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Japanese report: 24 May 2022

# Japan's Economy: Monthly Outlook (May 2022)

**Economic outlook revised downwards; growth potential in consumption of services and related sectors to provide underlying support for economy**

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## Summary

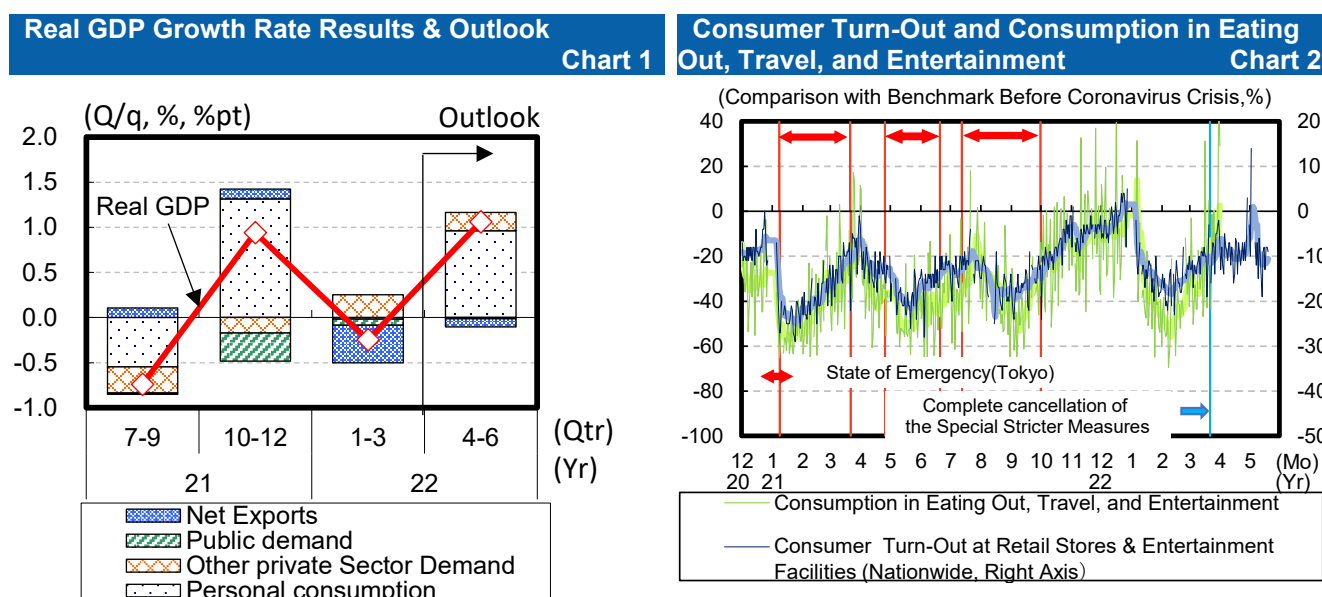
- Due to the worsening outlook for the overseas economy, we have revised our outlook for Japan's economy downwards. We now see growth in Japan's real GDP at +2.9% in FY2022, with FY2023 at +1.9%. According to our main economic scenario, economic normalization will progress due to the effectiveness of additional vaccinations and the diffusion of oral medicines etc. However, there is major downside risk due to factors such as the Ukraine crisis, the situation of the spread of COVID-19, US monetary policy, and the sluggish Chinese economy.
- We expect to see room for recovery in the consumption of domestic services and inbound consumption in FY2022, as well as major potential for production increases in motor vehicles. Our outlook sees a continuation of economic recovery despite highs in the price of resources. If the consumption of services recovers to the level seen during the Jul-Sep period of 2019 just before the increase in the consumption tax, the amount of growth in annualized terms could reach around 10 tril yen (or around 7.6 tril yen excluding inbound consumption). Meanwhile, domestic pent-up demand for passenger vehicles is estimated to have reached around 1.5 tril yen as of the end of April 2022.
- Under normal economic circumstances, it is generally understood that a weak yen carries the influence of bringing a net plus to Japan's economy. However, it has become difficult for the weak yen to realize this plus effect on the economy due to the influence of the Ukraine problem and the spread of COVID-19. Under these circumstances, if yen depreciation against the dollar continues at the 10% seen during the Jan-Mar period during the Apr-Jun period and beyond, the negative effect on Japan's FY2022 real GDP is estimated to reach around -0.05%. The progressively weak yen experienced recently is considered to be "bad yen depreciation," and the potential negative effects on Japan's economy need to be watched carefully.

## 1. Growth of Around 3% Seen in FY2022, but Downside Risk is Great

**Jan-Mar period real GDP suffered a decline of -1.0% q/q annualized due to the spread of COVID-19 and the effects of production cuts in motor vehicles**

The real GDP growth rate for Jan-Mar 2022 (1st preliminary est) suffered negative growth for the first time in two quarters at -1.0% q/q annualized (-0.2% q/q)<sup>1</sup>. The sharp upturn in the spread of Omicron variant of COVID-19 in January brought sluggish personal consumption as Special Stricter Measures (quasi-state of emergency) were implemented in most regions of the country. Meanwhile, production cuts in motor vehicles due to the spread of COVID-19 and the effects of parts shortages such as semiconductors brought further downward pressure on the economy.

Looking at performance by demand component (Chart 1), while real GDP was buoyed by the private sector with inventories and capex spending contributing, consumption and residential investment brought downward pressure. Meanwhile, consumer turnout suffered a major decline through mid-February due to the worsening COVID-19 infection situation (Chart 2), and the request to restaurants and bars to shorten hours, as well as the practice of restraint in going out, brought a decline in expenditure on eating out and travel. On the other hand, expenditure on entertainment, such as movie theaters and professional sports events grew, thereby limiting the decline in consumption of services to only around -0.2% q/q. As for the public sector, government consumption grew due to expenses associated with providing additional vaccinations, but public investment declined for the fifth consecutive quarter. As for overseas demand, both exports and imports grew, but since imports grew more than exports, the contribution of net exports (foreign demand) suffered a decline for the first time in three quarters at -0.4% pts q/q.



Source: Cabinet Office, Ministry of Internal Affairs and Communications, Google, CEIC; compiled by DIR.

Notes: 1) The left side chart uses real figures, all seasonally adjusted.

2) The benchmark used in the right side of the chart is the daily median between January 3 and February 6, 2020. The thick lines represent the 7-day central moving average. Eating out, travel, and entertainment related consumption is the total value of eating out, transportation, and culture & recreation services. Data from holidays falling on weekdays and the Obon Festival and year-end/New Year are excluded.

<sup>1</sup> See the DIR report by Keiji Kanda and Wakaba Kobayashi dated 18 May 2022, [Jan-Mar 2022 1st Preliminary GDP Estimate](#). This report's outlook for the Apr-Jun period of 2022 predicted growth of +5.3% q/q annualized, but in consideration of the expected implementation period of the Go To Travel Campaign (changed from beginning of May to beginning of September) we changed our outlook. Due to the delayed effects of personal consumption and government consumption, we revised our outlook downwards to +4.3%.

### ***Real Gross domestic income (GDI) exceeds real GDP in negative growth due to trading losses***

Against a backdrop of resource price highs etc., terms of trade have deteriorated in comparison to the Oct-Dec 2021 period, with the import deflator rising at a pace exceeding that of the export deflator. Meanwhile, trading losses<sup>2</sup>, which are an expression of income flowing out of Japan overseas through worsening terms of trade, amounted to -11.5 tril yen as of the Jan-Mar 2022 period, an increase in the margin of decline of 2.3 tril yen in comparison with the previous period. As a result, the growth rate of real gross domestic income after subtracting trading losses from real GDP was at -2.7% q/q annualized in comparison with the previous period. Since the Jan-Mar period, the growth rate of real GDI has continually fallen below that of real GDP. This means that the income environment for both households and corporations has deteriorated more than it appears when we look at the GDP figures alone.

### ***Major assumptions related to Ukraine problem and COVID-19 situation***

The economic outlook for FY2022 and beyond is largely dependent on the Ukraine problem and the COVID-19 situation. The Ukraine problem shows no signs of being resolved soon, and is likely to continue into the long-term. Meanwhile, if a new variant of COVID-19 spreads there could be another surge in infections both in Japan and overseas, and this could have the effect of seriously inhibiting economic activities. In either case, the sense of uncertainty remains great. The assumptions behind the main scenario put forward in this report are shown in Chart 3.

**Major Assumptions in this Outlook Associated with the Ukraine Problem and the COVID-19 Situation**  
Chart 3

		Summary
Ukraine Problem	Economic sanctions against Russia	<b>Economic sanctions against Russia expected to continue</b> as Ukraine problem moves into the long-term.
	Trade with Russia	<b>To be reduced in stages</b> (Effects are limited as Japan adjusts trading partnerships.)
	Price of resources	<b>Expected to mark time</b> at recent levels (WTI \$113/bbl)
COVID-19	COVID-19 infection situation	Measures against spread of infection expected to continue, with vaccine booster shots provided and dissemination of oral medicines, while system of providing medical attention is strengthened. <b>The number of serious cases is expected to continue at a low level (no new variants of COVID-19 are expected).</b>
	Go To Travel Campaign	<b>Expected to run from September 2022 to February 2023</b> (Excluding holiday season at year-end and late-December-new year through early January)
	Acceptance of inbound tourism	<b>Expected to increase in stages starting in June 2022.</b> (Recovery to quarterly average level seen in 2019 by the Jul-Sep period of 2023. Chinese tourism expected to recover in Jan-Mar period of 2024.)

Source: Produced by DIR.

First of all, the Ukraine problem is not expected to be resolved during the period covered by this outlook (the current fiscal year through the Jan-Mar period of FY2024). Economic sanctions against Russia are expected to continue. In the area of energy procurement, Japan plans on ending its reliance on Russia related projects with decrease in trade with Russia progressing in stages. Japan will rethink and adjust its trade relations, hence influence on Japan's economy is expected to be limited. The price of resources is expected to mark time during the period covered by this outlook at the levels seen recently, with the price of crude oil maintaining at around \$113/bbl on a WTI basis.

Next is the infection situation. We expect serious cases to remain low throughout the period covered by this outlook, due to the effect of additional vaccinations (booster shots) and the dissemination of oral

<sup>2</sup> Loss (gain if positive) due to changes in terms of trade from the base year of the deflator (currently 2015). It should be noted that the amount of loss or gain is revised when the base year is changed.

medicines. Normalization of economic activities is expected to progress. It is difficult to predict the appearance of newer variants of COVID-19 before the fact, and hence we do not include this factor in our assumptions for the main scenario.

The Go To Travel Campaign, which was postponed due to the spread of the Omicron variant, was originally planned to be implemented from around January 2022 until before the summer vacation, excluding busy periods (such as Japan’s long ‘Golden Week’ holiday). If the program is to be implemented in FY2022, the new implementation period is expected to be from the beginning of September until the end of February 2023 (excluding year-end/New Year), after the end of June when prefectures finish up their discount travel campaign, and after the summer vacation.

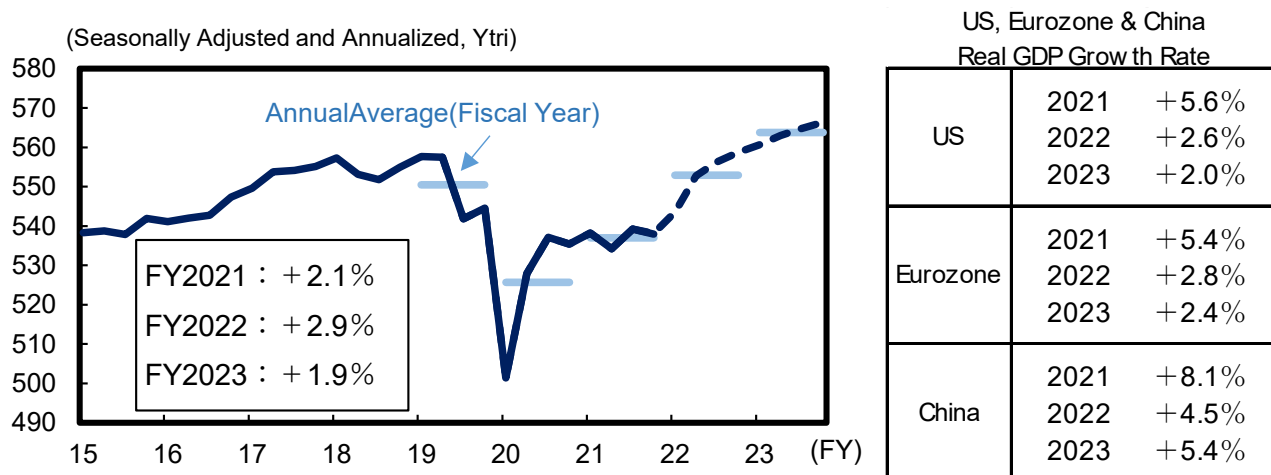
Our outlook assumes that the acceptance of inbound foreign tourists to Japan will resume in stages in June. The government plans on implementing small package tours to test the waters in May. The acceptance of inbound tourism is expected to progress after that point until it becomes full-fledged. According to our main scenario, inbound tourism is expected to increase in stages starting in June, and is expected to recover to quarterly average levels seen in 2019 by the Jul-Sep period of 2023. However, recovery in inbound tourism from China is expected to be sluggish due to China’s Zero Covid policy and the limits it places on international movement. Recovery in the number of tourists arriving from China is expected to lag about six months behind arrivals from other countries.

**Outlook for overseas economies: economic outlooks for US, Europe, and China revised downwards from last outlook**

Chart 4 illustrates trends in Japan’s real GDP according to our main scenario, and the outlook for overseas economies which is one of the assumptions in our outlook. The DIR outlook for overseas economies is based on the latest predictions (as of May 24) by our in-house expert in the economies we cover here.

As for expected growth in real GDP in 2022, we estimate the US GDP at +2.6% in comparison with the previous year with the Eurozone at +2.8%, and China at +4.5%. As for the US, growth declined in the Jan-Mar period of 2022 due to domestic supply constraints associated with an increase in imports, and the rapid normalization of monetary policy. In response, we revised our outlook downwards by 1.2%pt in comparison with our previous outlook. Meanwhile, our outlook for the Eurozone was revised downwards by 0.6%pt due to the Ukraine problem moving into the long-term and the hindrance of economic recovery due to rising inflation. China’s economy has been sluggish recently due to the Zero Covid policy, leading us to revise our outlook downwards by 0.9%pt.

**Outlook for Japan’s Real GDP and Assumptions Regarding Overseas Economies** **Chart 4**



Source: Produced by DIR based on data from Cabinet Office and various countries.

Note: The dashed line in the chart represents predicted values as estimated by DIR. Outlooks for the US, Eurozone and China are based on predictions by DIR’s in-house expert.

### ***Japan's real GDP expected to grow by around 3% in FY2022***

With the outlook for overseas economies as described in the above, our main scenario sees Japan's real GDP growth rate in FY2022 at +2.9%, with FY2023 at +1.9% (Chart 4).

Our outlook for the growth rate in FY2022 has been revised downwards from our previous outlook by 0.6%pt. The main factor behind this revision is the deteriorating outlook for overseas economies, with factors bringing down the growth rate centering on exports and capex spending. On the other hand, expectations for the strengthening of recovery centering on personal consumption due to the effects of progress in economic normalization and the effectiveness of economic measures remain unchanged. Our outlook for the growth rate in FY2023 was revised upwards by 0.1%pt. A relatively high growth rate is expected to continue beyond FY2022. This is because the carry-over effect from the previous period is large. Without that effect, the growth rate would be +0.9%.

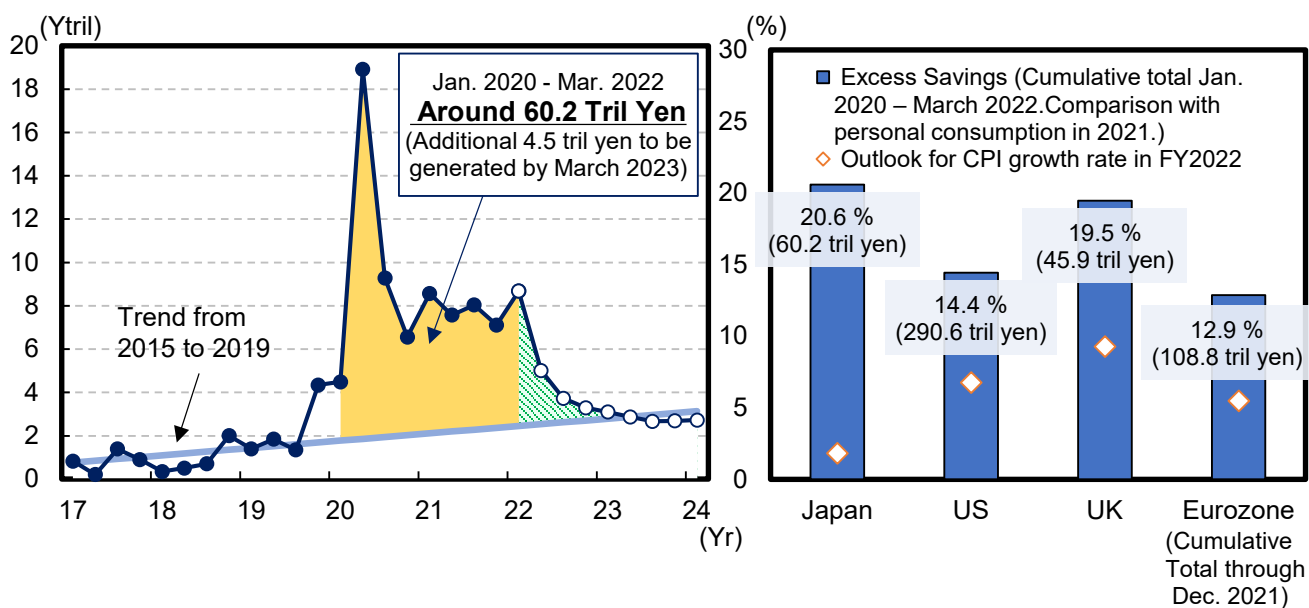
### ***Approximately 60 tril yen in excess savings mitigates negative effects of resource price highs, giving a boost to personal consumption***

GDP is expected to get a significant upward push from personal consumption in FY2022. Meanwhile, we expect that the Go To Travel Campaign will be implemented from the beginning of September till the end of February 2023 (excluding year-end/New Year). This is expected to boost demand for travel and eating out, in addition to demand for transportation (Chart 3). In addition, as will be explained further later in this report, we expect the shortage of semiconductors, which has been a factor in holding down production centering on motor vehicles, to be resolved between the second half of FY2022 and FY2023. If recovery production of motor vehicles occurs, this would also trigger pent-up demand, and consumption of goods centering on durables will grow as a result, while also boosting capex spending and exports.

As for the high price of resources which has become increasingly serious recently, household purchasing power has declined, but the influence of this factor is expected to be mitigated by excess savings which accumulated during the pandemic. Households have been practicing self-restraint centering on the consumption of services as a countermeasure to the spread of COVID-19. Meanwhile, the large-scale benefits paid out by the government during the pandemic have also encouraged a major accumulation in household savings. If the deviation from the trend in household savings seen in 2015-19 is regarded as excess savings, the amount is expected to reach about 60 tril yen by the end of March 2022<sup>3</sup> (Chart 5, left).

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<sup>3</sup> Disposable income in the Jan-Mar period of 2022 has not yet been announced, hence figures used have been estimated by DIR.

**Trends in Household Savings on a Data-Flow Basis (Left), Comparison of Excess Savings in Japan, US, and Europe (Right)**
**Chart 5**


Source: Cabinet Office, Ministry of Internal Affairs and Communications, BEA, Eurostat, Haver Analytics; compiled by DIR.

Notes: 1) Figures in the left side of the chart are seasonally adjusted. The circles on the right that are not colored in are DIR estimates. Savings = disposable income – household final consumption expenditure.

2) The right side of the chart shows cumulative excess savings from January 2020 to March 2022 calculated in the same way as Japan's figures excluding the amount of personal consumption in 2021. Yen conversion uses the average value of the yen in FY2022, assuming that the recent exchange rate continues to mark time. "All items, less fresh food" are used for Japan's CPI, while composite figures were also used for others.

This is the equivalent of 20.6% of the amount of personal consumption in 2021, significantly exceeding the projected CPI growth rate for FY2022 (Chart 5, right). Even with the cost of various goods and services on the rise, households are able to offset this to a certain degree with savings. Hence it is an environment in which consumption can easily be maintained. From a macro perspective, households have a relatively high rate of endurance against the high price of resources. When we calculate excess savings using the same method for the US, the UK, and the Eurozone, figures are not as high as Japan, but personal consumption in comparative terms reached around 13-20% in 2021 (Chart 5, Right). The US and Europe are facing a rate of inflation that greatly exceeds that of Japan, but both of these regions have accumulated sufficient savings, so we assume that personal consumption will be able to avoid being crushed due to inflation.

***While moderate growth is expected for capex, government consumption is expected to remain weak as COVID-19 related expenditures decline***

Capex spending is expected to maintain a moderate growth trend. Investment in software and R&D are expected to maintain underlying strength centering on digitalization and greening related projects. On the other hand, investment in machinery and equipment is expected to be weak for the short-term. Machinery orders, which determine the need for investment in machinery and equipment, is currently seen as marking time, and there is a strong sense of uncertainty regarding the future due to Russia's invasion of Ukraine. The tendency to delay capex spending appears to be spreading. That said, latent demand for investment amongst corporations is on the rise. According to the BOJ Tankan survey taken in March 2022 immediately after the appearance of the Ukraine problem, production capacity DI ("excessive capacity" – "insufficient capacity") was at -2%pt for large manufacturers, shifting into the deficiency range. Meanwhile, for large non-manufacturers, the sense of excess was resolved at 0%pt, with the forecast at -1%pt. Progress in the normalization of Japan's domestic economic activity may provide a tailwind for capex spending, especially in the non-manufacturing sector, while investment in machinery, including capacity increase, should eventually pick up.

As for government consumption, if the Go To Travel Campaign is implemented during the Jul-Sep period, related project expenses will become a factor in boosting this category. As normalization of economic activity progresses, COVID-19 related expenditures will likely decline in comparison with the Oct-Dec period of 2021. On the other hand, payment of medical and nursing care benefits is in a long-term growth trend due to Japan's progressively aging population, and government consumption related to these areas is of course being recorded. Government consumption is expected to show moderate growth in FY2023 once it is past the period of decline in COVID-19 related expenditures. Public investment suffered a decline in FY2021, but is seen moving toward a comeback in FY2022 with underlying support from implementation of the Five-year Acceleration Measures for Disaster Prevention, Mitigation, and National Resilience (FY2021-25). However, the labor shortage in the construction industry is creating a bottleneck, hence recovery associated with this factor is expected to be moderate.

***While downside risk in export of goods looms large, full-fledged recovery of inbound tourism looks promising***

Export of goods is expected to continue in a growth trend throughout the period covered by this outlook as supply constraints due to the shortage in semiconductors are resolved, and excess savings which has accumulated in the US and Europe softens the effects of high inflation (Chart 5, Right). However, there are many downside risks for overseas demand in FY2022. For instance, economic recovery may take more time in China due to the COVID-19 infection situation, and the energy shortage in Europe may become a hindrance to economic activity. Meanwhile, there is a possibility that the effects of rising interest rates in the US could cause the economy to slow down more than expected. On the other hand, in FY2023, resolution of the shortage in semiconductors is expected to provide underlying support, and the pace of growth in exports is expected to pick up. (More detail on FY2023 is provided later in this report.)

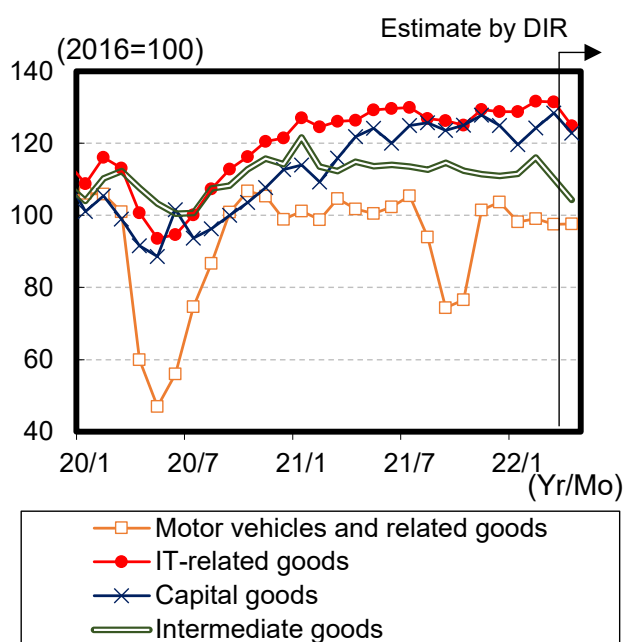
As for exports in the Apr-Jun period of 2022, growth is expected to remain small with the decline in exports to China where a lockdown is being implemented. Looking at the expectations for different types of goods, mainstay items in exports to China, including IT-related goods, capital goods, and intermediate goods, are expected to decline significantly in April 2022 (Chart 6). Resumption of economic activity in China will be in June at the earliest, and it is possible that goods mentioned here will decline during the Apr-Jun period in comparison to the previous quarter. However, during the Jul-Sep period and beyond, a return to a growth trend is seen as China's economy recovers.

On the other hand, motor vehicles and related goods are expected to achieve a small amount of growth in April. The US and Europe are the main destinations for motor vehicles, and the direction of exports will depend on the degree of supply constraints in that country. The automobile industry has met with difficulty in procuring parts due to the influence of the spread of COVID-19 in domestic Japan during the Jan-Mar period, but this situation has been improving recently. Meanwhile, according to a survey carried out in February 2022 by KPMG and the Global Semiconductor Alliance (GSA)<sup>4</sup>, 97% of top management of semiconductor manufacturers surveyed replied that the shortage in semiconductors would be resolved by the end of 2023. Based on this information, we expect resolution of the semiconductor shortage to progress during the second half of FY2022, and to finally be resolved in FY2023. As will be explained further in Chapter 2, considering the accumulation of pent-up demand for motor vehicles, automotive goods are expected to lead exports in FY2023.

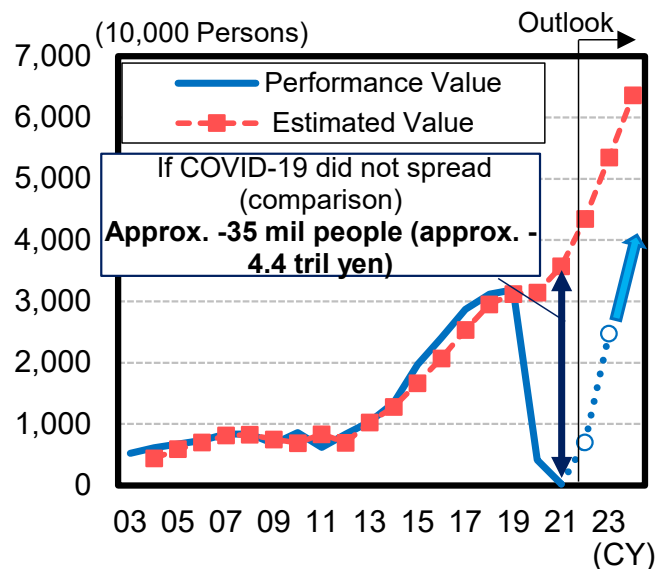
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<sup>4</sup> KPMG "[Global semiconductor industry outlook 2022](#)" (February 22, 2022)

**Real Export Index by Types of Goods**  
Chart 6



**Estimated Number of Foreign Tourists Visiting Japan**  
Chart 7



Source: Bank of Japan, Japan National Tourism Organization, Ministry of Foreign Affairs, data from various countries, Haver Analytics; compiled by DIR.

- Notes: 1) Figures on left side of chart seasonally adjusted by the Bank of Japan. Figures for April 2022 seasonally adjusted by DIR.  
 2) Figures on the right side of the chart were estimated using the panel data of the 20 countries with the most visitors to Japan in 2019. Period covered by the estimate is 2003 – 2019. Formula used in estimation is as follows:  
 $\ln(\text{number of foreign tourists visiting Japan}) = 1.7 + 0.7 \cdot \ln(\text{number of foreign tourists visiting Japan 1 period before}) + 0.7 \cdot \ln(\text{Real GDP}) - 0.7 \cdot \ln(\text{Real exchange rate against the yen}) + 0.2 \cdot \text{visa factor} + \text{fixed effect}$   
 Coefficients all have a significance of 1%. Real exchange rate against the yen = nominal exchange rate of foreign currency \* prices in Japan/prices in partner country.  
 3) Estimated values for the years 2020 and 2021 in the chart on the right are based on number of foreign tourists visiting Japan 1 period before, hence estimated values for the previous year were used. As for estimated values in the future, the estimate of number of foreign tourists visiting Japan 1 period before and the estimated value of real GDP according to the IMF were used. Real exchange rate against the yen assumed to mark time in comparison to recent rates. Future performance values were estimated by DIR.

The resumption of inbound tourism in Japan will likely boost the export of services. As is shown in Chart 3, our main scenario expects inbound tourism to increase in stages starting in June, with recovery to quarterly average levels seen in 2019 in the Jul-Sep period of 2023. (Tourism from China is expected to recover by the Jan-Mar period of 2024).

Chart 7 provides an estimate of inbound tourism based on exchange rates and the scale of the economy of country of origin, assuming the spread of COVID-19 does not occur. The deviation between the estimated value and actual performance in 2021 was approximately 35 million people. When we multiply this by the amount of consumption per person in 2019, it means that there was a loss of approximately 4.4 tril yen in inbound demand in 2021. In 2022 and beyond the pace of growth in the estimated value accelerates, based on the effect of the weak yen and growth of the economy of country of origin. In the year 2024, the estimated number of inbound tourists exceeds 60 million (7.7 tril yen in demand). Here we can see just how large the scale of potential demand from inbound tourism could reach. According to the United Nations World Tourism Organization (UNWTO), the most recent number of international tourist arrivals in North America and Europe as of January 2022 recovered to around -50% in comparison to the same month in 2019. Japan lags significantly behind the US and Europe at -99% (-95% as of April according to data from the Japan National Tourism Organization). Once the international movement of people returns to normal, inbound tourism promises to recover rapidly throughout the year 2024.



## 2. Two Areas of Potential Growth Expected to Boost Economic Recovery

The spread of COVID-19 has significantly inhibited not only demand from inbound tourism, but the consumption of domestic services as well. As was mentioned earlier in this report, the effects of supply constraints on motor vehicles have made production cuts worse. To look at this from a different perspective, we could also say that once the spread of COVID-19 and the problem of supply constraints are resolved, consumption of services and motor vehicle production are two areas of potential growth which can give a major boost to Japan's economic recovery.

### *Consumption of services: Japan, which lags behind the US and the UK in terms of economic normalization, has a margin of recovery in consumption totaling 7.6 tril yen*

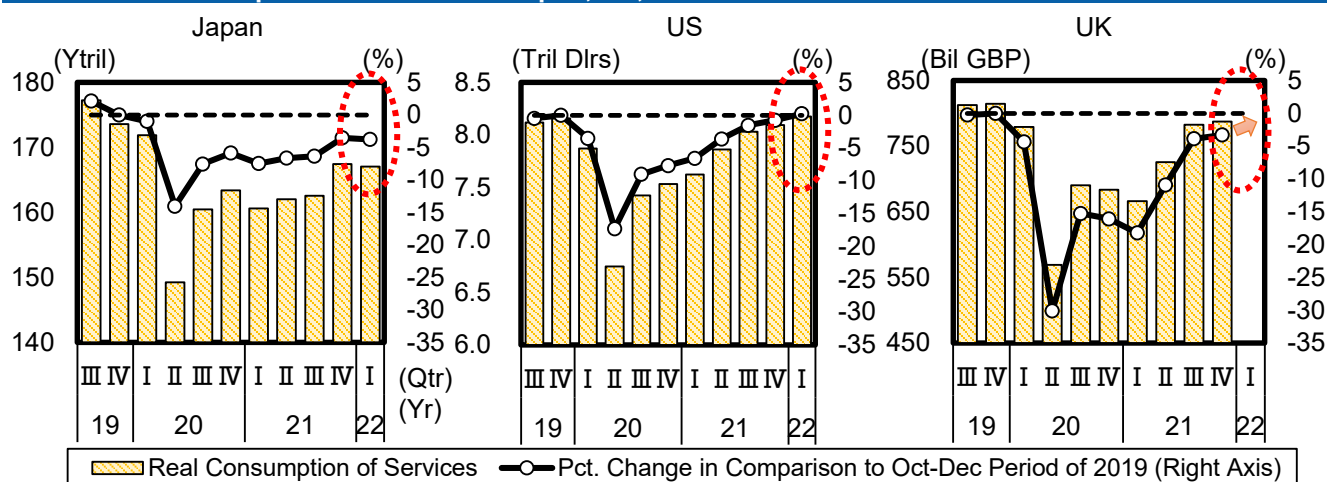
Chart 8 illustrates trends in the consumption of services in Japan, the US and the UK (covering domestic consumption of services including inbound tourism). Consumption of services in the US during the Apr-Jun period of 2020 was at -17% in comparison with the Oct-Dec period of 2019 before the spread of COVID-19 due to the effects of the lockdown. However, since the Jul-Sep period of 2020, normalization of the economy progressed, and in the Jan-Mar period of 2022, consumption of services had exceeded levels recorded before the spread of COVID-19 at +0.2% (Chart 8, Center). Meanwhile, consumption of services in the UK fell significantly during the Apr-Jun period of 2020 at -30% in comparison to levels experienced before the spread of COVID-19, but vaccinations were started early on, after which restrictions on movement were lifted in stages, and recovery up to the level of -3% was achieved during the Oct-Dec period of 2021. The results for the Jan-Mar period of 2022 were not yet available as of the writing of this report, but overall consumption recorded growth of +2% in comparison with the previous period, hence we can assume that the consumption of services has now recovered to the level seen before the pandemic (Chart 8, Right).

In Japan, consumption of services fell by -14% during the Apr-Jun period of 2020 in comparison to the level seen before the spread of COVID-19, a less dramatic decline than was seen in the US and the UK. However, recovery after that point was slow, with recovery reaching only the -4% level as of the Jan-Mar period of 2022. The repeated declarations of states of emergency, the application of Special Stricter Measures to prevent the spread of the disease, and changes in behavior such as refraining from unnecessary trips outside the home are believed to have weighed on service consumption. Moreover, Japan's consumption tax rate was raised to 10% in October 2019, causing the level of consumption of services to decline in the Oct-Dec period of that same year in comparison to the Jul-Sep period (Chart 8, Left). In consideration of these factors, there is much more margin for recovery in comparison to the US and the UK once the economy returns to normal. Assuming consumption of services recovers at some point to the level seen during the Jul-Sep period of 2019, the amount of growth in annualized terms would be up to around 10 tril yen. Potential growth in consumption on the part of Japanese citizens (excluding that portion of consumption associated with inbound tourism) is estimated at around 7.6 tril yen<sup>5</sup>. This is equivalent to 1.4% of real GDP in FY2021.

<sup>5</sup> We estimated inbound consumption by multiplying the annualized seasonally adjusted number of inbound visitors to Japan by 2019 per capita consumption (unit price per purchaser by expense item x purchase rate from the Japan Tourism Agency's "Consumption Trend Survey for Foreigners Visiting Japan," which covers expense items applicable services). The survey on expenditures by expense category during tourist stays in Japan has been discontinued since the Apr-Jun period of 2020.

Trends in Consumption of Services in Japan, US, and UK

Chart 8



Source: Cabinet Office, BEA, ONS, Haver Analytics; compiled by DIR.  
 Note: Figures are seasonally adjusted and annualized.

### **Domestic motor vehicle production: pent-up demand for passenger vehicles alone is estimated at 1.5 tril yen**

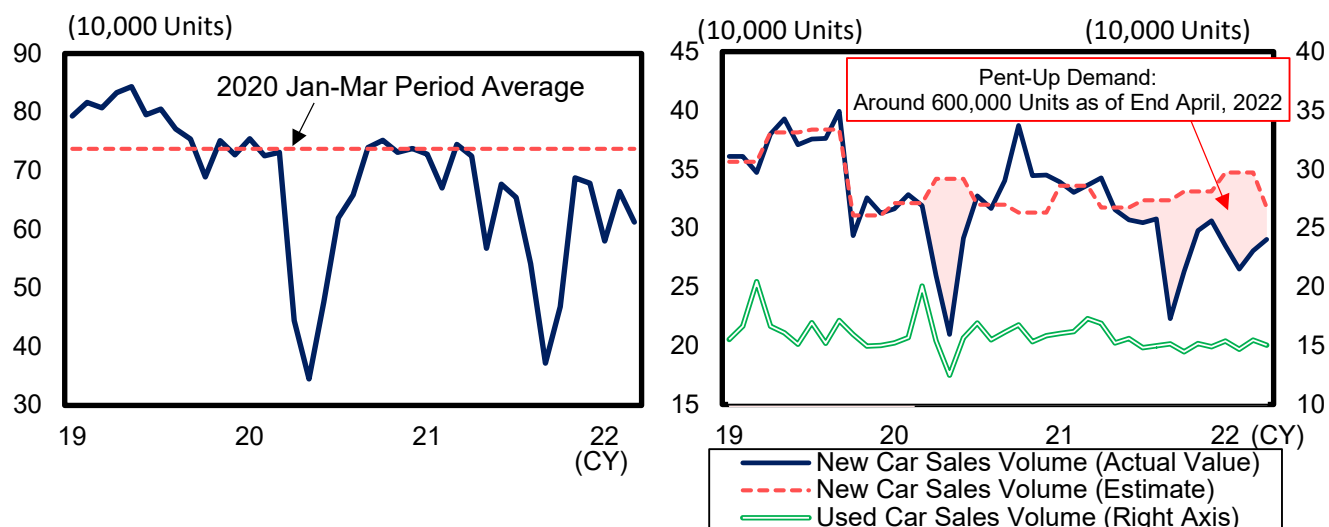
Moving into 2022, the spread of the Omicron variant of COVID-19 brought a sharp increase in new infections in domestic Japan, as well as the number of people who had had close contact with infected persons, forcing automakers to cut production again. The number of units produced remained stagnant (Chart 9, Left).

The dashed lines in Chart 9 (Right) represent the estimated number of new car sales based on fundamentals such as household purchasing power. Looking at the chart, we can see that potential demand grew in the first half of FY2020 due to the Special Cash Payment of ¥100,000 per person, but the number of sales of new cars declined anyway, due to the practice of restraint in going out and the temporary closing of many car dealers. The difference in the estimated value and the actual value of sales accumulated in the form of pent-up demand. This became manifest to some extent during the second half of FY2020, but then began to accumulate again due to production cuts in motor vehicles. It is estimated that 600,000 units remained at the end of April 2022. Multiplying this by the average unit price of motor vehicles in 2021 (approximately 2.45 mil yen), pent-up demand is estimated to be around 1.5 trillion yen. This is equivalent to about 27% of durable goods consumption in the Jan-Mar period of 2022. The supply constraints of motor vehicles since the rise in infections has put downward pressure not only on consumer spending, but also on capex and exports. Once supply constraints subside and motor vehicle production increases, it is expected that recovery will get a boost in these categories.

Motor vehicle supply constraints will continue for the time being, with Apr-Jun production likely to continue marking time. Several manufacturers, including Toyota Motor Corporation and Honda Motor Company, have reduced their April-May production compared to their initial plans due to parts shortages, including semiconductors, and the lockdown in China. In this regard, the Shanghai authorities have announced that they aim to lift the lockdown in its entirety by mid to late June. Also, as mentioned earlier, the semiconductor shortage is expected to be resolved between the second half of FY2022 and FY2023. Therefore, motor vehicle production will gradually increase at a faster pace from Jul-Sep 2022, and pent-up demand will emerge through FY2023.

## Domestic Production Volume of Japanese Auto Makers (Left), and Pent-Up Demand for Domestic Motor vehicles (Right)

Chart 9



Source: Bank of Japan, Cabinet Office, Ministry of Internal Affairs and Communications, Japan Automobile Dealers Association, Japan Mini Vehicles Association, News Releases from Auto Makers; compiled by DIR.

Notes: 1) Figures in both left and right sides of chart seasonally adjusted by DIR. The left side of the chart shows the sum of Toyota Motor Corporation, Honda Motor Company, Nissan Motor Corporation, Daihatsu Motor Company, Mazda Motor Corporation, Suzuki Motor Corporation, Mitsubishi Motors Corporation, SUBARU CORPORATION, and Hino Motors.

2) The estimate of new car sales volume was calculated using y/y estimated values from the Apr-Jun period of 2020 onwards, converted to a standard value. The period covered by the estimate is from the Jan-Mar period of 1984 to the Oct-Dec period of 2019. The estimation formula is as follows:

Sales volume of passenger vehicles on a y/y basis =  $1.0 * \text{actual earnings (employee compensation + other current transfer balance (net), y/y)} - 1.1 * \text{real interest rate (y/y difference)} + 0.4 * \text{consumer sentiment (Employment environment indicators that make up the consumer confidence index, y/y difference)} - 3.3 * \text{price of motor vehicles (y/y)} + \sum \beta * \text{dummy variables (y/y difference)}$ . Incomes expressed as real values with reference to household final consumption deflator. The dummy variable was produced by including consumption tax between 1989 and 2019, and the eco car subsidy during the 6-months around the time the consumption tax was increased in 2009 and 2011, and for half a year after, plus the 6-months after the Great East Japan Earthquake of 2011. Actual earnings, consumer sentiment, and the price of motor vehicles are given 1% significance, while constants are given a significance of 5%. The real interest rate does not reach the 10% level of significance. The coefficient of determination is 0.77. Other current transfer balance is made up of non-life insurance net premiums, non-life insurance payments, current transfers within general government, current international cooperation, other miscellaneous current transfers, and the Special Cash Payment.

### 3. Influence of Recently Weak Yen on Japan's Economy

*Recently weak yen has difficulty manifesting positive effects on economy, and hence is considered "bad yen depreciation"*

The yen has weakened further against the dollar due to differences in the direction of monetary policy between the US and Japan. As of the beginning of March 2022 the rate was in the range of 115 yen to the dollar, but by the end of April the yen had fallen sharply, and has recently been maintaining the level of 130 yen to the dollar. According to estimates in the "Outlook for Economic Activity and Prices" (January 2022) by Bank of Japan and the DIR report "Japan's Economy: Monthly Outlook (Jan. 2022)" (Japanese only), the weak yen is seen as being a net positive for Japan's economy under normal economic circumstances. However, Russia's invasion of Ukraine and the spread of COVID-19 have made it difficult for the positive effects of the weak yen to appear.

Chart 10 shows the results of our estimates, using the DIR macro model, of the influence of yen depreciation against the dollar on FY2022 real GDP broken down by individual component. Our assumption in this estimate is that during the Apr-Jun period and beyond, the yen will depreciate against the dollar by 10% in comparison to the average rate seen during the Jan-Mar period (116.2 yen to the dollar). Our main scenario assumes that the yen/dollar rate will be at 127.8 yen to the dollar during the Apr-Jun period, hence this estimate generally follows the same trajectory.

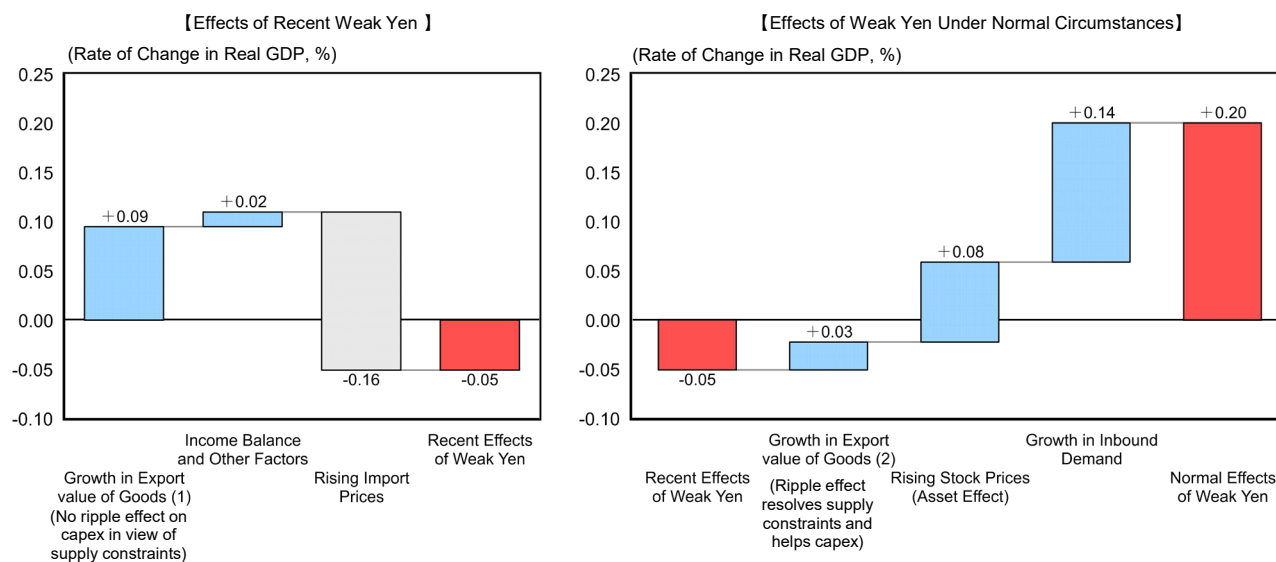
There are three ways in which a weak yen can have a positive influence on Japan's economy. The first is export value and growth in net income from foreign investment. The economic effects will spill over to a wide range of industries as compensation of employees increases and capex spending increases through higher domestic corporate earnings. Secondly, the assumption that a weak yen brings improved business performance to corporations which rely on exports spreads amongst investors in the stock market, and stock prices rise, ultimately stimulating personal consumption through the asset effect. Personal consumption is estimated to grow by around 0.2% when stock assets rise by 10%. Finally, the third way in which a weak yen can have a positive effect is that it boosts inbound demand, which is included in the larger category of export of services. This is because from the viewpoint of other countries, the weak yen means lower prices in Japanese goods and services. On the other hand, the cost of travel overseas becomes more expenses for the Japanese, hence this encourages the trend of holding off on overseas visits and looking toward domestic travel instead (a decline in import of services and growth in domestic consumption).

As for the negative effect of the weak yen, the main example that can be pointed to is a rise in the price of imports. This is ultimately connected to growing costs for corporations and a decline in purchasing power for household through the ripple effect which can also bring a rise in domestic prices. It brings downward pressure on capex spending and personal consumption.

The right side of Chart 10 shows how under normal economic circumstances the positive effects of the weak yen on Japan's economy exceed the negative effects, boosting real GDP by around 0.2%. This is consistent with the findings of the macro models of the Cabinet Office (2018) and the Bank of Japan (2019)<sup>6</sup>.

#### Effects of 10% Yen Depreciation Against the Dollar on FY2022 Real GDP Since the Jan-Mar Period of 2022

Chart 10



Source: Produced by DIR.

Note: Estimates make use of DIR macro model, with ripple effects of various factors included. These are the effects estimated for the Apr-Jun period of 2022 and beyond, assuming the yen rate against the dollar depreciates by 10% in comparison to the range recorded during the Jan-Mar period (11.6 yen). This includes the influence of growth in inbound demand on the decline in outbound demand.

<sup>6</sup> The Cabinet Office's "Short-Run Macroeconometric Model of the Japanese Economy (2018version)" (Japanese only) and the Bank of Japan's "[The Quarterly Japanese Economic Model \(Q-JEM\): 2019 version](#)" both estimate the first-year impact of a 10% depreciation of the yen against the dollar on the Japanese economy to be just over +0.2%.

However, Japan is currently now faced with the Ukraine problem and the spread of COVID-19, while on top of this are rising interest rates in the US and a stagnant economy in China, which bring rising concern regarding a possible slowdown in the global economy. With the growing sense of uncertainty regarding the future, corporations can easily become passive in regard to increasing capex spending even if there is growth in corporate earnings. Meanwhile, stock prices can easily become weak. Japan's major capital goods export is motor vehicles, but that industry has been faced with supply constraints since 2021, and this makes it difficult for the weak yen to become manifest as growth in export volume. With this as background, the left side of Chart 10 assumes that with the recently weak yen, around 20% of the factors which should lead to growth in the amount of export of goods will fail to become manifest, and hence we assume that it would be difficult to expect an asset effect.

Inbound demand disappeared completely after the spread of COVID-19 began, while acceptance of inbound tourism is expected to move toward recommencing this year as was explained in Chapter 1 of this report. That said, restrictions on the number of entries into Japan per day continue, and few of the positive effects of the weak yen are expected to appear.

If the yen continues to weaken under these circumstances, the negative effect of rising import costs will exceed the positive effects of the weak yen, and could push down real GDP by around 0.05% according to our estimates (Chart 10, Left). In this sense, the current weakening of the yen can be called "bad yen depreciation." In the face of the Ukraine problem and the spread of COVID-19, the negative impact of the weak yen on the Japanese economy needs to be carefully monitored.

Japan's Economic Outlook No. 213 (May 24, 2022)														Chart 11		
		2021			2022				2023				2024	FY2021	FY2022	FY2023
		Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar			
Real GDP	Y tril; annualized	538.2	534.2	539.2	537.9	543.6	552.8	556.4	558.8	560.7	563.0	564.9	566.5			
	Q/q %	0.5	-0.7	0.9	-0.2	1.1	1.7	0.6	0.4	0.3	0.4	0.3	0.3			
	Q/q %; annualized	2.1	-2.9	3.8	-1.0	4.3	7.0	2.6	1.7	1.4	1.7	1.3	1.1			
	Y/y %	7.3	1.2	0.4	0.2	1.0	3.5	3.2	4.0	3.1	1.9	1.5	1.3	2.1	2.9	1.9
Private Consumption	Q/q %	0.7	-1.0	2.5	-0.0	1.8	1.6	0.7	0.4	0.3	0.2	0.1	0.1	2.6	4.4	1.5
Private Residential Investment	Q/q %	1.0	-1.7	-1.2	-1.1	0.2	1.1	0.6	0.3	0.0	-0.2	-0.3	-0.3	-1.6	-0.4	0.5
Private Non-Resi. Investment	Q/q %	2.2	-2.4	0.4	0.5	1.5	2.0	1.9	1.7	1.2	0.7	0.5	0.4	1.3	4.6	4.7
Government Consumption	Q/q %	0.8	1.1	-0.3	0.6	0.1	1.1	-1.5	-1.2	-1.0	0.1	0.1	0.1	2.0	0.4	-2.1
Public investment	Q/q %	-3.7	-3.8	-4.7	-3.6	-0.5	0.5	0.7	0.5	0.3	0.2	0.2	0.1	-9.3	-5.1	1.3
Exports	Q/q %	2.8	-0.3	0.9	1.1	0.5	2.3	1.9	1.3	1.4	1.2	1.2	1.0	12.5	4.9	5.7
Imports	Q/q %	4.3	-0.8	0.3	3.4	0.9	1.5	0.9	0.7	0.5	0.4	0.4	0.3	7.2	5.2	2.4
Nominal GDP	Q/q %; annualized	1.3	-3.9	1.2	0.4	3.7	7.6	3.5	2.4	2.4	2.6	2.1	1.6	1.1	2.9	2.8
GDP deflator	Y/y	-1.1	-1.2	-1.3	-0.4	-0.6	-0.2	0.5	0.2	0.7	0.8	0.9	0.9	-1.0	0.0	0.8
Industrial production	Q/q	0.3	-1.9	0.2	0.8	1.5	1.7	1.5	0.6	0.3	0.2	0.2	0.1	5.7	3.9	2.1
Core CPI	Y/y	-0.6	-0.0	0.4	0.6	1.9	1.6	2.0	1.5	1.5	1.5	0.9	0.9	0.1	1.8	1.2
Unemployment rate	%	2.9	2.8	2.7	2.7	2.6	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.8	2.5	2.3
Trade balance (goods, services)	Y tril; annualized	4.0	-0.9	-2.9	-5.8	-9.0	-9.6	-8.9	-8.3	-7.6	-6.9	-6.2	-5.6	-1.7	-8.9	-6.5
Current account balance	Y tril; annualized	17.9	11.9	11.4	6.2	2.2	1.7	2.5	3.0	4.0	4.8	5.7	6.4	12.6	2.4	5.2
Major assumptions																
Crude oil price (WTI futures)	\$/bbl	66.2	70.5	77.1	95.0	108.2	113.2	113.2	113.2	113.2	113.2	113.2	113.2	77.2	112.0	113.2
Exchange rate	Yen/\$	109.4	110.1	113.7	116.2	127.8	127.9	127.9	127.9	127.9	127.9	127.9	127.9	112.3	127.9	127.9

Source: Compiled by DIR.

Note: GDP through Jan-Mar 2022: actual; thereafter: DIR estimates.