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Japan's Economy: Monthly Outlook (Nov 2021)

Economic outlook revised; Personal consumption heading for full-scale recovery with easing of restrictions on activities

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Summary

- In light of the announcement of the Jul-Sep 2021 GDP 1st preliminary results, we have revised our economic outlook. We now see Japan's real GDP at +3.1% in FY2021, with FY2022 at +3.6%. According to our main economic scenario, the situation of COVID-19 infections is expected to remain stable due to the effectiveness of the vaccine and the spread of oral medicines.
- Personal consumption will likely recover centering on services now that restrictions on activities have eased up. The effects of additional economic measures are expected to appear focusing on the first half of 2022, and the emergence of pent-up demand for motor vehicles, estimated at around 0.6 tril yen, will also boost the economy. Although the burden on households will increase due to high resource prices, excess savings of over 40 tril yen will reduce the negative impact on personal consumption. However, it should be noted that the effects will be especially large in the case of low-income households.
- The greatest downside risk to Japan's economy continues to be the spread of mutant strains of COVID-19. If a mutant strain that reduces the severity prevention effect of the vaccine spreads in Japan and overseas, most countries will likely impose tough restrictions on activities, which could cause economic activity to stagnate again.

1. Japanese Economy Shows Signs of Full-Scale Recovery Despite the Risk of Mutant Strains

Jul-Sep period real GDP sees negative growth due to effects of production cuts in motor vehicles

The real GDP growth rate for the Jul.-Sep. 2021 (1st preliminary est) declined by -3.0% q/q annualized (-0.8% q/q)¹. Motor vehicles suffered major production cuts due to the shortage of semiconductors and the spread of COVI-19 in Southeast Asia, an important supplier of parts, bringing down personal consumption, exports, and capital expenditure. In addition, the declaration of a state of emergency and “Special Stricter Measures”, which were applied until September 30, had the effect of holding down domestic economic activity.

Looking at performance by demand component (Chart 1), all areas related to private sector demand declines except private sector inventory. Personal consumption stood out as suffering a steep downturn. Consumption of services, which accounts for just under 60% of domestic final consumption expenditure of households (FY2020 nominal amount), was at +0.1% q/q, remaining steady despite the state of emergency and other measures. On the other hand, consumption of durable goods suffered a major decline at -13.1% due to production cuts in motor vehicles and sluggish sales of home electric appliances.

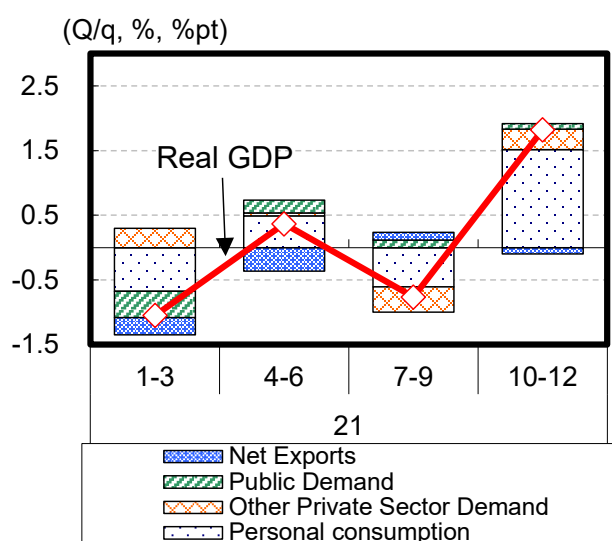
The outlook for the real GDP growth rate in the Oct-Dec period sees growth of +7.5% q/q annualized based on the assumption that economic activity will return to normal (Chart 2), while motor vehicle sales are expected to recover as supply constraints are moderated, and personal consumption will likely expand mainly durable consumer goods. Growth in demand components such as exports and capital expenditure are expected to boost the recovery to the level seen in the Oct-Dec period of 2019, before the COVID-19 pandemic hit². The growth will clearly exceed the level seen before pandemic in the Jan-Mar period of 2022.

¹ See the DIR report by Keiji Kanda and Wakaba Kobayashi dated 15 November 2021, *Jul-Sep 2021 1st Preliminary GDP Estimate*.

² If real GDP growth during the Oct-Dec period of 2021 is at +7.5% q/q annualized, it will fall 0.4% below the level seen before the COVID-19 pandemic (Oct-Dec period of 2019).

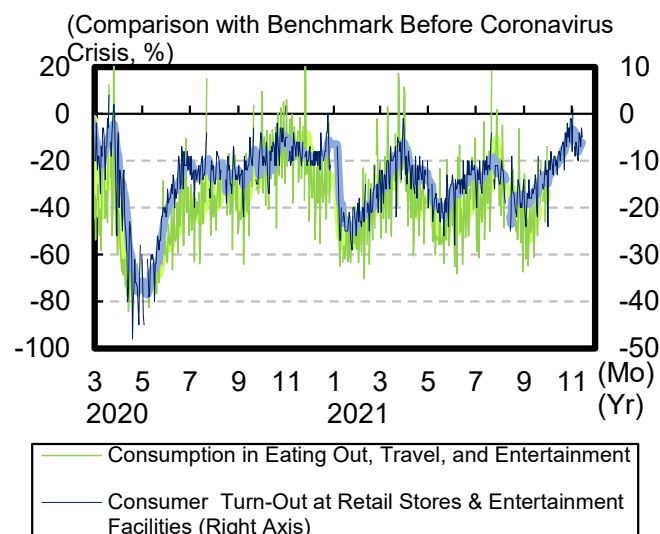
Real GDP Growth Rate Results & Outlook

Chart 1



Consumer Turn-Out and Consumption in Eating Out, Travel, and Entertainment

Chart 2



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

Note: The left side chart uses real figures, all seasonally adjusted. 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 (8/10-14 2020) and year-end/New Year (12/28 2020-1/4 2021) are excluded.

COVID-19 infections expected to remain stable due to effectiveness vaccine and spread of oral remedies

The percentage of Japan's total population which has completed two doses of the vaccination (vaccination completion rate) has risen to 75.7% as of November 17, 2021. Considering the uncounted amount³, it is possible that it has actually reached around 80% (or around 90% of persons eligible for vaccination). It can be said that the government's goal of "aiming to finish by as early a date as possible, vaccinating all people who want one by October or November this year"⁴ has been largely achieved.

According to our main scenario, booster shots to maintain the effectiveness of the vaccine will be implemented suitably, and countermeasures against the spread of infectious diseases, such as wearing medical masks, will be continued. Hence it is expected that a surge in infections as was experienced in August can be avoided. Meanwhile, the use of oral medicines is going to spread, so that even if COVID-19 begins to spread again, overloading the medical care provision system can also be avoided. Hence both domestic and overseas economic activities are expected to continue normalization.

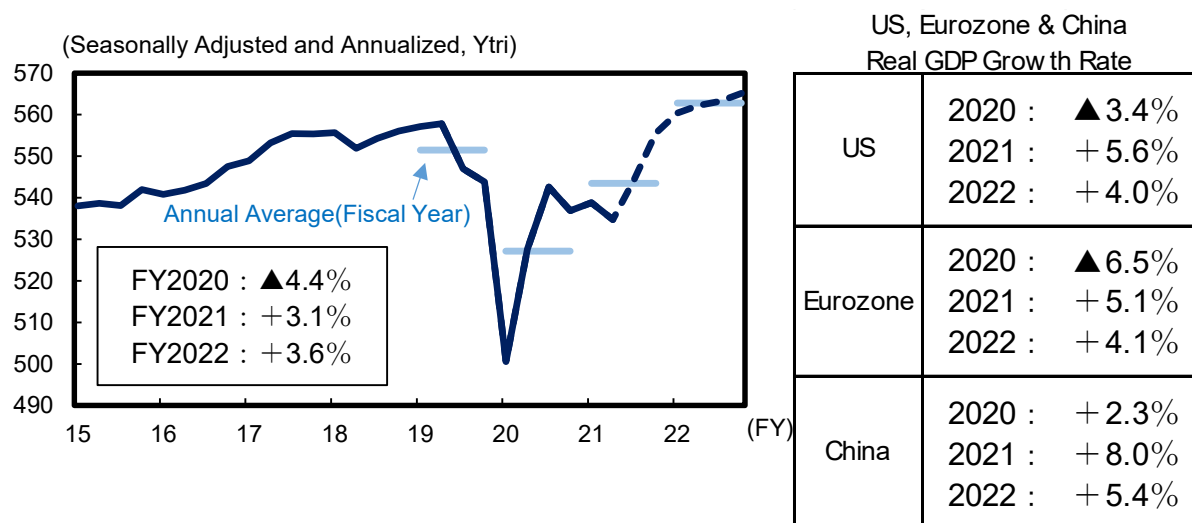
As was also noted in the DIR report, published in September, *Japan's Economic Outlook No. 210* (Japanese only), the greatest downside risk to Japan's economy continues to be the spread of mutant strains of COVID-19. Special care should be taken regarding the spread of these strains that can reduce the severity prevention effect of the vaccine.

Outlook for overseas economies in 2021: US and China revised downward, while Eurozone sees upward revision

Chart 3 shows real GDP according to our main economic scenario and the premise of our outlook for the overseas economies. Our outlook for overseas economies is based on the latest research performed by DIR's own in-house expert as of November 19, 2021.

³ Looking at the trend in the number of vaccinations per day, there is a large number that has not been counted during the most recent two weeks. The tendency has been for the actual number to be revised upwards as time passes.

⁴ The Prime Minister's Office: Prime Minister of Japan and His Cabinet (kantei.go.jp) (Japanese only)



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

Note: The dotted 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.

The real GDP growth rate in 2021 is expected to be +5.6% in the US, +5.1% in the Eurozone, and +8.0% in China. While China is expected to achieve a growth rate exceeding that of the global economy overall (+5.9% according to the IMF), the outlook has been revised downwards by 0.8%pts in comparison with the previous outlook because of the spread of COVID-19, the shortage of electrical power, and the the Evergrande Group management crisis. Meanwhile, the outlook for the US growth rate has also been revised downwards by 0.6%pts based on recent developments. Conversely, the outlook for the Eurozone's growth rate is revised upwards by 0.4%pts based on the fact that normalization of economic activities has progressed more than expected.

The real GDP growth rate in 2022 is expected to be +4.0% in the US, +4.1% in the Eurozone, and +5.4% in China. As for the US and the Eurozone, high growth greatly exceeding that of the potential growth is expected to continue, while the outlook for China's economy shows a growth rate at just under the level seen in 2019 before the outbreak of the COVID-19 pandemic. The export environment is expected to continue its positive tone in 2022, which is good for Japan, and this should boost economic recovery.

US real GDP during the Jul-Sep period of 2021 was +2.0% q/q annualized, a major decline in comparison to the Apr-Jun period figures (+6.7%). Household consumption behavior became passive as COVID-19 infections began to spread again, and disposable income declined due to the reactionary decline in cash benefits provided by economic measures and the expiration of the additional amount paid in unemployment benefits. Moreover, the supply chain breakdown has caused corporate activity to stagnate. During the Oct-Dec period, personal consumption is expected to get back on its feet with improvement in the status of COVID-19 infections, and a pickup in the pace of recovery in the employment environment, but there are concerns that the inflation rate which remains at a high will have a negative influence on the economy. If the supply of labor becomes sluggish, it will bring upward pressure on wages and inflation could belong-term. It will be necessary to keep a close eye on the influence on the bond market of the FRB's tapering and the rise in interest rates expected to follow as well as wage and price trends in future.

As for the Eurozone, the GDP growth rate grew by +9.3% q/q annualized during the Jul-Sep period, continuing the high growth trend of the Apr-Jun period, recovering to a level just below that seen before the pandemic hit (Oct-Dec period of 2019). Personal consumption achieved major growth centering on services with the improvement in the status of COVID-19 infections due to progress in vaccination.

However, more recently, the number of new infections has risen again, prompting some countries to reinstate strict measures limiting activities, and bringing an increased sense of uncertainty regarding the future. The growth rate is therefore expected to slow down during the Oct-Dec period and beyond, with the pause in normalization of economic activities and the inflation rate remaining at a high.

China's real GDP growth rate fell sharply during the Jul-Sep period at +0.8% q/q annualized in comparison to the +4.9% registered in the Apr-Jun period. Behind this development were nationwide restrictions on activities due to a resurgence of COVID-19 infections, stagnant motor vehicle sales due to the shortage of semiconductors, and restraints on production activities by environmental regulations and the shortage of electrical power, as well as the deterioration of terms of trade due to the high price in natural resources, and a decline in new construction starts in the real estate market. The recovery trend is expected to continue in the future, but the shortage in electrical power and measures to prevent the spread of COVID-19 are expected to continue to affect the economy negatively through the Jan-Mar period of 2022. It will also be necessary to keep a close eye on the Evergrande Group management crisis as it will likely be a downside factor on the economy. However, considering the size of the allowance for doubtful accounts of commercial banks overall, it is unlikely that it will develop into a financial crisis. The growth rate is expected to pick up starting in around the Apr-Jun period of 2022 once the electrical power shortage and measures to prevent further spread of COVID-19 have calmed down. There is still plenty room for government economic measures.

Japan's real GDP expected to continue high growth at the 3% level as normalization of economy progresses

Based on this outlook for the overseas economy, our main scenario sees Japan's real GDP growth rate in FY2021 at +3.1%, with +3.6% seen in FY2022 (Chart 3).

The outlook for the 2021 growth rate has been revised downwards by 0.4%pts in comparison to the previous report due to the downward revision of the outlooks for the US and China economies, and the influence of production cuts in motor vehicles. However, the outlook for personal consumption is revised upwards by 0.6%pts (previous report: +3.1% → this report: +3.7%) due to the lifting of restrictions on activities and the effects of economic measures. A more detailed outlook for personal consumption will be provided in Chapter 2, while Chapter 3 offers a quantitative consideration of the Go To Travel Campaign and its economic effects, as well as domestic pent-up demand for motor vehicles and the effects of the high price of resources on households.

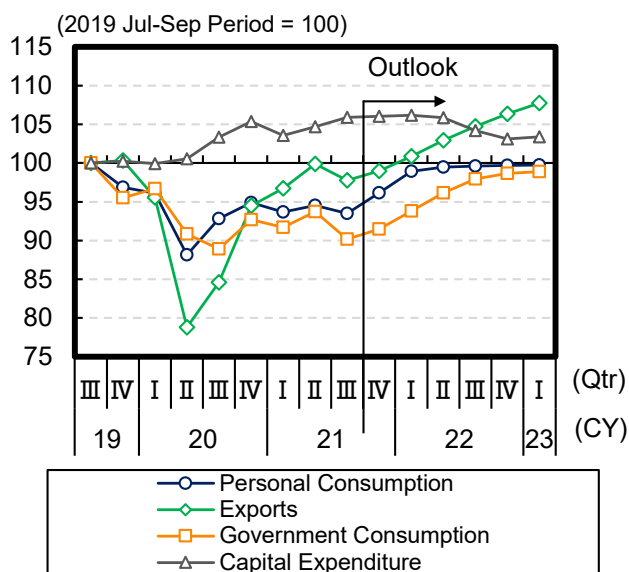
The outlook for the FY2022 growth rate has been revised upwards by 0.3%pts. As the COVID-19 infection situation calms down and economic measures take effect, the growth rate for personal consumption and capital expenditure increases, while government consumption is expected to be sluggish as the necessity of COVID-19 related economic measures declines (Chart 4).

As for exports, after making a comeback during the Oct-Dec period of 2021, exports are expected to maintain high growth throughout the period covered by this outlook. During the Jul-Sep period, the export of goods from Japan declined in q/q terms for the first time in five quarters because of the spread of COVID-19 in Southeast Asia, which brought difficulties in procuring parts for industrial products, while at the same time there was a shortage of semiconductors. However, this situation has already begun to improve. The Daiwa Securities analyst for the automobile sector sees the supply constraints on semiconductors used in motor vehicles reaching a resolution in FY2022⁵. For this reason, recovery exports are seen throughout FY2022 centering on motor vehicles, as well as electrical devices and general machinery. On the other hand, inbound demand, which had been experiencing continual

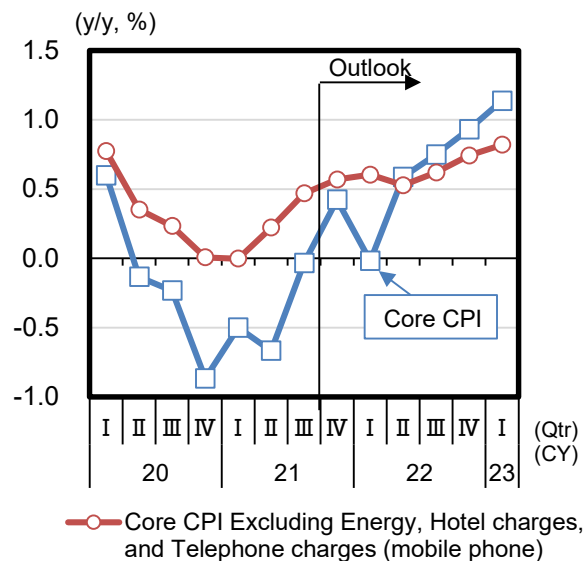
⁵ See the Daiwa Securities report dated October 18, 2021 by Eiji Hakomori, "Automobile Sector 2Q FY21 Earnings Outlook".

stagnation, is also expected to be heading toward a comeback in FY2022, and this should provide a boost for the export of services.

Outlook for Major Demand Components Chart 4



Outlook for Core CPI Chart 5



Source: Cabinet Office, Bank of Japan, Ministry of Internal Affairs and Communications; compiled by DIR

Note: The Go To Travel Campaign is expected to be implemented in 2022 between mid-January and mid-July.

CPI expected to hover at over 0.5% excluding special factors

The FY2020 y/y rate of change for core CPI (excluding fresh foods) maintained negative performance due to the collapse of energy prices and the decline in Hotel charges associated with the Go To Travel Campaign (Chart 5). Moving into FY2021, core CPI figures continued to fall below the previous year with cuts in Telephone charges (mobile phone) and the revision in standards. As for September, however, the influence of the weak yen and rising resource prices encouraged positive growth for CPI for the first time in a year and a half. In future, the ripple effect of rising resource prices will spread further in retail prices, and core CPI is expected to rise further to around +1% y/y.

On the other hand, core CPI excluding Energy, Hotel charges, and Telephone charges (mobile phone) as shown in Chart 5 is expected to continue in a moderate growth phase, reaching +0.7% y/y by the Jan-Mar period of 2023. Price trends will still likely fall far below the 2% inflation targeted by the Bank of Japan. Behind this phenomenon lies the fact that the Japanese economy's potential growth rate is low, and the growth rate of wages will likely remain at a moderate pace. It is notable whether Kishida administration's "virtuous cycle of growth and distribution" by growth strategy and distribution strategy will accelerate raise of wage.

Greatest downside risk remains status of mutant strains of COVID-19

While vaccines have been well distributed in the advanced nations and progress is being made in economic normalization, vaccination rates remain low in the emerging nations. According to the Oxford University Database, as of November 18, 2021, only 4.7% of people in low-income countries⁶ had been vaccinated at least once (as compared to more than 52% worldwide). It is quite possible that new mutant strains could emerge as vaccination lags in emerging nations, and that they could spread to developed countries such as Japan.

What is most important to be careful about here are mutant strains of the disease which vaccines are less effective against. If the burden on the medical care provision system becomes excessive due to the spread of infection, the emphasis will have to be shifted to preventing the spread of the disease, meaning that

⁶ The World Bank defines low-income countries as those with a per capita GNI (gross national income) of \$1,045 or less as of the year 2020.

consumer turnout will have to be significantly suppressed, causing personal consumption to decrease significantly. Meanwhile, if mutant strains spread overseas, external demand will deteriorate and cause Japan's growth rate to decline. Economic activity would remain sluggish until new vaccines that can fight against mutant strains of COVID-19 are developed and disseminated, and there would be a risk that the economic growth rate during the period covered by this outlook would fall significantly below that of our main scenario. It is important to remain vigilant regarding this downside risk.

2. Personal Consumption Moves Toward Full-Scale Recovery Due to Lifting of Restrictions on Activity

Consumer turnout recovers in Europe and North America, with consumption of services nearing levels seen before the pandemic

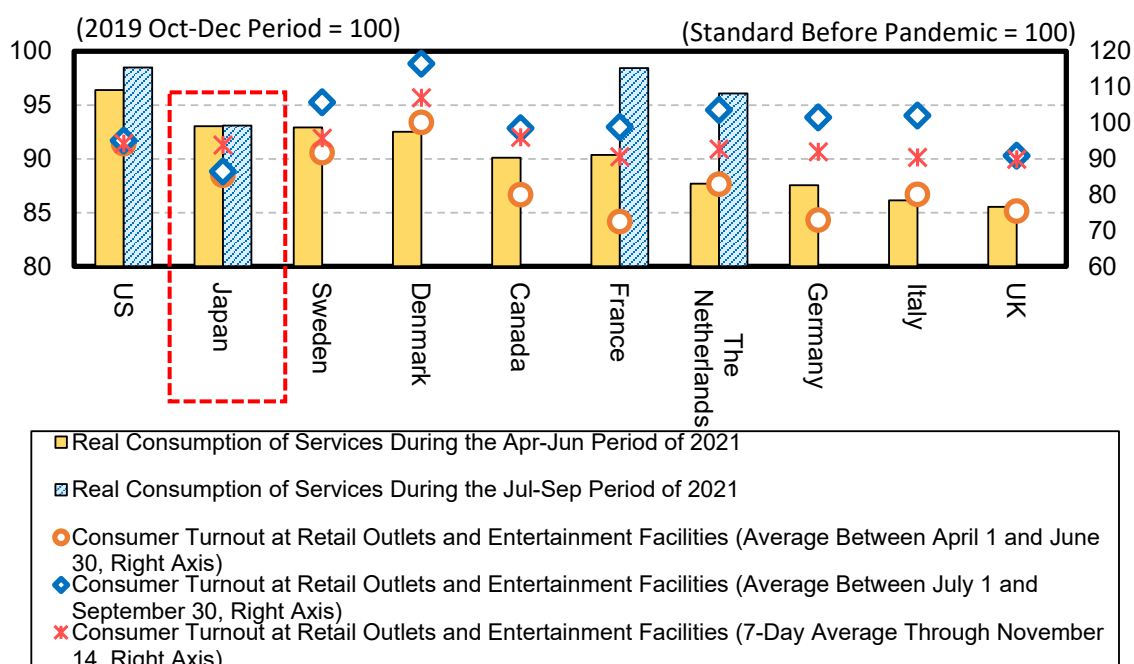
In the advanced nations in Europe and North America, which are ahead of Japan in terms of the normalization of economic activities, the recovery in services between the Apr-Jun period of 2021 and the Jul-Sep period is striking (see bar graph in Chart 6).

Real consumption of services in the US during the Jul-Sep period neared the level seen before the pandemic at over 98% of the amount recorded during the Oct-Dec period of 2019. Looking at consumption by category, accommodations and eating & drinking services were at 99.6% of pre-pandemic levels, exhibiting consecutive growth for three quarters since the Oct-Dec period of 2020 when it was at 79% of the amount recorded during the Oct-Dec period of 2019. Consumption of services in the US have pretty much recovered to the level experienced before the pandemic. Entertainment and shipping & transport are at 82% and 87% respectively in comparison to the amount recorded during the Oct-Dec period of 2019, but the trend toward recovery continues. Growth in the vaccination rate in the US has stagnated and COVID-19 is spreading, but the environment surrounding the consumption of services has improved greatly.

Canada and developed countries in Europe still lagged behind Japan and the US in the recovery in consumption of services as of the Apr-Jun period, but as for the Jul-Sep period, consumer turnout had grown significantly. According to Google Maps location information data, turnout at retail stores and entertainment facilities exceeded levels seen before the pandemic in most countries (Chart 6). Vaccination rates have grown and restrictions on activities have been lifted, and normalization of economic activities progressed rapidly over the summer.

In Japan, the state of emergency and "Special Stricter Measures" were completely lifted as of the end of September, and since October, consumer turnout has grown sharply as economic activities resumed (Chart 6). While consumption of services in Japan is not expected to reach full-scale recovery in the Oct-Dec period, but chances are that it will achieve major growth considering the linkage between turnout and consumption. Moreover, the Go To Travel Campaign is expected to resume during the first half of 2022, and is expected to boost recovery in consumption of services during that period.

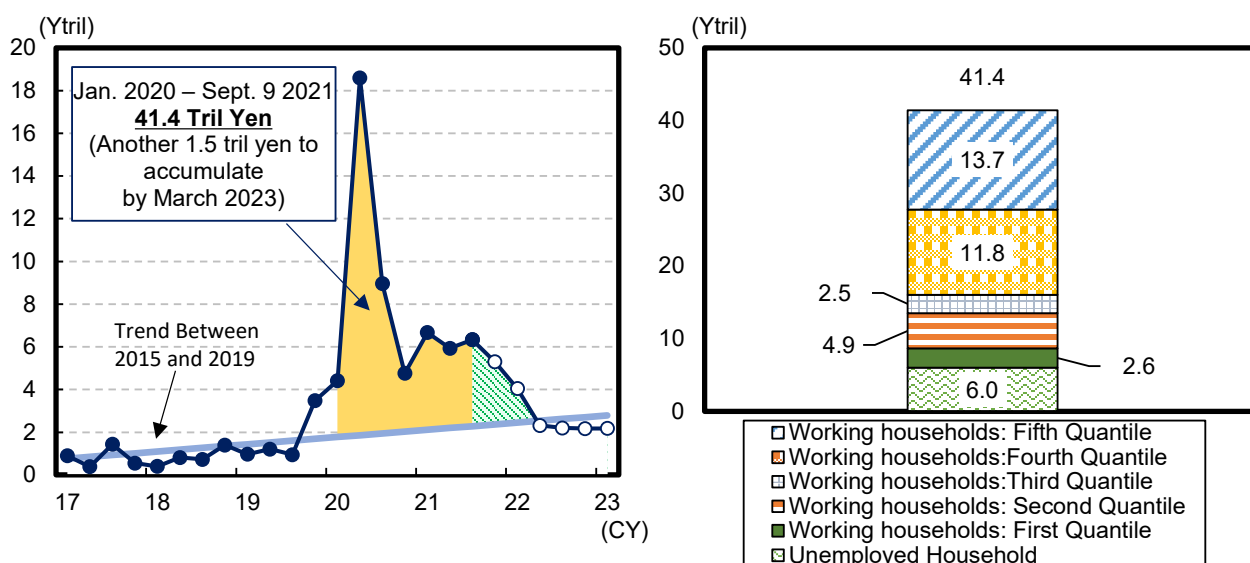
Real Consumption of Services and Consumer Turnout at Retail Outlets and Entertainment Facilities
Chart 6



Excess savings of over 40 tril yen can likely be reduced only up to a point

In considering the future of domestic personal consumption, the excess savings accumulated after the pandemic began is a salient point. Household savings grew sharply in 2020 due to the special fixed benefit of 100,000 yen per person and the practice of self-restraint in the consumption of services. After moving into the year 2021, excess savings continued to accrue. If we define excess savings as the amount diverging from the trend in household savings seen between 2015 and 2019, said amount reached approximately 41 tril yen from January 2020 to September 2021. It is expected to reach around 43 tril yen by March 2023 (Chart 7, Left).

Trends in Household Savings (Flow) (Left), and Breakdown of Recent Excess Savings by Annual Income and Employment Status (Right)
Chart 7



Notes: 1) Figures shown in the left side of the chart are seasonally adjusted. The dots that are not filled in represent figures estimated by DIR. Amount in savings = disposable income – household final consumption expenditure.
 2) Ratios in breakdown of excess savings in the right side of the chart were taken from the Family Income and Expenditure Survey conducted by the Ministry of Internal Affairs and Communications (total households), and then converted into SNA based figures.

Using the Family Income and Expenditure Survey conducted by the Ministry of Internal Affairs and Communications, we arranged households with excess savings through September 2021 by annual income and employment status. Doing so reveals that high income households (the fourth and fifth quantiles shown on the right side of Chart 7) hold around 60% of total household excess savings. Since high income households normally have relatively high expenditure in eating out, travel, and entertainment, the effects of self-restraint in consumption of these services is especially obvious. It also suggests that, being that many in the high-income bracket are regular employees, their incomes were relatively safe from declines even after the outbreak of COVID-19. In contrast, excess savings of unemployed households centering on elderly households account for around 15% of overall excess savings. The major factors behind this figure are thought to be the fact that the income of elderly households is made up mainly of pensions, which are not so susceptible to fluctuations in the economy, as well as the fact that the elderly are more likely to avoid going out than younger and middle-aged people since they have a higher risk of experiencing a serious case of COVID-19 if they become infected.

However, it is expected that excess savings will be reduced only up to a point (Chart 7, Left). The disposable income of working households has been experiencing long-term stagnation, and due to growing anxiety about the future, average propensity to consume has been on the decline (in other words propensity to save is on the rise)⁷. In addition, according to the "Public Opinion Poll on Financial Behavior of Households" conducted by the Central Council for Financial Services Information in 2020, the purpose of holding financial assets in the case of high-income households is "funds to cover living expenses in old age" and "in order to be prepared for illness and unexpected disasters". These are the same reasons mentioned by low- and middle-income households. Among unemployed households, the percentage of respondents who answered "in order to be prepared for illness and unexpected disasters" is particularly high. Simply because household savings rose sharply after the spread of COVID-19 began, this does not mean that they will be optimistic enough about the future to devote all of the increase to travel or eating out.

3. Effects on Consumption of Major Factors: (1) Resumption of Go To Travel Campaign, (2) Recovery of Motor vehicle Sales, and (3) Rising Price of Resources

Four factors require our attention in considering the future of personal consumption: (1) Resumption of the Go To Travel Campaign, (2) Recovery of Motor vehicle sales supported by catch-up production, (3) Rising Price of Resources, which causes the purchasing power of households to decline, and (4) Benefits for households included in the Kishida Administration's economic measures.

As for (4), according to the new economic measures, a benefit equivalent to 100,000 yen is to be paid to households with children the age of 18 or under, as well as households that are exempt from the resident tax and students living in poverty⁸. Cash benefits are said to total 2.3 tril yen, while benefits paid out in the form of coupons are to total 0.8 tril yen. This will boost household income from the Oct-Dec period of 2021 through the Jan-Mar period of 2022. According to Kaneda et al (2021)⁹, the Special Cash Payment paid to individuals in 2020 led to the growth in consumption for about six weeks starting in the week it was paid out.

The government plans on paying the benefit for households with children the age of 18 or under and households exempt from the resident tax until the end of 2021. Coupons are expected to be distributed

⁷ See the DIR report by Mitsumaru Kumagai et al. dated November 19, 2021, *Japan's Economic Outlook No. 211* (Japanese only).

⁸ The economic effects of the benefit are commented on by Mitsumaru Kumagai et al. in the DIR report dated November 19, 2021, *Japan's Economic Outlook No. 211* (Japanese only).

⁹ Michiru Kaneda, So Kubota, Satoshi Tanaka(2021) "Who spent their COVID-19 stimulus payment? Evidence from personal finance software in Japan", *Covid Economics: Vetted and Real- Time Papers*, Issue 75, pp.6-29.

around spring of 2022. If the benefit paid to households is to be used around the same time as the Special Cash Payment, consumption will possibly gain a boost from December 2021 through January 2022. However, about 70% of these benefits go to savings, and the short-term consumption stimulus effect is expected to be only about 1 tril yen (about 1.6 tril yen including the policy effect of granting Individual Number Card Points equivalent to a maximum of 20,000 yen). It will support the recovery of personal consumption mainly in the first half of 2022.

The remainder of this chapter is devoted to a consideration of factors (1) - (3) shown above.

(1) Resumption of the Go To Travel Campaign is expected to have an economic effect of 3.7 tril yen

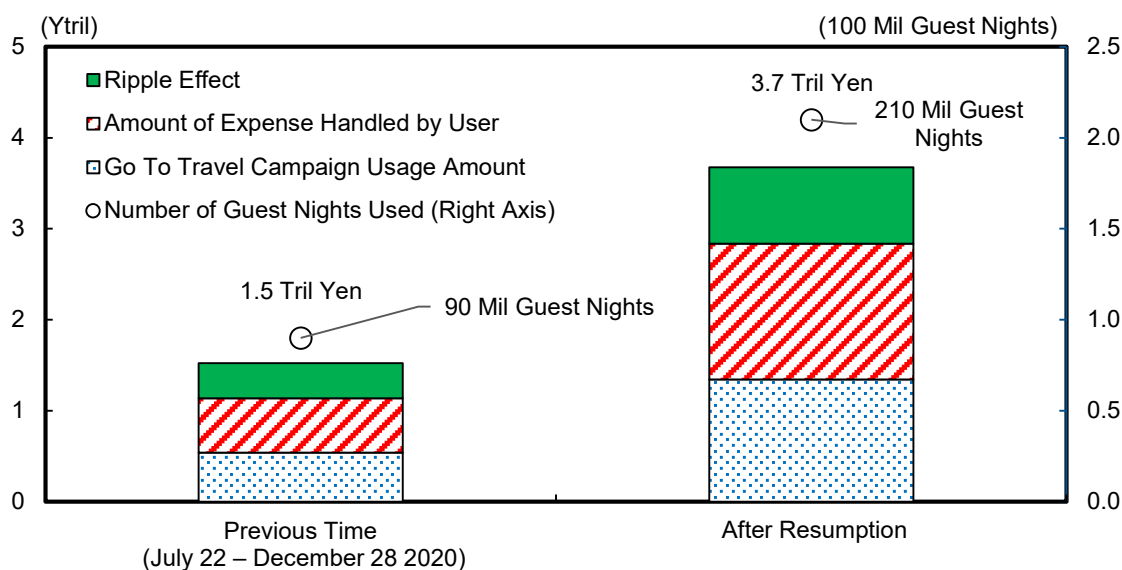
As of the writing of this report, the details of the campaign are not yet clear. According to news reports, the Go To Travel Campaign is expected to resume in mid-January 2022. According to information available from the Cabinet Office, as of July 2021, the unexecuted portion of the total budget related to the project amounted to about 1.3 tril yen. When the business is restarted with this as a financial resource, if the subsidy rate is 35% of the previous travel expense, the direct economic effect based on GDP (the sum of the amount of the Go To Travel Campaign usage and the user's own expense) is estimated at 2.8 tril yen. When the ripple effect is included, it is estimated to be 3.7 tril (Chart 8)¹⁰.

If travel behavior is the same as it was in 2020 when the campaign began, resumption of the program should generate demand of 2.1 trillion guest nights. Meanwhile, if the rate of the use is the same as in October and November of 2020, the program should be able to last for 8.9 months. If the COVID-19 situation remains stable for the duration of the program, the usage could exceed that of 2020. The Go To Travel Campaign promises to give a boost to consumption during the Jan-Mar and Apr-Jun periods of 2022.

Note that the results of the estimate shown here also indicate the extent of the economic effect on the budget amount. Spending on travel that would have occurred even without the Go To Travel Campaign is also included here. Therefore it should be noted that the net effect of boosting personal consumption may be less than the results of the estimate shown here.

¹⁰ For details see the DIR report dated November 2, 2021 by Yutaro Suzuki and Kanako Nakamura, titled "Impact of Resumption of Go To Travel Campaign and Appropriate Policy Approach." This trial calculation is based on the premise that the subsidy rate is the same as the previous time. According to some reports, there is a plan to reduce the travel subsidy rate from 35% to 30%. If the subsidy rate is 30%, the number of guest nights will increase, so the economic effect will expand to about 4.0 tril yen.

Economic Effects of the Go To Travel Campaign (If Budget Amount is 1.3 Tril Yen, GDP Base) Chart 8



Source: Japan Tourism Agency, Ministry of Internal Affairs and Communications, Cabinet Office; compiled by DIR.

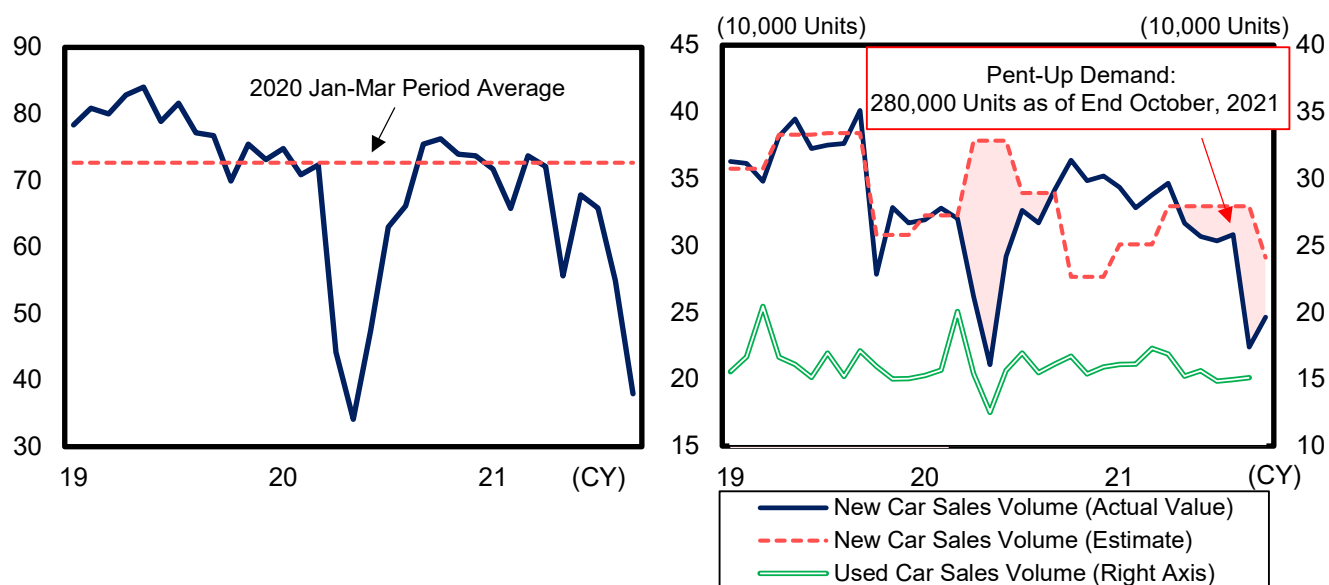
(2) Domestic pent-up demand for motor vehicles would accelerate consumption by 0.6 tril yen

Domestic motor vehicle production fell by around 50% in September in comparison to the previous year due to the worldwide shortage of semiconductors and the spread of COVID-19 in Southeast Asia, an important supplier of parts (Chart 9, left). As a result, domestic sales of motor vehicles also suffered a major decline.

The dotted lines in the right side of Chart 9 represent estimated sales volume of new passenger vehicles based on fundamentals such as household purchasing power. Looking at this chart we see that potential demand experienced major growth due to the Special Cash Payment distributed during the first half of 2020, while sales volume actually declined due to the practice of voluntary restraint, which prevented people from going out, and temporary closings of auto dealers. The difference between the estimated value shown and the actual value is pent-up demand, which built up during this time. During the second half of 2020, some of this disappeared, but pent-up demand again built up during the production cuts in motor vehicles. As of the end of October, 2021, there seem to be about 280,000 units remaining. If we multiply this by the average unit price of motor vehicles during the year 2020 (about 2.3 mil yen), we can then estimate pent-up demand at 0.6 tril yen. This is almost equivalent to about 10% of the amount of consumption of durable goods during the Jul-Sep period of 2021.

The stringent supply and demand situation is seen in the market for used cars as well, causing prices of them to rise. Surprisingly, there are no signs of growth in used car sales starting in the spring of 2021 and beyond when sales of new cars are on the decline (Chart 9, right). This is because of the shortage of supply of new car. The decline in replacement purchases of motor vehicles led to a decline in used cars available on the secondary market as well. Thus, consumers cannot buy the car of their choice due to few amount of models and supply. If this is the case, pent-up demand has built up and remains high, hence demand should appear as soon as motor vehicle manufacturers carry out recovery production.

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 Company, 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 Apr-Jun period of 1983 to the Oct-Dec period of 2019. The estimation formula is as follows:

Sales volume of passenger vehicles on a y/y basis = $-2.1 + 1.5 * \text{actual earnings (employee compensation + other current transfer balance (net), y/y)} - 0.2 * \text{real interest rate (y/y difference)} + 0.3 * \text{consumer sentiment (Employment environment indicators that make up the consumer confidence index, y/y difference)} - 3.6 * \text{price of motor vehicles (y/y)} + \sum \beta * \text{dummy variables}$. 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 0.73. 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) As for October 2021 indicators, income and inflation rate were estimated by DIR. The most recent values were used for nominal interest, consumer sentiment, and the price of motor vehicles.

(3) The burden of the high price of resources will hit low-income households especially hard

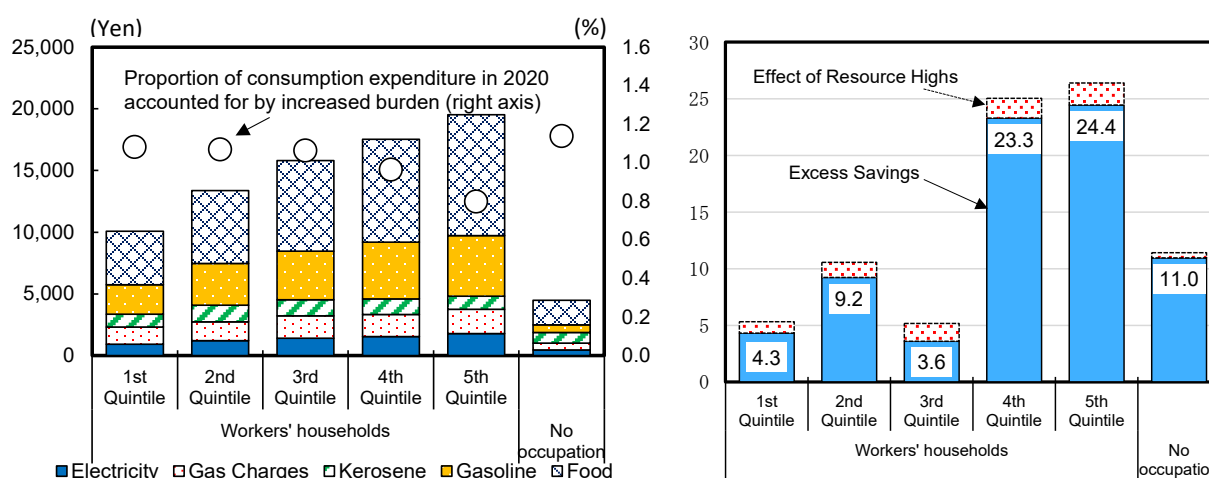
As demand rises sharply due to the recovery of the economy, the prices of resources such as oil have continued to register highs. The import price index had grown significantly as of October 2021 was at +4.1% m/m on a yen basis (+38.0% y/y). Looking at this in terms of demand and use, consumer goods such as “Beverages & foods and agriculture products for food” contributed to the rise in prices, as well as “Petroleum, coal & natural gas”. In this section we offer an analysis of the effect of rising food and energy prices on households during the second half of FY2021.

The left side of Chart 10 shows the amount of increase in burden on households due to the high price of resources between October 2021 and March 2022 by item, assuming recent prices of oil and imported foods remain flat, and the proportion of overall consumption expenditure accounted for by the amount of growth in energy prices respectively. Looking at the amount of increase in burden by annual income quintile, we see that working households in the 1st quintile are expected to see around 10,000 yen increase in burden, while the 5th quintile is expected to see around 20,000 yen. In other words, high income households should see more growth in the amount of financial burden. Looking at the situation by product, foods and gasoline are especially prominent in the amount of increase in burden, carrying a large proportion of the total. As a result, the proportion of increased burden on consumer spending is

higher for households with lower income, but the disparity between households is small (Chart 10, Left, marked by circles).

But the actual burden of low-income households will be heavier than suggested by the proportion of consumer expenditure accounted for by the increase in burden. Generally speaking, the unit price of goods such as foodstuffs purchased by high-income households is relatively high, and it is easy to lower the unit price by choosing low-priced products. There are also many unnecessary and unurgent expenditures. On the other hand, low-income households have a lot of necessary expenditures and it is not easy to lower the unit price, so it is difficult to avoid the increase in burden due to high resource prices.

Amount of Increased Burden in 2nd Half of FY2021 by Annual Income Quintile and Excess Savings
Chart 10



Source: Ministry of Internal Affairs and Communications; compiled by DIR.

Notes: 1) Calculations based on fixed purchase volume using data from October 2020 to March 2021.

- 2) Our calculations assume that the price of oil and imported foods remain flat in comparison to recent prices, and that assuming their influence becomes fully manifest, based on relationships experienced in the past, electricity rates would grow by around 3%, gas prices by around 7%, and kerosene by around 20%. Gasoline prices would rise by around 14%, and foods by around 3%. The estimation period for foods is from January 2000 to December 2019, while the estimate of energy prices is based on those seen since June 2011 since a structural change occurred after the Great East Japan Earthquake of 2011.
- 3) Kerosene and gasoline expenses of unemployed households were calculated on the assumption that in unemployed households made up of two persons or more, kerosene and gasoline expenses account for the same proportion of expenses as other heating and motor vehicle expenses.
- 4) As for expenditure on food, items which are not covered by the Import Price Index survey (including fresh vegetables and so on) are excluded.
- 5) These estimates should be taken with a certain grain of salt, as results tend to differ depending on the data period used.

The right side of Chart 10 shows the increase in the amount of household burden due to the high price of resources and excess savings (covered in Chapter 2) by annual income quintile. Working households in the 4th and 5th quintiles accumulated a large amount of excess savings, hence the increase in burden associated with the high price of resources can be absorbed by dipping into those excess savings. Even “No occupation”, many of which are elderly persons, apparently have excess savings which significantly exceed the increased amount of burden. On the other hand, working households from the 1st to the 3rd quintiles have a relatively smaller amount of excess savings, hence the increase in burden associated with the high price of resources accounts for anywhere from 10% to 30% of excess savings.

According to the Japan Meteorological Agency, the La Niña phenomenon has appeared in the Pacific¹¹ and this means that Japan will have a severe winter. Since this estimate assumes that energy-related consumption is constant, if energy consumption increases due to decline in temperature, the increase in

¹¹ Japan Meteorological Agency, El Niño Outlook (November 2021 - May 2022) (Last Updated: 10 Nov 2021).

burden due to high resource prices will become even greater. Particular attention should be paid to the impact of high resource prices on low-income households.

Japan's Economic Outlook No. 211 (November 19, 2021)

Chart 11

		2020			2021				2022				2023	FY2020	FY2021	FY2022
		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	Q/q %; annualized	-28.2	23.5	11.8	-4.1	1.5	-3.0	7.5	8.5	3.6	1.2	0.7	1.3			
	Y/y	-10.1	-5.5	-0.9	-1.3	7.6	1.4	0.4	3.5	4.1	5.1	3.4	1.7	-4.4	3.1	3.6
Private consumption	Q/q %; annualized	-29.1	22.8	9.3	-5.0	3.7	-4.5	11.9	12.1	2.2	0.6	0.3	0.2	-5.8	3.7	4.0
Private residential investment	Q/q %; annualized	2.3	-20.9	-0.1	4.3	8.3	-10.1	4.1	7.4	4.9	2.6	0.8	0.8	-7.2	0.3	3.1
Capex	Q/q %; annualized	-22.1	-8.4	18.1	-4.1	9.1	-14.4	5.9	10.6	10.5	7.6	3.0	1.0	-6.9	1.4	6.1
Government Consumption	Q/q %; annualized	2.7	11.6	7.9	-6.7	4.5	4.7	0.6	0.6	-1.2	-6.2	-3.9	1.0	3.4	2.4	-1.5
Public investment	Q/q %; annualized	11.9	5.3	3.0	-5.5	-8.1	-5.8	4.1	3.6	2.8	2.8	1.2	1.2	4.2	-3.0	2.4
Exports	Q/q %; annualized	-53.8	33.0	55.6	9.9	13.6	-8.3	5.1	7.9	8.5	7.3	6.2	5.4	-10.4	12.0	6.1
Imports	Q/q %; annualized	-2.4	-29.1	20.7	16.9	22.8	-10.5	7.2	9.2	4.6	2.8	2.0	1.5	-6.8	7.9	3.9
Nominal GDP	Q/q %; annualized	-27.2	23.9	9.7	-4.4	-1.0	-2.5	8.2	8.8	3.9	1.9	1.4	1.9	-3.9	2.4	4.1
GDP deflator	Y/y	1.4	1.1	0.1	-0.2	-1.1	-1.1	-0.4	-0.2	0.5	0.5	0.5	0.6	0.6	-0.7	0.5
Industrial production	Q/q	-16.8	9.0	5.7	2.8	1.2	-3.7	1.0	4.3	1.8	0.7	0.4	0.4	-9.5	6.9	5.4
Core CPI	Y/y	-0.1	-0.3	-0.9	-0.5	-0.6	-0.0	0.5	-0.1	0.8	0.9	1.0	1.2	-0.5	-0.1	1.0
Unemployment rate	%	2.7	3.0	3.0	2.8	2.9	2.8	2.8	2.7	2.7	2.6	2.5	2.4	2.9	2.8	2.5
Trade balance (goods, services)	Y tri; annualized	-5.9	4.9	9.7	5.7	4.0	2.4	1.4	1.0	1.8	2.8	3.7	4.5	3.9	2.4	3.4
Current account balance	Y tri; annualized	6.8	14.5	23.7	18.5	18.9	15.7	14.7	14.2	15.1	16.1	17.3	18.3	16.3	16.3	17.2
Major assumptions																
Crude oil price (WTI futures)	\$/bbl	28.0	40.9	42.7	58.1	66.2	70.5	81.2	80.9	80.9	80.9	80.9	80.9	42.4	74.7	80.9
Exchange rate	Yen/\$	107.6	106.1	104.5	105.9	109.4	110.1	113.7	114.1	114.1	114.1	114.1	114.1	106.0	111.9	114.1

Source: Compiled by DIR.

Note: GDP through Jan-Sep 2021: actual; thereafter: DIR estimates.