6% YoY in October, rising for the 20th consecutive month. As a result, the **terms of trade index** (export price index/import

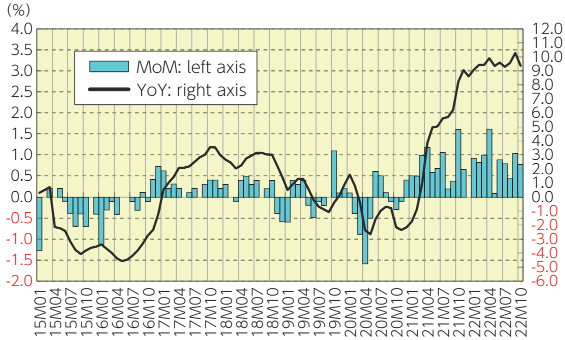

Figure 2-1-12 Domestic Corporate Goods Price Index: 2020=100: Growth Rate

Source: Bank of Japan, Domestic Corporate Goods Price Index

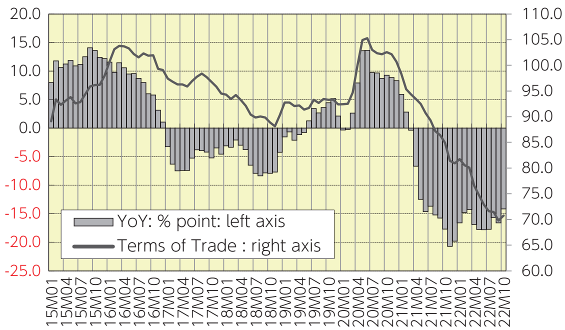

Figure 2-1-13 Terms of Trade: 2020=100

Source: Authors' calculations based on Bank of Japan, Domestic Corporate Goods Price Index.

price index*100) fell sharply by -14.2 points YoY in October, deteriorating for the 20th consecutive month. It was also the 18th consecutive month of double-digit deterioration (Figure 2-1-13).

According to the Ministry of Internal Affairs and Communications, the national consumer price index (CPI, 2020 average = 100) rose for the 14th consecutive month in October to +3.7% YoY. The **core CPI index**, which excludes fresh food, rose **+3.6% YoY for the 14th consecutive month** and for the first time since February 1982 (+3.6% YoY). The core-core CPI index which excludes both fresh food and energy rose for the seventh consecutive month by +2.5% YoY (Figure 2-1-14).

Looking at the October Composite Index by category, **energy prices rose for the 19th consecutive month,** +15.2% YoY. The contribution of energy

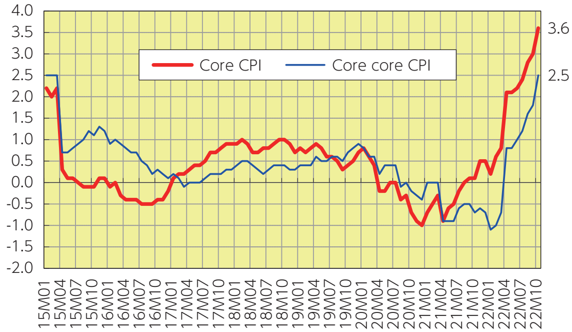

Figure 2-1-14 National Consumer Price Index: 2020=100: y/y: %.

Source: Authors' calculations based on "National Consumer Price Index," Ministry of Internal Affairs and Communications

prices to the index was +1.18%. Of these, gasoline prices rose for the 20th consecutive month, up +2.9% YoY, due in part to subsidies aimed at curbing inflation. The contribution of energy prices to CPI inflation was +0.06%. **Non-energy prices** rose for the seventh consecutive month to +2.8%. Their contribution to CPI inflation was +2.52%. Therein, food prices, excluding fresh food, rose for the 16th consecutive month, by +5.9%. Growth accelerated, reaching the highest rate of increase since March 1981 (+6.1%). Their contribution to CPI inflation was +1.33%.

Comparing the prices goods and services, **goods prices** in October increased for the 18th consecutive month, up 6.5% YoY. Their contribution to CPI inflation was 3.35%. **Service prices** rose a modest +0.8% YoY, the third consecutive monthly increase. Their contribution to CPI inflation was +0.40%. In the services expenditure category, rents fell for the first time in 17 months, -10.0% YoY, with a contribution of -0.09%. Their contribution to CPI inflation was -0.09%. Mobile phone charges rose for the first time in 19 months, +1.8% YoY. Their contribution to CPI inflation was +0.02%.

Looking at past trends in the prices of goods and services, the prices of services fluctuated in line with the prices of goods prices since the early 1990s. Recently, however, service prices have remained almost flat compared to the sharp increase in goods prices (Figure 2-1-15). Since service prices are determined almost entirely by wage trends, consumer price increases are not sustainable unless they are accompanied by wage increases, especially increases in base salaries.

With regard to the outlook for the CPI, in the second half of 2022, the CPI core index is likely to remain above the upper 3% level year-on-year due to the

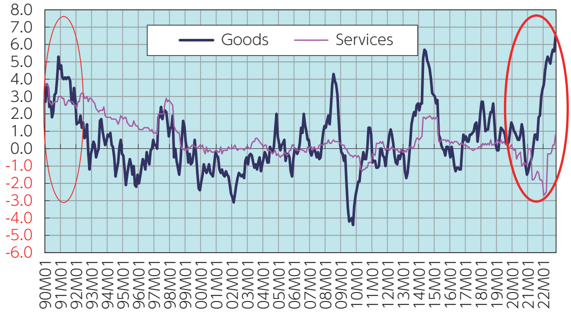

Figure 2-1-15 National Consumer Price Index by Item: % change from the same month last year

Source: Authors' calculations based on "National Consumer Price Index," Ministry of Internal Affairs and Communications

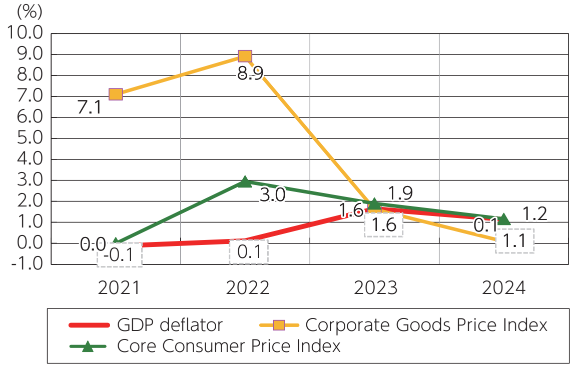

Figure 2-1-16 Trends in prices: % change from previous year

impact of surging energy and food prices. In FY 2023, the impact of surging energy prices will fade away, and the underlying tone of the CPI will be determined by trends in service prices. In this sense, wage increases in FY 2023 will be important.

Our latest forecast concerning inflation is as follows. The **national corporate goods price index** is projected to increase +8.9% in FY 2022, +1.6% in FY 2023, and +0.1% in FY 2024. The **national consumer price core index** is projected to rise +3.0% in FY 2022, +1.9% in FY 2023, and +1.2% in FY 2024. The **GDP deflator** is projected to be +0.1% in FY 2022, +1.6% in FY 2023, and +1.1% in FY 2024 (Figure 2-1-16).