

# FY2021 - FY2022 Economic Outlook

The pace of recovery has been polarized among regions. Polarized goods and services are expected to swing back.

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Mizuho Research & Technologies, Ltd.

**MIZUHO**

## Key points of our outlook

- The global economy is expected to recover through 2022, and the transition to the post-pandemic world will progress, mainly due to successful vaccine rollouts and subsequent easing of activity restrictions. However, the pace of recovery will be polarized among regions. While developed countries (where vaccine rollout has sufficiently progressed) are expected to make a sustained recovery, ASEAN countries and India will be left behind due to the recent resurgence of infections and the slow pace of vaccine rollouts. Developed countries still have reasonable risks of downward pressure on their economies though, which requires attention. The risks include high uncertainty regarding the infectivity of the Delta variant, risks of vaccination hesitancy, and the emergence of new variants.
- In the post-pandemic transition process, the polarized consumption of goods and services is expected to swing back. While service consumption is expected to recover after being seriously affected by activity restrictions, the growth of goods consumption, which had increased due to stay-at-home demand, will slow down. Further, in countries where strict activity restrictions were imposed during the pandemic, pent-up demand mainly for services is expected to emerge after restrictions are lifted, which will boost consumption temporarily.
- We expect the strong growth of the US economy, driven by a recovery in demand for services due to the easing and lifting of restrictions, as well as due to achievement of the Biden Plan. The inflation rate is currently above 3% due to the tight supply and demand for goods, but this is expected to fall to the 1% level in the second half of 2022 as demand for goods peaks out. With regard to the financial markets, subsequent to the rise of US interest rates and the strengthening of the dollar reflecting the lifting of restrictions, the rise of interest rates and appreciation of the dollar will pause along with the decline of interest rates.
- The Japanese economy is expected to recover from the second half of FY2021 onward, in service consumption in particular, mainly due to the progress of vaccine rollouts despite the downward pressure from the slump in personal consumption reflecting the spread of the Delta variant and the impact of semiconductor supply constraints. In FY2022, capital investment and exports are forecast to be strong, supported by the recovery of the global economy.

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# 1. Overview

# Overview of the global economy: recovery continuing in developed countries; slow recovery in Asia

- The developed countries should follow a sustained economic recovery, where vaccine rollouts are progressing.
- In contrast in Asia, the recent resurgence of infections and delays in vaccine rollout are serving as downward pressure on economic growth.

## Outlook on the global economy

|                        | (Y-o-y % change) |      |           |      | (Y-o-y % change)     |                                     | (%pt) |      |
|------------------------|------------------|------|-----------|------|----------------------|-------------------------------------|-------|------|
|                        | 2019             | 2020 | 2021      | 2022 | 2021                 | 2022                                | 2021  | 2022 |
|                        | CY               |      | (Outlook) |      | (Forecast as of May) | (Comparison with previous forecast) |       |      |
| Global real GDP growth | 2.8              | -3.2 | 5.9       | 4.2  | 5.7                  | 4.1                                 | 0.2   | 0.1  |
| Japan, US, Europe      | 1.6              | -5.2 | 5.1       | 4.4  | 4.7                  | 4.3                                 | 0.4   | 0.1  |
| US                     | 2.2              | -3.5 | 6.2       | 4.2  | 6.0                  | 4.0                                 | 0.2   | 0.2  |
| Eurozone               | 1.3              | -6.5 | 4.6       | 4.7  | 4.3                  | 4.7                                 | 0.3   | -    |
| UK                     | 1.4              | -9.8 | 5.9       | 5.0  | 3.9                  | 4.2                                 | 2.0   | 0.8  |
| Japan                  | 0.0              | -4.6 | 2.3       | 4.2  | 1.4                  | 4.2                                 | 0.9   | -    |
| Asia                   | 5.2              | -0.9 | 7.6       | 5.2  | 7.7                  | 4.9                                 | -0.1  | 0.3  |
| China                  | 6.0              | 2.3  | 8.4       | 5.4  | 8.4                  | 5.4                                 | -     | -    |
| NIEs                   | 1.9              | -0.8 | 4.5       | 2.9  | 3.6                  | 2.6                                 | 0.9   | 0.3  |
| ASEAN5                 | 4.8              | -3.5 | 4.1       | 5.4  | 5.0                  | 4.7                                 | -0.9  | 0.7  |
| India                  | 4.8              | -7.0 | 9.6       | 5.5  | 9.8                  | 4.9                                 | -0.2  | 0.6  |
| Australia              | 1.9              | -2.5 | 4.3       | 3.1  | 3.0                  | 2.6                                 | 1.3   | 0.5  |
| Brazil                 | 1.4              | -4.1 | 4.8       | 2.2  | 2.8                  | 2.7                                 | 2.0   | -0.5 |
| Mexico                 | -0.2             | -8.3 | 5.6       | 2.6  | 4.8                  | 3.0                                 | 0.8   | -0.4 |
| Russia                 | 2.0              | -3.0 | 3.1       | 3.3  | 2.7                  | 3.5                                 | 0.4   | -0.2 |
| Japan (FY)             | -0.5             | -4.5 | 3.8       | 3.7  | 2.7                  | 4.0                                 | 1.1   | -0.3 |

**US:**  
Revised upward based on the strong demand for goods

**Europe:**  
Revised upward in view of the progress in vaccine rollouts despite the impact of supply constraints.

**Japan:**  
While impacted by the current spread of infection, the acceleration of vaccine rollouts served as a positive contribution

**NIES:**  
Strong global goods exports are boosting production. High motivation for capital investment such as capacity expansion is also taken into consideration.

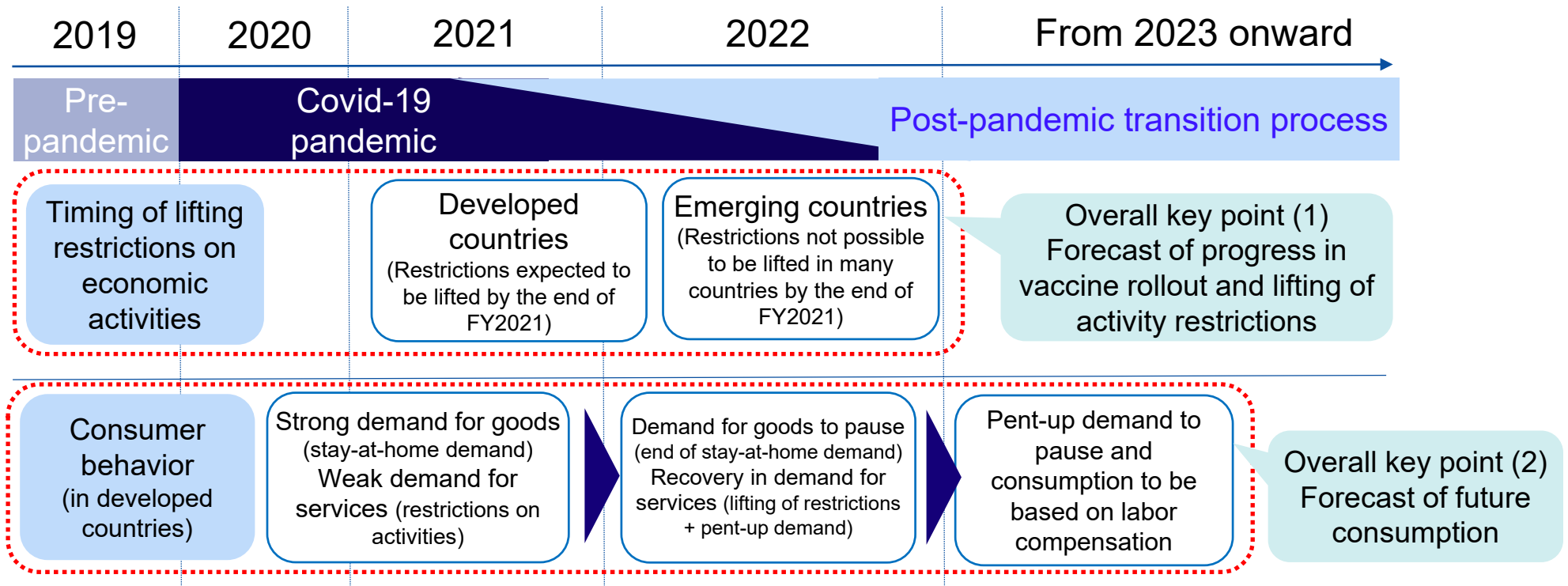
**ASEAN and India:**  
Downward pressure on the growth rate is caused by the recent resurgence of infections and delays in vaccine rollout.

Note: The total for forecasted regions is calculated based on GDP share (PPP) by the IMF  
Sources: Made by MHRT based upon releases by the International Monetary Fund (IMF) and statistics of relevant countries and regions

# Overall trend: polarization among regions in the process of transitioning to a post-pandemic world; polarized demand for goods and services expected to swing back

- **Polarization among regions** expected to occur in the **post-pandemic transition process**
  - Easing and lifting of restrictions on economic activities are expected to progress in developed countries toward the end of FY2021. In **contrast**, many emerging countries will find it difficult to lift restrictions during FY2021.
- **Polarized demand for goods and services to rapidly swing back**
  - Demand for services such as food/beverages and accommodations will regain momentum as restrictions are eased and lifted. Demand for goods, which had increased due to stay-at-home consumption, is expected to slow down.

## Global outlook (main scenario)



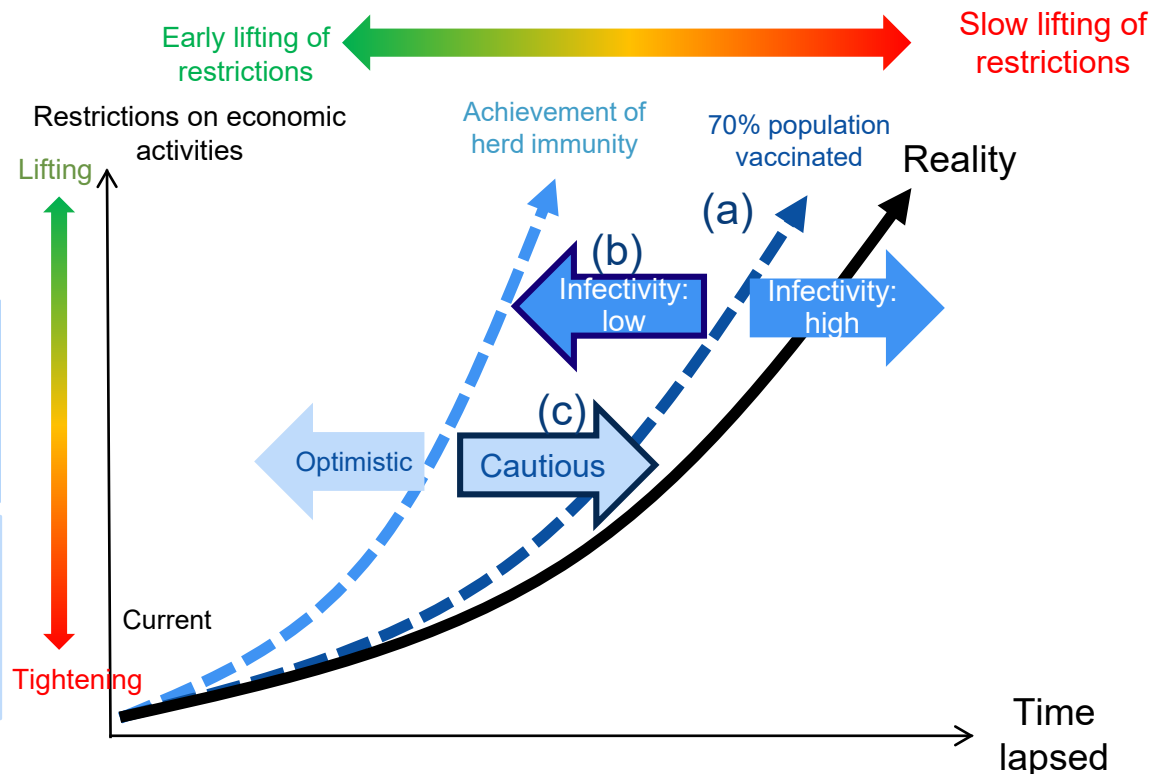
Source: Made by MHRT

# Key point (1): outlook on the progress of vaccine rollouts and the lifting of activity restrictions (a summary of the current state and outlook)

- Three factors varying by country
  - (a) **Assumptions on vaccine rollouts** → The timing of achievement is influenced by target rollout rates and vaccination systems.
    - Analyzing the pace of vaccination based on the amount of vaccines secured, import dependency, vaccine transportation and inoculation systems, etc.
  - (b) **Virus infection rate** → impacts the timing of achievement of herd immunity (i.e., the time when restrictions on economic activities can be lifted while preventing the spread of infections)
    - Calculated logically based on epidemiological model simulations
  - (c) **Social tolerance** (Balance between economics and infection rates; public sentiment) → impacts the timing of the actual lifting of restrictions

## Summary on the timing of lifting restrictions on economic activities

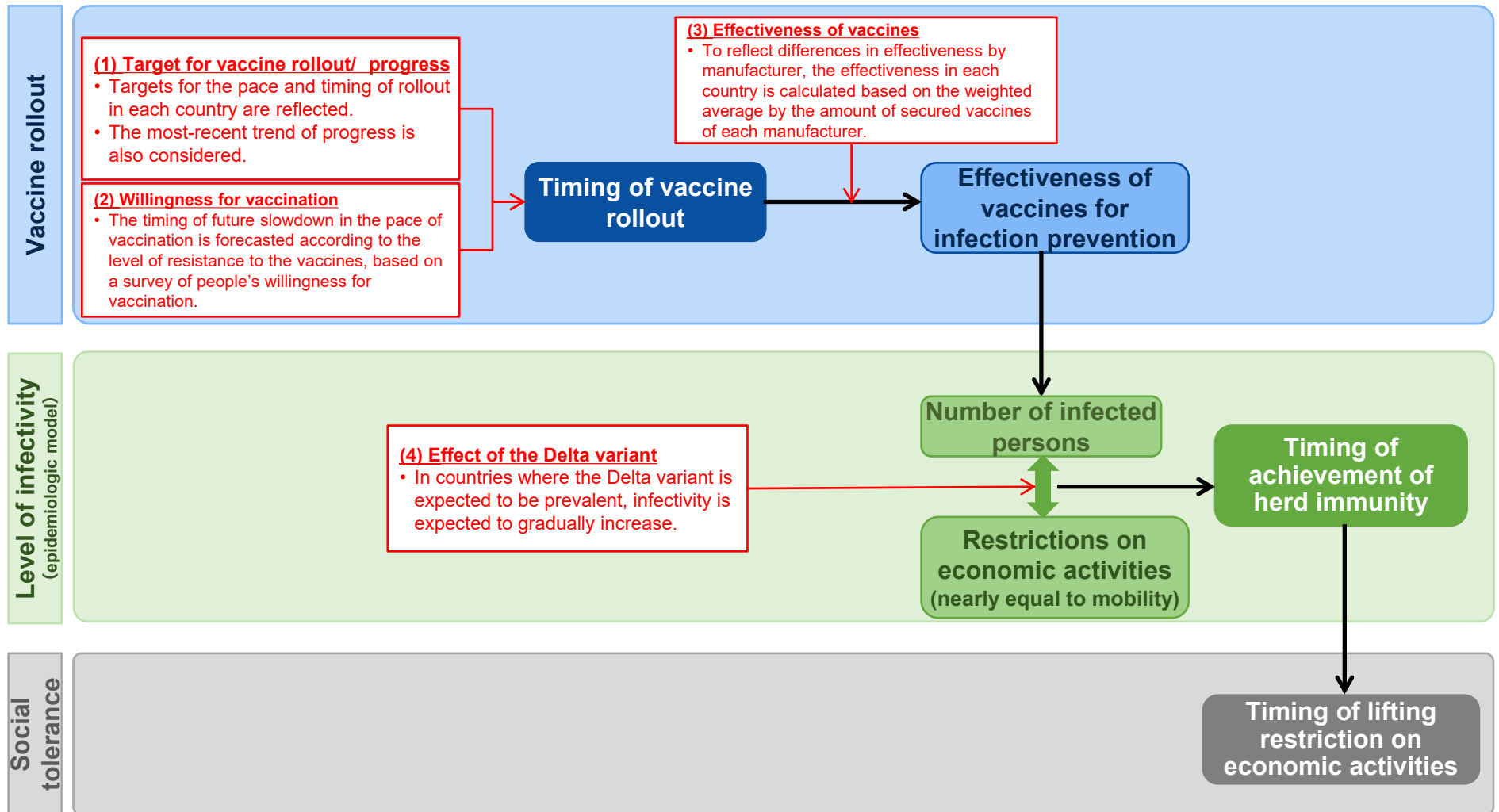
| Key point |  |  |
|-----------|--|--|
| (a)       | Vaccine rollout                            | Amount of vaccines secured, import dependency, and the vaccine transportation and inoculation systems will affect the timing of rollout.                               |
| (b)       | Level of infectivity (epidemiologic model) | Vaccination rates required to achieve herd immunity differ between countries suffering from severe infection and those where the infection is successfully controlled. |
| (c)       | Social tolerance                           | The timing of lifting restrictions will vary depending on public reactions to restrictions on economic activities and priorities in vaccination.                       |



Source: Made by MHRT

# Targets for vaccine rollout, progress, and willingness for vaccination in each country reflected in MHRT's latest outlook; differences in vaccine effectiveness also considered

The process and new information considered in the forecast of the timing of activity restrictions



Source: Made by MHRT

# Vaccine assumptions (1): most countries in the forecast to complete vaccine rollout by the end of 2021

- Developed countries aim to roll out vaccines to the majority of their populations in the second half of 2021, while emerging countries aim for rollout through the end of 2021 to the first half of 2022.
  - The baseline for the future pace of rollout is established on the basis of the target timing/level of rollout of each country.

## Target for vaccine rollout by the countries in the outlook

|                     |             | As of August 14  |                                | Number of vaccinations per 100 people/week (Latest) | 2021   |       |       |        |       |       | 2022  |       |       |     |     |     | Target level/group                   |
|---------------------|-------------|------------------|--------------------------------|---|--------|-------|-------|--------|-------|-------|-------|-------|-------|-----|-----|-----|--------------------------------------|
|                     |             | Vaccination rate | of which 2nd dose administered |   | Jul    | Aug   | Sep   | Oct    | Nov   | Dec   | Jan   | Feb   | Mar   | Apr | May | Jun |                                      |
| Developed countries | US          | 59.1%            | 50.3%                          | 1.5   | Yellow | Green |       |        |       |       |       |       |       |     |     |     | 70% of ages 18 and older             |
|                     | Eurozone    | 66.3%            | 56.4%                          | 4.0   | Green  |       |       |        |       |       |       |       |       |     |     |     | 70% of adults                        |
|                     | UK          | 69.6%            | 59.5%                          | 2.1   | Yellow |       |       |        |       |       |       |       |       |     |     |     | All adults                           |
|                     | Japan       | 48.8%            | 36.7%                          | 4.5   |        |       |       |        | Green |       |       |       |       |     |     |     | All those requested                  |
| NIEs East Asia      | China       | 0.0%             | 54.0%                          | 6.8   |        |       |       |        |       | Green |       |       |       |     |     |     | Whole nation                         |
|                     | South Korea | 43.6%            | 19.0%                          | 5.1   |        |       | Green |        |       |       |       |       |       |     |     |     | 70% of the whole nation              |
|                     | Taiwan      | 38.2%            | 2.7%                           | 3.2   |        |       |       | Yellow |       |       |       |       |       |     |     |     | 60% of the population                |
|                     | Singapore   | 76.7%            | 69.6%                          | 8.7   |        | Green |       |        |       |       |       |       |       |     |     |     | Two-thirds of the population         |
| ASEAN               | Indonesia   | 19.6%            | 10.2%                          | 2.8   |        |       |       |        |       |       |       |       | Green |     |     |     | Two-thirds of the population         |
|                     | Malaysia    | 52.1%            | 32.2%                          | 9.9   |        |       |       |        |       | Green |       |       |       |     |     |     | 80% of the population                |
|                     | Philippines | 12.9%            | 11.0%                          | 3.4   |        |       |       |        |       | Green |       |       |       |     |     |     | Half to two-thirds of the population |
|                     | Thailand    | 25.4%            | 7.2%                           | 4.3   |        |       |       |        |       | Green |       |       |       |     |     |     | 70% of the population                |
|                     | Vietnam     | 12.8%            | 1.3%                           | 4.5   |        |       |       |        |       |       | Green |       |       |     |     |     | 70% of ages 18 and older             |
| Other               | India       | 30.6%            | 8.8%                           | 2.6   |        |       |       |        |       |       | Green |       |       |     |     |     | All ages 18 and older                |
|                     | Australia   | 38.3%            | 20.6%                          | 5.6   |        |       |       |        |       | Green |       |       |       |     |     |     | Whole nation                         |
|                     | Brazil      | 54.6%            | 23.2%                          | 5.2   |        |       |       |        |       | Green |       |       |       |     |     |     | All ages 18 and older                |
|                     | Mexico      | 41.8%            | 22.5%                          | 3.3   |        |       |       |        |       |       |       | Green |       |     |     |     | All ages 16 and older                |
|                     | Russia      | 27.9%            | 22.1%                          | 3.3   |        |       |       |        | Black |       |       |       |       |     |     |     | Target abolished                     |

Lower than the target → The key is how to persuade avoiders

Note: Targets for the first dose are shown in yellow, with the second dose in green. The abolished target is shown in black. If the country has more than one target, the target period with the broader target population is selected.

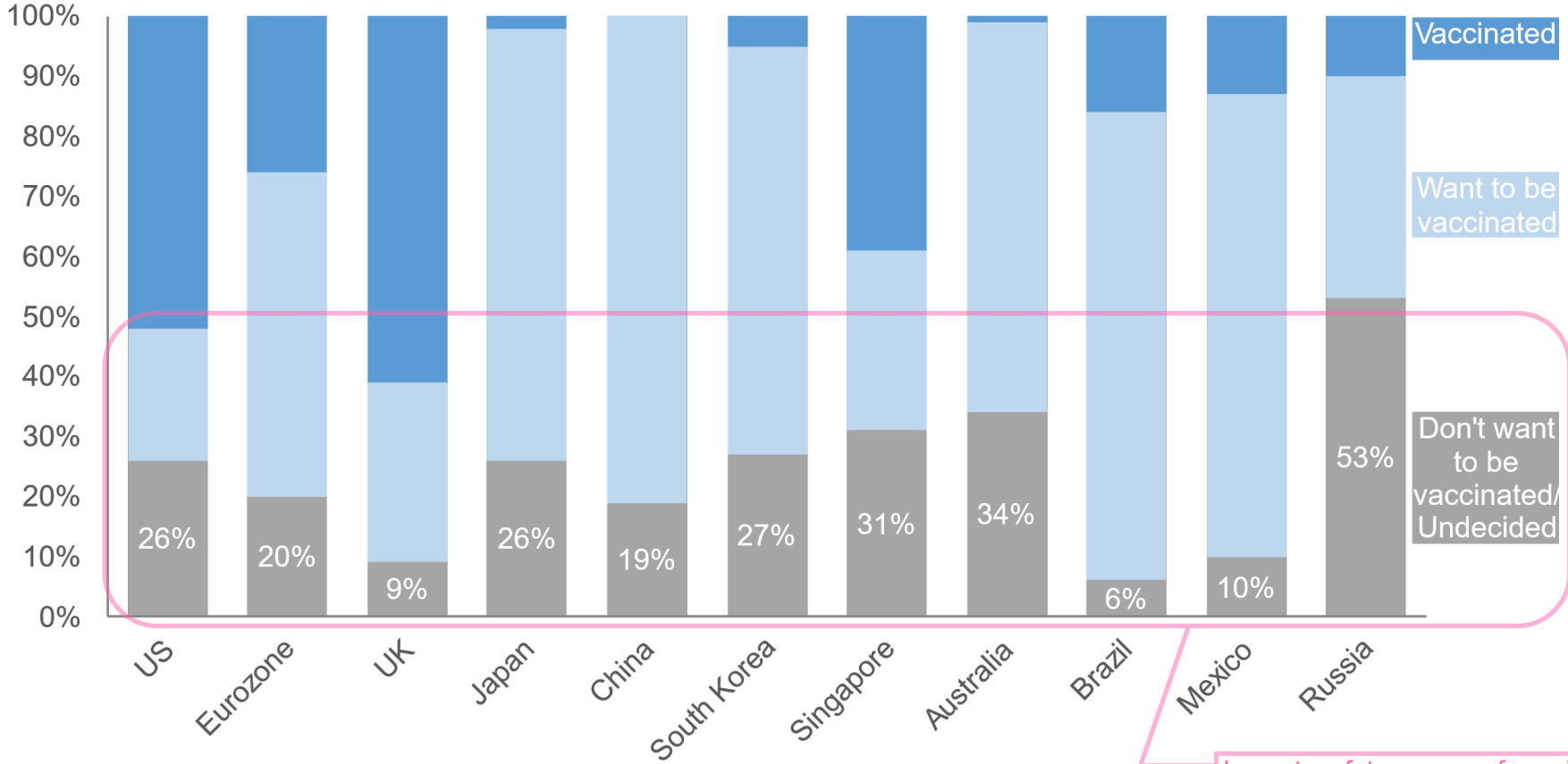
Source: Made by MHRT based upon media reports



# Vaccine assumptions (2): Slowdown timing of vaccine rollout differs according to people's willingness for vaccination

- Willingness for vaccination varies widely by country. This will affect the timing of future slowdown in the pace of vaccination.
  - While willingness for vaccination is relatively high in Europe and South America, it is extremely low in Russia, making it difficult to roll out the vaccines there.

## Willingness for vaccination in major countries



Note: Only Singapore was covered by *Our World in Data*. No survey exists for Taiwan, ASEAN, and India.  
 Source: Made by MHRT based upon releases by Ipsos and the *Our World in Data*

Impact on future pace of vaccination  
 ⇒ Target achievement to be delayed

## Vaccine assumptions (3): Significant differences in vaccine effectiveness by country depending on the manufacturers of secured vaccines

- Vaccinations have shown high efficacy among developed countries and Russia that mainly secured Pfizer, Moderna, and Gamaleya vaccines.
  - In contrast, efficacy is relatively low in emerging countries, where the percentage of AstraZeneca and Sinovac is high in the vaccine portfolio.

### Effectiveness of vaccines in each country based on the manufacturers of the vaccines secured

|  |                 | Pfizer BioNTech | Moderna | J&J | AstraZeneca | Sinovac | Sinopharm | CanSino | Gamaleya | Bhārat | Weighted average of efficacy |
|--|-----------------|-----------------|---------|-----|-------------|---------|-----------|---------|----------|--------|------------------------------|
| Efficacy                                       |                 | 95%             | 94%     | 67% | 64%         | 51%     | 79%       | 65%     | 92%      | 81%    |                              |
| Percentage of vaccines secured in each country | US              | 38%             | 38%     | 25% |             |         |           |         |          |        | 88%                          |
|  | Eurozone        | 61%             | 12%     | 16% | 12%         |         |           |         |          |        | 87%                          |
|  | UK              | 36%             | 6%      | 22% | 36%         |         |           |         |          |        | 78%                          |
|  | Japan           | 80%             | 20%     |     |             |         |           |         |          |        | 95%                          |
|  | China           | 7%              |         |     |             | 25%     | 64%       | 4%      |          |        | 73%                          |
|  | South Korea     | 48%             | 29%     | 9%  | 14%         |         |           |         |          |        | 88%                          |
|  | Taiwan          |                 |         |     | 100%        |         |           |         |          |        | 64%                          |
|  | Singapore       | 98%             |         |     |             | 2%      |           |         |          |        | 94%                          |
|  | Indonesia       |                 |         |     | 23%         | 57%     | 7%        | 14%     |          |        | 58%                          |
|  | Malaysia        | 35%             |         |     | 9%          | 38%     |           | 10%     | 9%       |        | 72%                          |
|  | The Philippines | 33%             | 11%     | 8%  | 14%         | 20%     |           |         | 8%       | 7%     | 78%                          |
|  | Thailand        | 19%             |         |     | 63%         | 17%     |           |         |          |        | 68%                          |
|  | Vietnam         |                 |         |     | 38%         |         |           |         | 62%      |        | 81%                          |
|  | India           |                 |         |     | 55%         |         |           |         | 12%      | 33%    | 73%                          |
|  | Australia       | 34%             | 21%     |     | 45%         |         |           |         |          |        | 81%                          |
|  | Brazil          | 41%             |         | 16% | 21%         | 20%     |           |         | 2%       |        | 75%                          |
|  | Mexico          | 14%             |         |     | 34%         | 8%      | 5%        | 29%     | 10%      |        | 71%                          |
| Russia   |                 |                 |         |     |             |         |           | 100%    |          | 92%    |                              |

Note: The above information is based on the amount secured as of the end of June, and the amount may have been changed due to additional purchase or donations.

Japan has secured AstraZeneca vaccines but has not used them. The percentage of the company's vaccine is therefore calculated as zero.

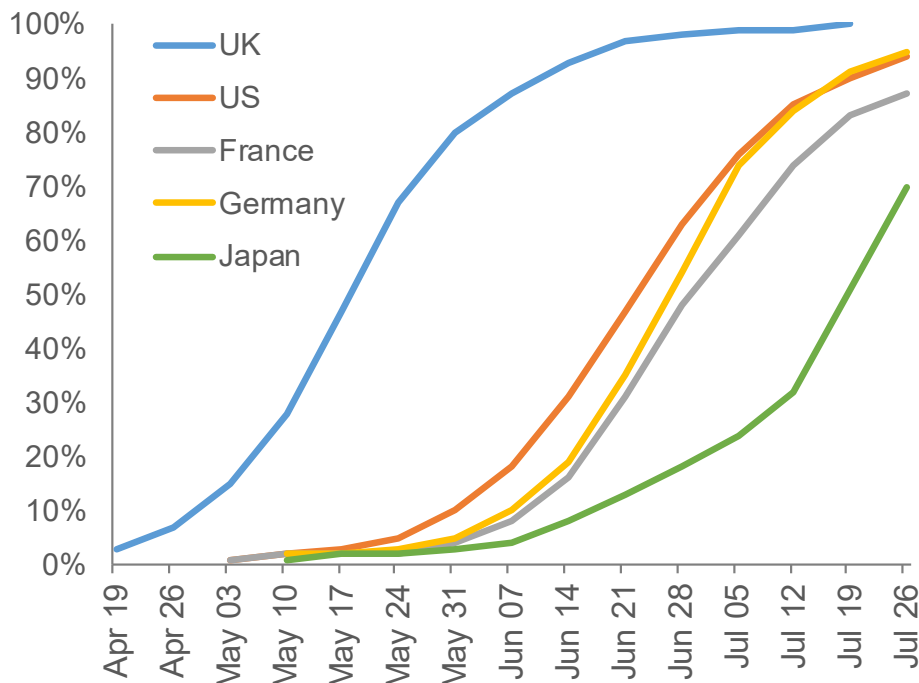
The efficacy is based on clinical trial results at the time of approval and does not consider possible decline in efficacy for new variants.

Source: Made by MHRT based upon releases by WHO, Duke University, media reports, etc.

## Level of infectivity (4): spread of the Delta variant

- The Delta mutant strains ("Delta variant(s)") are rapidly replacing the original strain in major countries.
  - In Europe, almost all cases are now caused by the Delta variant. In Japan, 70% of new infections are now Delta variants.
- The level of infectivity is expected to be higher in countries where the Delta variant is widespread.
  - According to UK studies, the level of infectivity of the Delta variant is 2.5 times higher than that of the original strain. (The 95% confidence interval needs to be considered with a sufficient buffer.)
  - The epidemiologic model assumes a 2.1 times infectivity compared to the original strain.

### Ratio of Delta variants in major countries

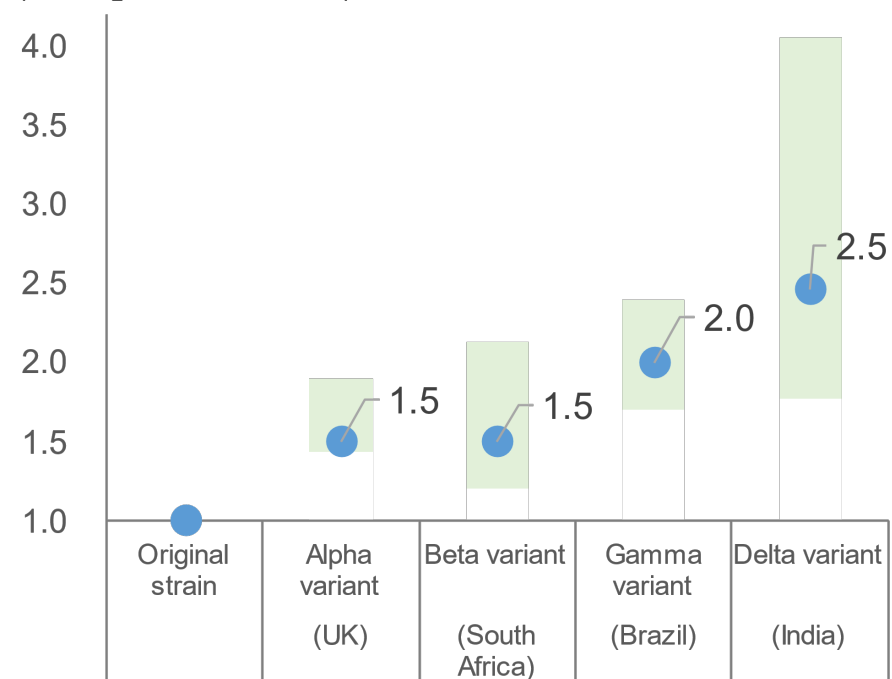


Note: The ratio of Delta variant to the number of cases subject to genomic analysis and variant screening tests; note that the results may be biased, as this is not a random sampling (especially for the most-recent values).

Source: Made by MHRT based upon releases by CoVariants.org

### Level of infectivity of variants (compared to the original strain)

(vs. original strain, times)

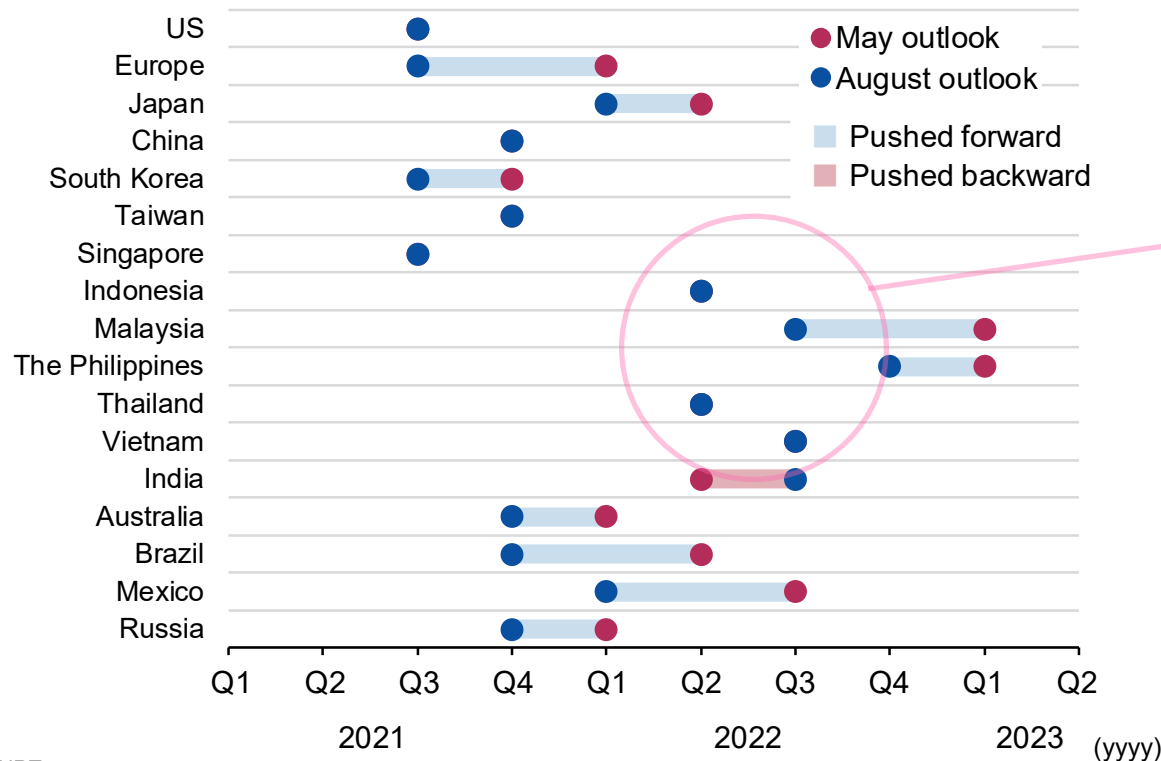


Note: The band graphs show the upper and lower limits of the 95% confidence interval. Source: Made by MHRT based upon Public Health England, Davies et al. (2021), Pearson et al. (2021), Faria et al. (2021)

# Earlier-than-expected lifting of economic activity restrictions assumed for many countries, due to the acceleration of vaccine rollouts

- The acceleration of the vaccine rollouts is expected to expedite the lifting of restrictions on economic activities by one or two quarters in many countries.
  - Developed countries and some emerging countries are expected to lift restrictions on economic activities in FY2021 (by the end of 2021 or early 2022).
  - On the other hand, India's outlook on the lifting of restrictions has been pushed back by one quarter due to a deterioration in the assumption for the level of infectivity. In Vietnam and Indonesia, the progress of vaccine rollouts will be offset by worsening spread of infections. The lifting of restrictions in major emerging countries in Asia is expected to be delayed.

## Timing of lifting of restrictions on economic activities in the forecast countries



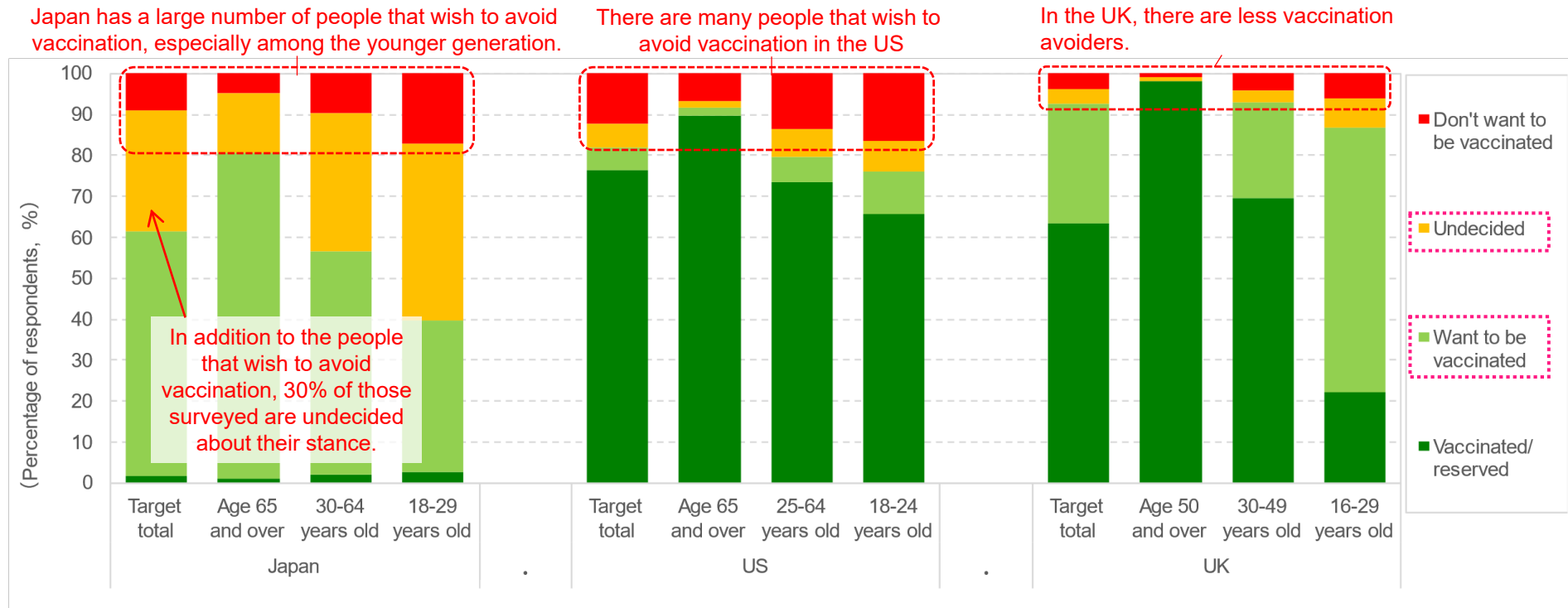
The lifting of restrictions in major emerging countries in Asia will take place in the Apr-Jun quarter 2022 or later, which is later than in other countries (i.e., the effects from Covid-19 pandemic will persist).

Source: Made by MHRT

# Lingering risks (1): vaccine rollouts face vaccination avoidance

- In the US, where vaccination is progressing ahead of other countries, the pace of rollout slowed down after the vaccination rate exceeded 40%.
  - Japan may also see a decline in the number of new vaccine applicants in early autumn due to those who wish to avoid vaccination or who are undecided.
  - Delays in vaccine rollout will have negative impact on the normalization of the economy.

## Willingness for vaccination in Japan, the US, and the UK



Note: The survey was conducted from April 23 to May 6 in Japan, May 12 to 24 in the US and April 28 to May 23 in the UK  
 Source: Made by MHRT based upon Sekizawa et al. (2021) and releases by the US Department of Commerce Census Bureau and the UK Office for National Statistics

## Lingering risks (2): decline of effectiveness of vaccines after emergence of new variants

- Epsilon, Zeta, Theta, Iota, and other new variants have already appeared following the Delta variant.
  - Some could affect the efficacy of the existing vaccines, and uncertainty remains, including that for unknown variants.

### Major variants identified and their characteristics

| WHO classification | Name (named by WHO) | Country of first detection | Time of first detection | Infectivity   | Severity   | Vaccine efficacy   |
|--------------------|---------------------|----------------------------|-------------------------|---|--|--|
| VOC                | Alpha               | UK                         | Sep. 2020               | 1.5-1.7 times the original strain (estimated as 1.3 times domestically) | 1.4 times the original strain                        | Pfizer: 97.0%<br>AstraZeneca: 70.4%<br>Novavax: 85.6%                            |
|                    | Beta                | South Africa               | May 2020                | About 1.5 times the original strain                                     | Possibility of high risk of death on hospitalization | Pfizer: 75.0%<br>AstraZeneca: Efficacy not shown<br>Novavax: 51.0%<br>J&J: 52.0% |
|                    | Gamma               | Brazil                     | Nov. 2020               | 1.4-2.2 times the non-Gamma strain/variant                              | Possibility of high risk of hospitalization          | Pfizer: 61.0% (after the first dose)<br>Sinovac: 41.6% (tentative)               |
|                    | Delta               | India                      | Nov. 2020               | 1.8-2.2 times the original strain<br>1.4-1.6 times the alpha variant    | Possibility of high risk of hospitalization          | Pfizer: 87.9%<br>AstraZeneca: 59.8%  |
| VOI                | Eta                 | Multiple countries         | Dec. 2020               |   |  |  |
|                    | Iota                | US                         | Nov. 2020               |   |  |  |
|                    | Kappa               | India                      | Oct. 2020               |   |  |  |
|                    | Lambda              | Peru                       | Dec. 2020               | Same level as the Delta variant   |  | Pfizer and Moderna vaccines are effective  |
| VOI excluded       | Epsilon             | US                         | Mar. 2020               | 1.2 times the original strain   |  |  |
|                    | Zeta                | Brazil                     | Apr. 2020               |   |  |  |
|                    | Theta               | The Philippines            | Jan. 2021               |   |  |  |
| —                  | —                   | Japan                      |                         |   |  |  |

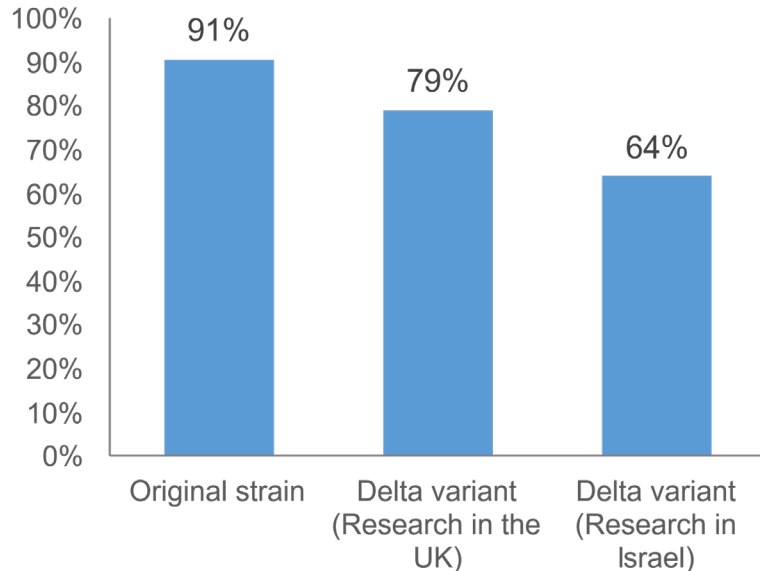
Note: Variants of Concern (VOC) refers to variants that could have different properties, such as increased infectivity or severity, or weakened vaccine efficacy. Variants of Interest (VOI) refers to variants that are suggested to have a possibility to affect infectivity, severity, vaccine efficacy, etc.

Source: Made by MHRT based upon releases by National Institute of Infectious Diseases, Japan and WHO

# Reference: studies show Delta variant could reduce effectiveness of vaccines in preventing infection

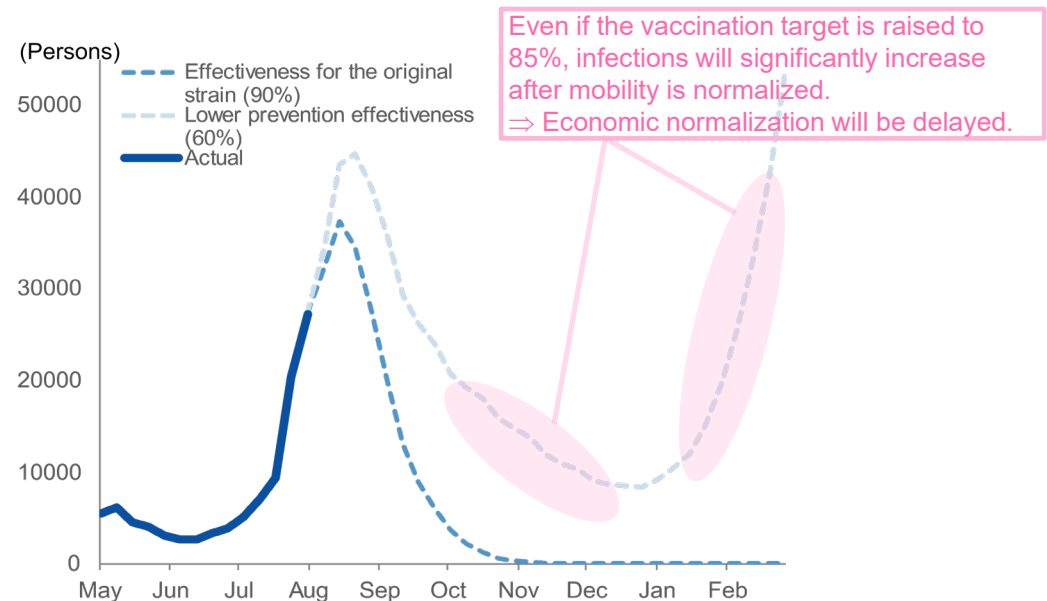
- Studies suggest that vaccines have become less effective in preventing infections in the UK and Israel where breakthrough infections have spread.
  - While vaccines continue to be highly effective in preventing development and severity of the disease, their effectiveness in preventing infection itself has declined from over 90% against the original strain to 79% in the UK and 64% in Israel for new variants. The decline of efficacy in preventing infection is expected to affect targeted vaccine rollouts and the timing of lifting mobility restrictions.
  - If the infection prevention effect is reduced to 60%, even if the vaccine rollout rate is raised to 85% (from the previous 70%), the strength to increase infection will exceed the vaccination effect according to the currently assumed mobility recovery path.
  - Even if the effect of preventing serious cases is considered, the number of hospitalized and seriously ill patients is expected to increase, and the timing of normalization of the economy will inevitably be delayed.

## Anti-infection effect of mRNA vaccines against the Delta variant



Note: The values for the original strain are the average of the results of each survey in the US, the UK, and Israel  
Source: Made by MHRT based upon releases by CDC

## Simulation of infection in Tokyo (estimate as of Aug 13)

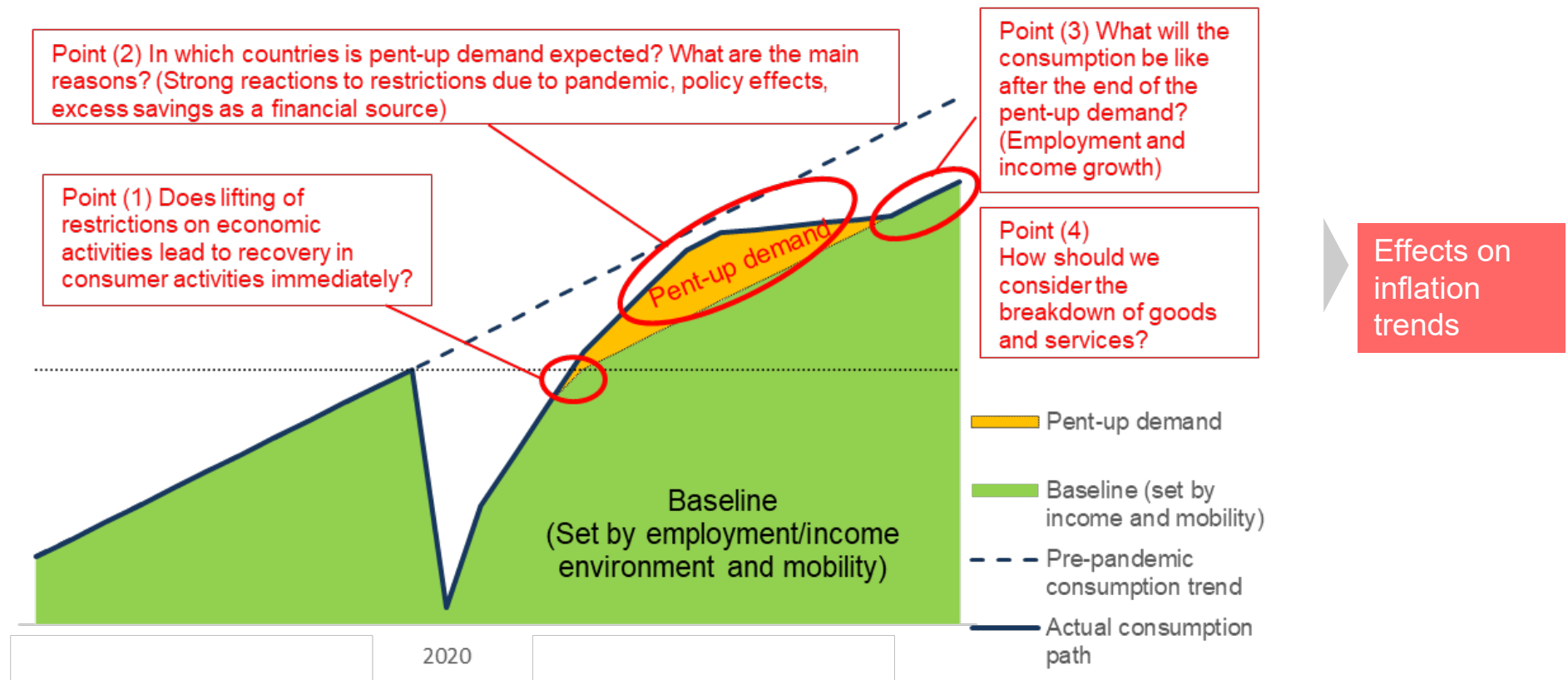


Note: Results are through the week starting on August 1. Level of infectivity of Delta variant is assumed to be 1.4 times that of alpha variant.  
Source: Made by MHRT based upon <https://covid-2019.live> and releases by the Ministry of Health, Labour and Welfare

## Key point (2): outlook on future consumption (four key points which need to be considered)

- The key points which need to be considered in the forecast of future consumption along with the progress of vaccine rollouts and transition to the post-pandemic period are: (1) the timing of recovery of consumption activities (time lag with the lifting of restrictions on economic activities), (2) emergence or absence of pent-up demand, (3) growth of consumption after the end of pent-up demand, and (4) breakdown of goods and services consumption.

### Four points to consider in future personal consumption (showing an overview of personal consumption paths)



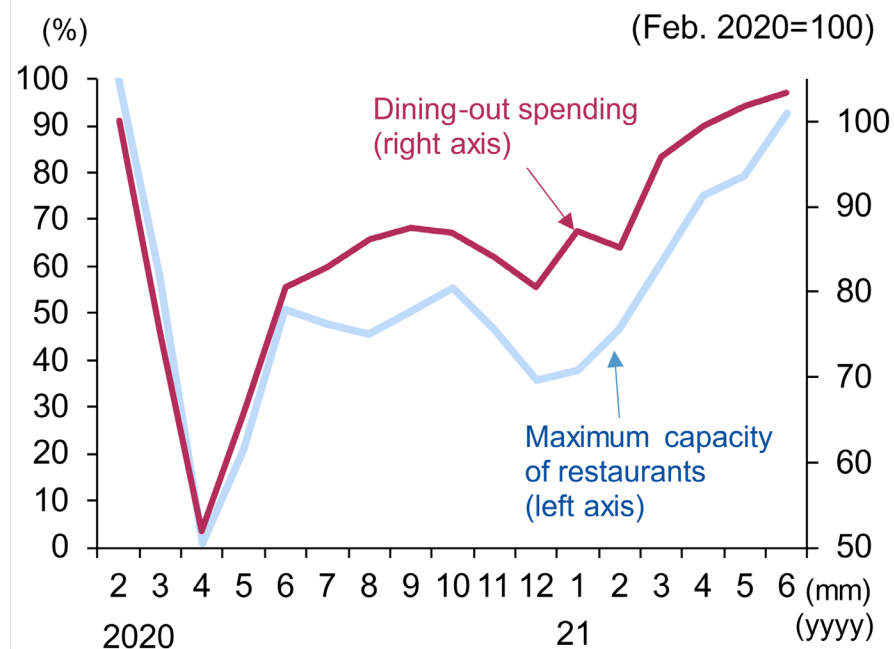
Source: Made by MHRT



# (1) Timing of recovery in consumption activities: consumption will recover shortly after the lifting of restrictions on economic activities

- In the US, restrictions on restaurants out have been mostly lifted, and spending on dining out has already recovered to pre-pandemic levels.
- Japan, where consumer behavior is thought to be more cautious than in the US, is also showing signs of anticipating the lifting of restrictions.
  - Before the state of emergency was declared in July, many sources reported that summer travel bookings were strong, especially among the elderly that had finished their second dose of vaccination.
    - Even in Japan, a large time lag is not expected between the lifting of restrictions and the recovery of consumer activities.

## Restaurant capacity limits and spending on dining out in the US



Source: Made by MHRT based upon releases by individual states in the US and by the US Department of Commerce

## Japan: summer travel reservations (as of late June)

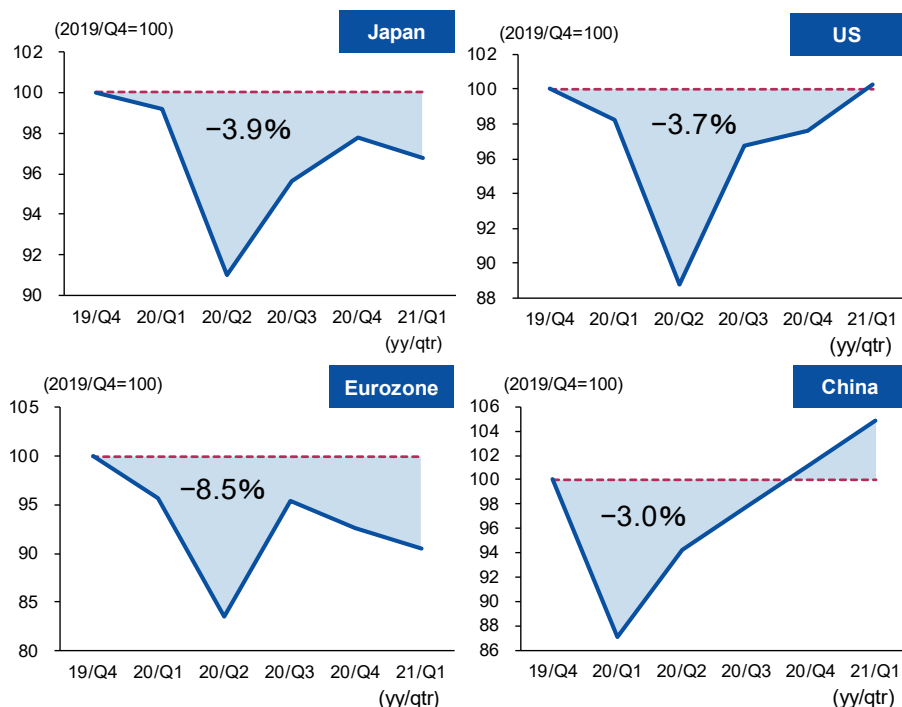
|                     | Summer travel reservation trend & status   |
|---------------------|--|
| <b>ANA</b>          | Reservations for domestic flights for four consecutive holidays in July <b>doubled from the previous year</b> , and those on vacations in the middle of August <b>doubled or tripled</b> from the previous year. <b>Reservations are increasing mainly among the elderly that have completed vaccinations.</b> |
| <b>JR East</b>      | The sale of <b>reserved seats for special trains</b> from July 1 to 15 had been suspended, but a <b>decision was made to operate some of them.</b>   |
| <b>HIS</b>          | Inquiries about overseas travel are increasing, <b>especially from the elderly.</b>  |
| <b>Prince Hotel</b> | Reservation rates for some hotels in Karuizawa in August are <b>almost the same as the pre-pandemic level.</b>   |
| <b>JTB</b>          | As of June 20, the amount of reservations for travel in July was <b>up 45% from the previous year.</b>   |
| <b>Club Tourism</b> | Released tours that only accept the elderly; in the last month (around June), the <b>percentage of people aged 65 and over</b> that made reservations <b>increased by about 10 percentage points compared to the pre-pandemic level.</b>   |

Source: Made by MHRT based upon media reports

## (2) Emergence of pent-up demand: high expectations in developed countries (Japan boosted by government policy measures); tepid expectations in China

- Reduced consumption, mainly in services, has been prolonged in developed countries, as people refrain from going out due to restrictions on social activities and concerns about infections.
  - Consumption was constrained by about 4% on an annualized basis. The decline has been particularly large in the eurozone, where strict activity restrictions were imposed.
  - In Japan, the “Go To” campaign (tourism and food service promotion campaign) is expected to resume after the lifting of restrictions on economic activities. In such case, we expect to see pent-up demand of about JPY 3 trillion.
  - In China, activity restrictions ended early. Considering that some of the pent-up demand has already emerged, its positive impact is limited.

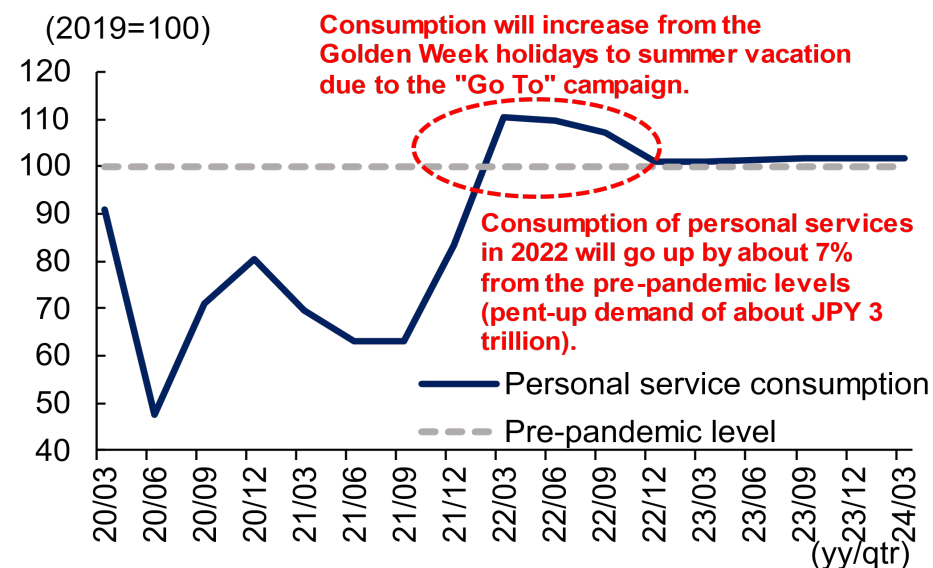
### Quarterly path of consumption (decline in Japan, the US, eurozone, and China)



Note: The decline is the average of the decline in each period (Jan-Mar quarter of 2020 to Jan-Mar quarter of 2021) compared to the Oct-Dec quarter of 2019.

Source: Made by MHRT based upon the statistics of relevant countries and regions

### Consumption of personal services in Japan

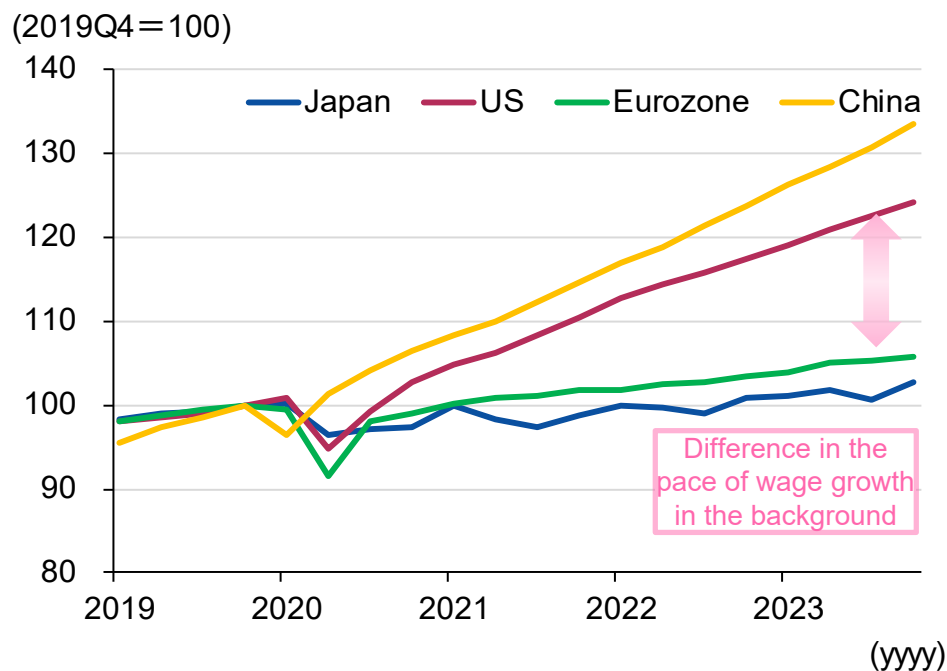


Source: Made by MHRT based upon Cabinet Office, SNA (National Accounts of Japan), JCB & Nowcast, "JCB consumption NOW," etc.

### (3) Growth after the end of pent-up demand: consumption to return to a pace consistent with the growth of labor income

- The **basic trend of consumption** after normalization and the end of pent-up demand will **depend on labor income**.
  - Employment will continue to recover in all major economies, however, **the degree of recovery in labor compensation is expected to be stronger in the US and China and weaker in Japan and the eurozone, reflecting differences in the pace of wage growth.**
  - Consequently, the pace of consumption growth is likely to be stronger in the US and China and weaker in Japan and the Eurozone.

#### Path of labor compensation (Japan, US, Eurozone, and China)



Note: For China, the path of disposable income is suggested.  
Source: Made by MHRT based upon the statistics of relevant countries and regions

#### Employment and wage outlook (key points)

| Country         | Employment and wage outlook (key points)   |
|-----------------|--|
| <b>US</b>       | <ul style="list-style-type: none"> <li>• Higher wages are expected due to a labor shortage in addition to a steady recovery in employment; labor income will continue to improve.</li> </ul>   |
| <b>Eurozone</b> | <ul style="list-style-type: none"> <li>• The labor shortage will be limited due to the employment retained during the Covid-19 crisis. On the other hand, the speed of wage adjustment will be slow, and wages are likely to remain at low levels, reflecting the result of the pandemic until the second half of 2022.</li> </ul> |
| <b>China</b>    | <ul style="list-style-type: none"> <li>• Recent wage growth is already approaching pre-pandemic levels; employment and wages are expected to remain strong.</li> </ul>   |
| <b>Japan</b>    | <ul style="list-style-type: none"> <li>• Employment will grow moderately, but upward pressure on wages will be limited due to job retention (wage growth has traditionally been sluggish). Growth in labor compensation is expected to be moderate.</li> </ul>   |

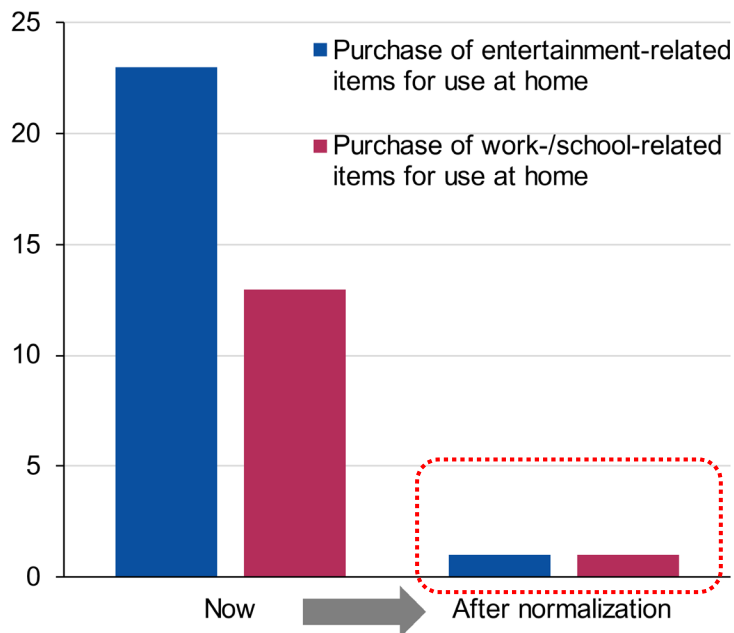
Source: Made by MHRT

## (4) Stay-at-home consumption to pause. In contrast, service consumption that was restrained thus far will serve as the driver

- Sales of goods are strong in the US, but consumers are planning to reduce spending on stay-at-home items.
  - As people go out more often and as office work and face-to-face classes resume, stay-at-home demand will slow down.
- Many of those surveyed in the US, as well as in Japan and Germany, said that they would increase spending on services after restrictions are lifted.
  - On the top of the list of activities people want to do after the pandemic are dining out, travel, and events-related activities.

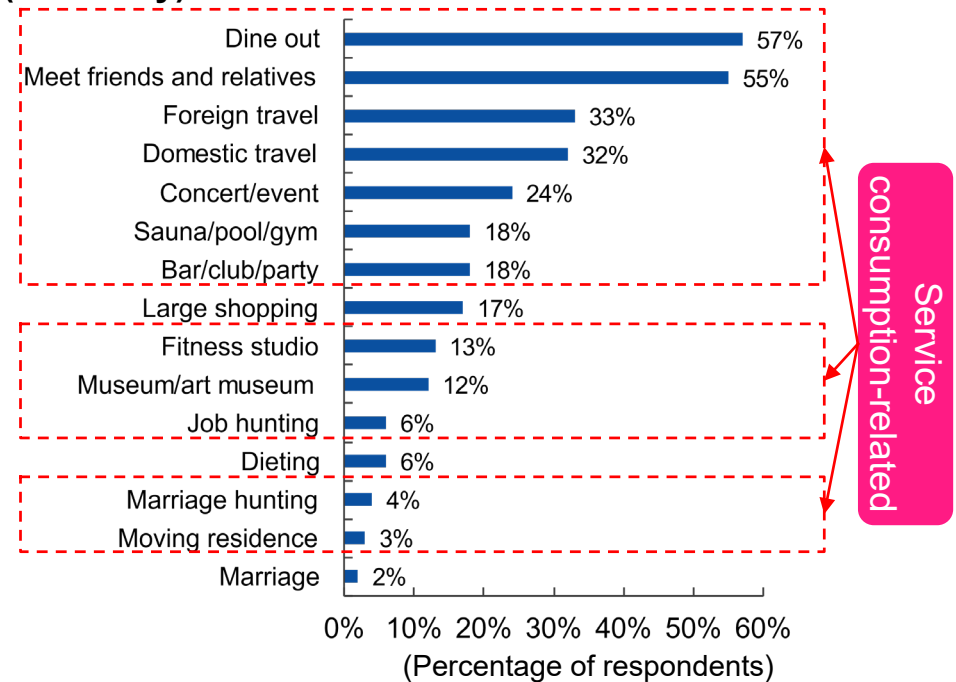
### Purchase intentions for stay-at-home products (US)

("Increase" - "Decrease," %pt)



Note: The questionnaire asked whether there are/will be an increase or a decrease, for "now" and "after normalization," compared to the pre-pandemic period.  
Source: Made by MHRT based upon releases by Numerator

### Top activities consumers want to do after the pandemic (Germany)



Note: The questionnaire asked people aged 18 and older (2,036) in Germany what they would like to do first after the pandemic (multiple answers); conducted January 25-27, 2021.  
Source: Made by MHRT based upon releases by YouGov

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## **2. Economic conditions of the countries**

## US: +6.2% projected for 2021 and +4.2% for 2022

- Real GDP growth in 2021 is projected to register +6.2% and +4.2% for 2022. (Revised from May by +0.2% pt for 2021 and +0.2% pt for 2022)
- For 2021, the upward revision is mainly due to stronger-than-expected goods consumption, while the downward revision is due to delays in recovery of industrial production and housing construction.
- For 2022, the upward revision is mainly due to recovery in industrial production, etc., while downward revision is due to the changes in the assumption of the Biden Plan.
  - As for the Biden Plan, it is likely that (1) the total Plan will be smaller than previously assumed, and (2) the economic effect in 2022 will be smaller than previously expected. Both of these are reflected in our latest outlook.

### Outlook on the US economy

|                                |                               | 2019             | 2020 | 2021      | 2022 | 2020    |         |         |         | 2021    |         |         |         | 2022    |         |         |         |     |
|--------------------------------|-------------------------------|------------------|------|-----------|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-----|
|                                |                               | CY               |      | (Outlook) |      | Jan-Mar | Apr-Jun | Jul-Sep | Oct-Dec | Jan-Mar | Apr-Jun | Jul-Sep | Oct-Dec | Jan-Mar | Apr-Jun | Jul-Sep | Oct-Dec |     |
| GDP (real)                     | Q-o-q % ch. p.a.              | 2.3              | -3.4 | 6.2       | 4.2  | -5.1    | -31.2   | 33.8    | 4.5     | 6.3     | 6.5     | 6.3     | 7.0     | 4.2     | 2.4     | 1.8     | 1.1     |     |
| Personal consumption           | Q-o-q % ch. p.a.              | 2.2              | -3.8 | 8.5       | 4.1  | -6.9    | -33     | 41.4    | 3.4     | 11.4    | 11.8    | 4.9     | 7.0     | 4.0     | 2.0     | 1.0     | -0.4    |     |
| Housing investment             | Q-o-q % ch. p.a.              | -0.9             | 6.8  | 10.9      | 3.7  | 20.4    | -31     | 59.9    | 34.4    | 13.3    | -9.8    | 0.9     | 3.1     | 5.3     | 7.3     | 6.2     | 3.3     |     |
| Capital investment             | Q-o-q % ch. p.a.              | 4.3              | -5.3 | 7.8       | 4.6  | -8.1    | -30     | 18.7    | 12.5    | 12.9    | 8.0     | 5.8     | 4.8     | 5.2     | 3.4     | 3.3     | 2.7     |     |
| Inventory investment           | Q-o-q contribution p.a., % pt | 0.1              | -0.5 | 0.1       | 0.9  | -0.5    | -4.0    | 6.8     | 1.1     | -2.6    | -1.1    | 2.1     | 1.6     | 1.2     | 0.3     | 0.2     | 0.2     |     |
| Government consumption         | Q-o-q % ch. p.a.              | 2.2              | 2.5  | 0.9       | 0.8  | 3.7     | 3.9     | -2.1    | -0.5    | 4.2     | -1.5    | 1.6     | 1.9     | 0.0     | 0.5     | 1.0     | 2.5     |     |
| Net exports                    | Q-o-q contribution p.a., % pt | -0.2             | -0.3 | -1.4      | -0.3 | -0.1    | 1.5     | -3.3    | -1.7    | -1.6    | -0.4    | -0.3    | -0.7    | -0.7    | -0.2    | -0.0    | 0.3     |     |
|                                | Exports                       | Q-o-q % ch. p.a. | -0.1 | -14       | 5.3  | 9.0     | -16.3   | -60     | 54.5    | 22.5    | -2.9    | 6.0     | 9.3     | 8.8     | 9.0     | 9.6     | 9.6     | 8.3 |
|                                | Imports                       | Q-o-q % ch. p.a. | 1.2  | -9        | 14.3 | 9.3     | -13     | -53     | 89.2    | 31.3    | 9.3     | 7.8     | 8.6     | 11.2    | 11.4    | 8.7     | 7.0     | 4.1 |
| Unemployment rate              | %                             | 3.7              | 8.1  | 5.4       | 4.0  | 3.8     | 13.1    | 8.8     | 6.8     | 6.2     | 5.9     | 5.1     | 4.4     | 4.1     | 4.0     | 3.9     | 3.9     |     |
| PCE deflator                   | Y-o-y % ch.                   | 1.5              | 1.2  | 3.0       | 1.7  | 1.7     | 0.6     | 1.2     | 1.2     | 1.8     | 3.6     | 3.4     | 3.5     | 2.8     | 1.7     | 1.2     | 1.2     |     |
| Core excluding food and energy | Y-o-y % ch.                   | 1.7              | 1.4  | 2.9       | 1.9  | 1.8     | 1.0     | 1.4     | 1.4     | 1.6     | 3.4     | 3.3     | 3.4     | 3.2     | 1.9     | 1.4     | 1.4     |     |

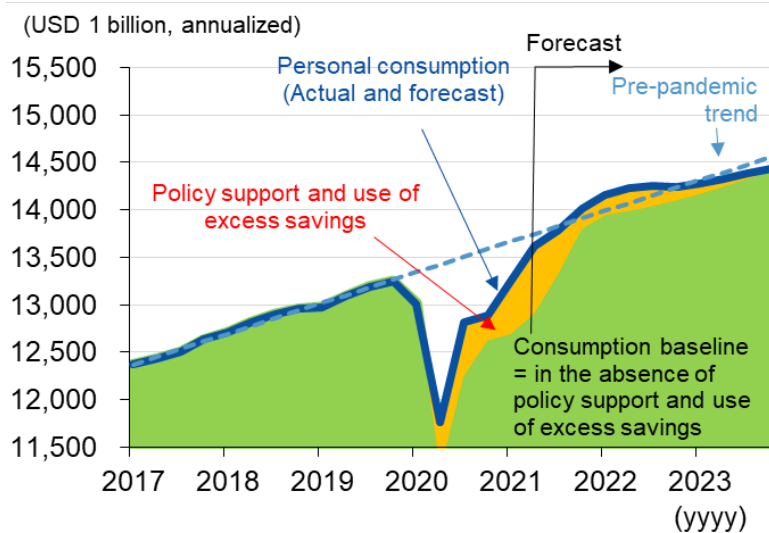
Note: The shaded areas are forecasts by MHRT

Source: Made by MHRT based upon releases by the US Department of Commerce and the US Department of Labor

# US: consumption expected to return to cruise mode after the positive effects of policy support and splurge consumption fades

- Personal consumption is currently strong. In addition to the improvement of labor income, the easing of restrictions and spread of teleworking lifestyles is serving as tailwinds upon consumption. The policy measures also have a significant impact.
- Personal consumption is expected to recover to the pre-pandemic trend, partly due to splurge consumption (i.e., use of savings). However, after the boost from splurge consumption fades, consumption will fall below the pre-pandemic trend and will not return to that trend until 2024
  - Looking closer, goods consumption is expected to peak out, while service consumption will continue to recover. (The driver for consumption will shift from goods to services.)
    - Given the long hours spent at home, goods consumption at the moment is stronger than expected. This should peak out some time in or after the Oct-Dec quarter.
    - Service consumption will return to the pre-pandemic level in the Oct-Dec quarter. However, there will be disparities in the recovery rate among services, reflecting consumer preferences.

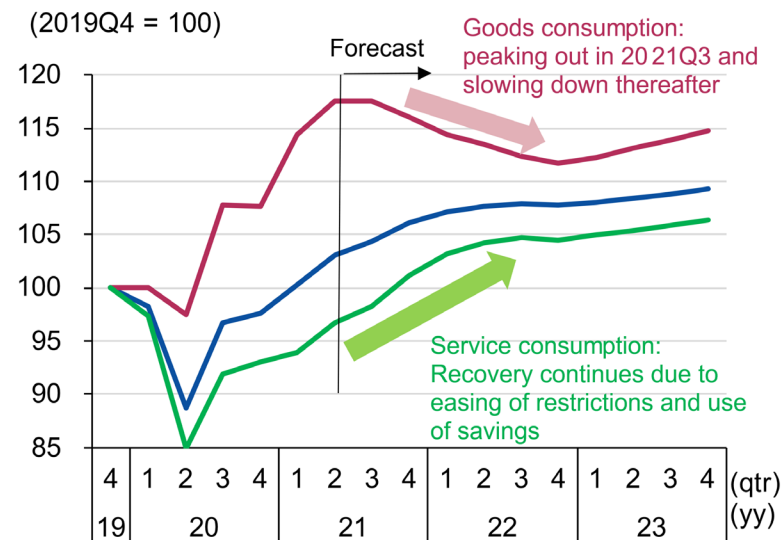
## US: outlook & baseline on personal consumption



Note: The consumption baseline is estimated based on a consumption function consisting of disposable income, financial assets, and mobility in commercial facility. As for the Jul-Sep quarter of 2021 onward, the calculation is made based on the assumption that income and assets will continue to increase at the current pace and that commercial facility mobility will normalize as assumed by MHRT.

Source: Made by MHRT based upon releases by the US Department of Commerce and Google

## US: outlook on personal consumption by goods and services



Note: Forecast values for the Jul-Sep quarter of 2021 onward  
Source: Made by MHRT based upon releases by the US Department of Commerce

# Eurozone: consumption driven by vaccine rollouts in 2021, supply constraints expected to be resolved in mid-2022

- Real GDP growth in the eurozone is expected to register +4.6% y-o-y and +4.7% y-o-y in 2021 and 2022, respectively. GDP will return to the pre-pandemic level in the Jan-Mar quarter of 2022.
  - In 2021, the recovery of the service industry reflecting the progress of vaccine rollouts will serve as the driver of economic growth. On the other hand, supply constraints will drag down the pace of recovery in the manufacturing sector, hampering the overall economic recovery.
  - In 2022, GDP will be pushed up mainly by an increase in consumption due to the use of savings made during the lockdown period and increase in exports due to the resolution of supply constraints.

## Outlook on the eurozone economy

|                                 |                          | 2019 | 2020 | 2021      | 2022 | 2020    |         |         |         | 2021    |         |         |         | 2022    |         |         |         |
|---------------------------------|--------------------------|------|------|-----------|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|                                 |                          | CY   |      | (Outlook) |      | Jan-Mar | Apr-Jun | Jul-Sep | Oct-Dec | Jan-Mar | Apr-Jun | Jul-Sep | Oct-Dec | Jan-Mar | Apr-Jun | Jul-Sep | Oct-Dec |
| GDP (real)                      | Q-o-q % ch.              | 1.4  | -6.4 | 4.6       | 4.7  | -3.6    | -11.4   | 12.4    | -0.6    | -0.3    | 2.0     | 2.1     | 0.4     | 1.2     | 1.0     | 1.1     | 1.0     |
| Domestic demand                 | Q-o-q % ch.              | 2.2  | -6.3 | 3.5       | 3.9  | -3.3    | -12.0   | 10.2    | -0.4    | -0.6    | 2.4     | 2.0     | 0.3     | 1.1     | 0.7     | 0.9     | -0.3    |
| Personal consumption            | Q-o-q % ch.              | 1.3  | -7.9 | 3.2       | 4.6  | -4.4    | -12.6   | 14.1    | -2.9    | -2.2    | 4.1     | 2.9     | 0.1     | 1.9     | 0.6     | 0.5     | -2.1    |
| Gross fixed capital formation   | Q-o-q % ch.              | 6.7  | -7.4 | 3.8       | 3.7  | -4.6    | -19.3   | 13.0    | 2.6     | 0.1     | 1.4     | 0.3     | 1.0     | 0.2     | 1.2     | 1.7     | 1.7     |
| Government consumption          | Q-o-q % ch.              | 1.7  | 1.4  | 3.4       | 1.8  | -0.0    | -2.6    | 5.3     | 0.5     | -0.2    | 0.8     | 1.2     | 0.2     | 0.4     | 0.4     | 0.2     | 0.0     |
| Inventory investment            | Q-o-q contribution, % pt | -0.3 | -0.5 | 0.1       | 0.1  | 0.3     | -0.2    | -1.5    | 0.5     | 0.6     | -0.3    | 0.1     | 0.0     | -0.0    | 0.0     | 0.2     | 0.4     |
| External demand                 | Q-o-q contribution, % pt | -0.8 | -0.3 | 1.2       | 0.9  | -0.4    | 0.5     | 2.5     | -0.3    | 0.3     | -0.3    | 0.2     | 0.1     | 0.1     | 0.3     | 0.3     | 1.3     |
| Exports                         | Q-o-q % ch.              | 2.4  | -9.0 | 8.2       | 9.1  | -3.6    | -18.5   | 16.6    | 3.9     | 0.6     | 1.2     | 1.8     | 1.5     | 2.1     | 2.6     | 3.3     | 3.1     |
| Imports                         | Q-o-q % ch.              | 4.4  | -8.9 | 6.0       | 7.9  | -2.9    | -20.0   | 11.6    | 4.9     | 0.1     | 1.9     | 1.6     | 1.3     | 2.0     | 2.1     | 3.1     | 0.8     |
| CPI                             | Y-o-y % ch.              | 1.2  | 0.3  | 1.8       | 1.2  | 1.1     | 0.2     | -0.0    | -0.3    | 1.1     | 1.8     | 2.1     | 2.3     | 1.3     | 1.3     | 1.0     | 1.2     |
| Core, excluding food and energy | Y-o-y % ch.              | 1.0  | 0.7  | 1.3       | 1.0  | 1.1     | 0.9     | 0.6     | 0.2     | 1.1     | 0.9     | 1.5     | 1.7     | 1.1     | 1.2     | 0.9     | 0.8     |

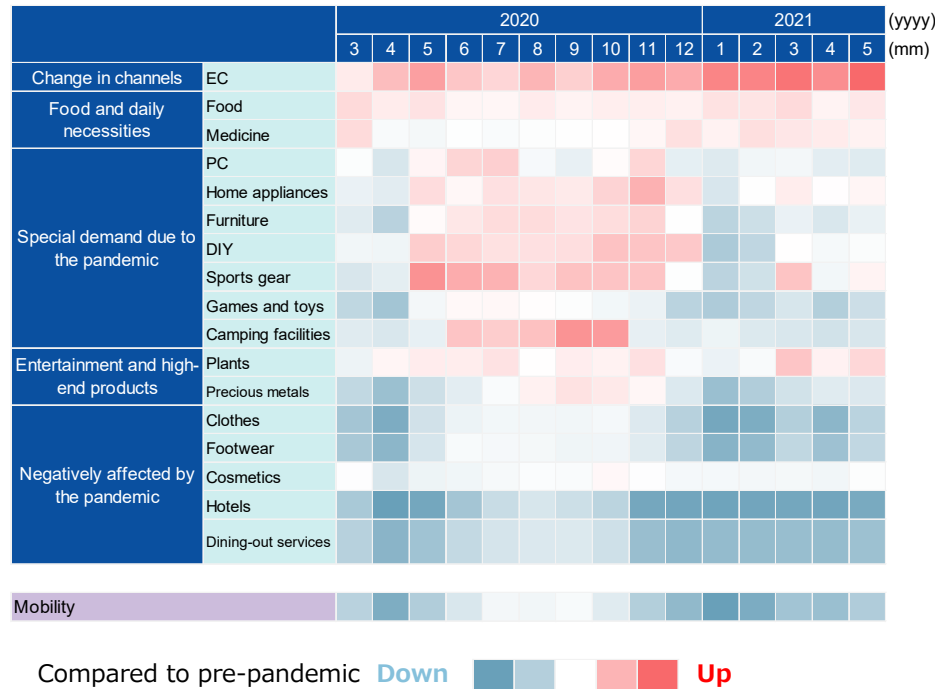
Note: The shaded areas are forecasts by MHRT.  
Source: Made by MHRT based upon releases by Eurostat



# Eurozone: special demand in goods consumption runs its course; service consumption will serve as the driver along with the resumption of economic activities

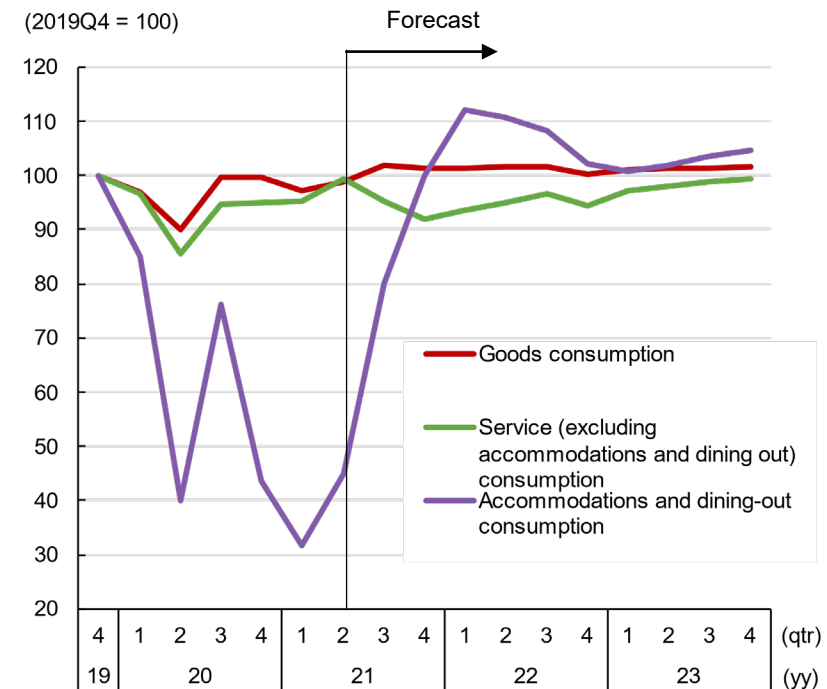
- Special demand for PCs and home appliances due to the Covid-19 pandemic has run its course. Goods consumption will level off at the pre-pandemic level from the second half of 2021.
- After the infection-prevention measures are lifted (Oct-Dec quarter of 2021), the odds are high that the consumption of services such as accommodations and dining out will serve as the driver of the recovery in consumption.
  - Savings have increased due to the loss of consumption opportunities thus far. Pent-up demand using such savings is expected to emerge in 2022.
  - On the other hand, wages have remained low since the pandemic. The sluggish growth of wages going forward will serve as a drag upon the recovery of consumption.

## Germany: sales of retail and service industries



Note: Indicates up/down from January 2020  
 Source: Made by MHRT based upon releases by the Federal Statistical Office (Destatis) of Germany and Google LLC

## Eurozone: outlook on goods and services consumption



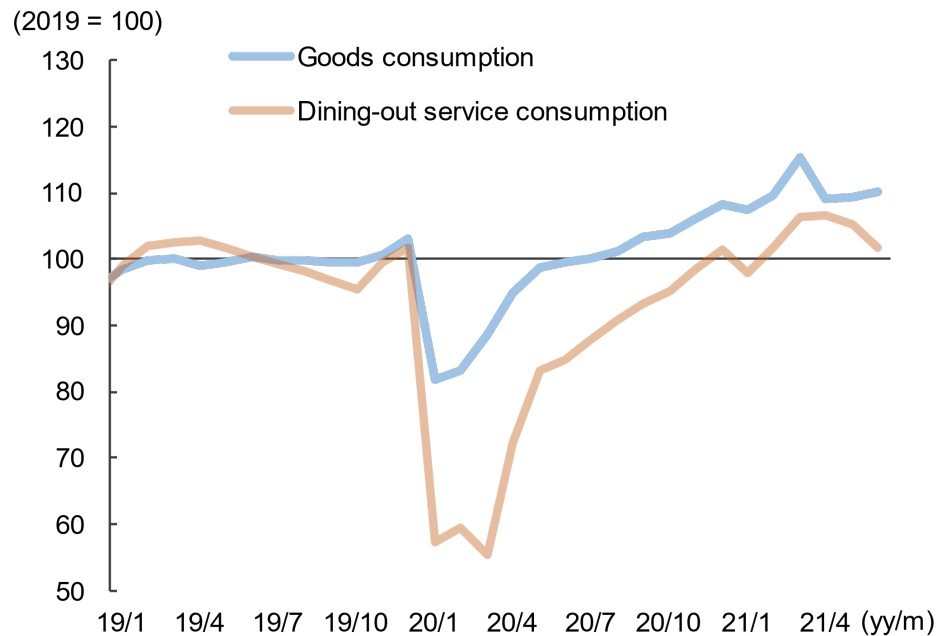
Note: Estimates and forecasts by MHRT  
 Source: Made by MHRT based upon releases by Eurostat



# China: consumption will follow a gradual recovery

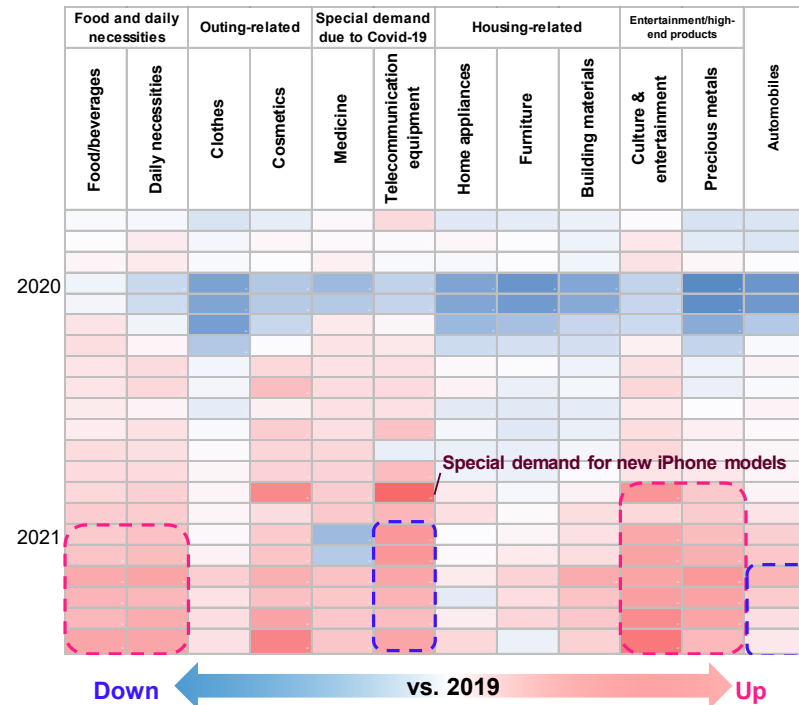
- Even though the recovery of goods consumption had been picking up since the second half of 2020, it is currently returning to the pre-pandemic trend.
  - Although demand for durable goods including pandemic-related items such as communications equipment has run its course, demand for non-durable goods such as daily necessities is following firm footing, indicating the strength of goods consumption. The expansion of high-end and entertainment products, which are considered as replacements for overseas travel, is also expected to accelerate goods consumption.
- Consumption of dining-out services is also expected to recover, although more slowly than goods consumption. Service consumption will also recover gradually along with the spread of vaccine rollouts by the end of 2021.
  - As the current state of infections is expected to subside, we expect that the impact on consumption will be limited.

## China: consumption of goods and dining-out services



Note: Seasonally-adjusted by MHRT  
 Source: Made by MHRT based upon releases by the National Bureau of Statistics of China and CEIC data

## China: retail sales (vs 2019)



Note: Seasonally-adjusted by MHRT  
 Source: Made by MHRT based upon releases by the National Bureau of Statistics of China and CEIC data

# Emerging economies: slow recovery of Asia's economic recovery given prolonged activity restrictions due to the resurgence of infections

- In 2021, the recovery of domestic demand among the ASEAN countries, where vaccine rollouts are slow, will be hampered by the persistence of activity restrictions.
  - Given relatively loose activity restrictions, the NIEs and commodity-exporting countries, benefiting from US economic recovery and external demand due to the rise of commodity prices, are expected to remain on a recovery track.
- In 2022, there will be a full-fledged resumption of economic activities along with the rollout of vaccines. The pace of economic growth among the ASEAN countries will pick up.
  - The pace of growth among the NIEs and commodity-exporting countries should slow down due to the impact of interest rate hikes and slowdown of goods exports stemming from a shift in demand to services.

## Outlook on the Asian and emerging economies

|                  | 2018 | 2019 | 2020 | 2021      | 2022 | 2020    |         |         |         | 2021    |         |
|------------------|------|------|------|-----------|------|---------|---------|---------|---------|---------|---------|
|                  |      |      |      | (Outlook) |      | Jan-Mar | Apr-Jun | Jul-Sep | Oct-Dec | Jan-Mar | Apr-Jun |
| <b>Asia</b>      | 6.3  | 5.2  | -0.9 | 7.6       | 5.2  | -       | -       | -       | -       | -       | -       |
| <b>China</b>     | 6.7  | 6.0  | 2.3  | 8.4       | 5.4  | -6.8    | 3.2     | 4.9     | 6.5     | 18.3    | 7.9     |
| <b>NIEs</b>      | 2.9  | 1.9  | -0.8 | 4.5       | 2.9  | -       | -       | -       | -       | -       | -       |
| South Korea      | 2.9  | 2.2  | -0.9 | 3.9       | 2.9  | 1.5     | -2.6    | -1.0    | -1.1    | 1.9     | 5.9     |
| Taiwan           | 2.8  | 3.0  | 3.1  | 4.9       | 2.7  | 2.5     | 0.3     | 4.3     | 5.1     | 8.9     | 7.5     |
| Hong Kong        | 2.8  | -1.7 | -6.1 | 5.0       | 3.3  | -9.1    | -9.0    | -3.6    | -2.8    | 8.0     | 7.5     |
| Singapore        | 3.5  | 1.3  | -5.4 | 5.5       | 3.0  | 0.0     | -13.3   | -5.8    | -2.4    | 1.5     | 14.7    |
| <b>ASEAN5</b>    | 5.3  | 4.8  | -3.5 | 4.1       | 5.4  | -       | -       | -       | -       | -       | -       |
| Indonesia        | 5.2  | 5.0  | -2.1 | 4.2       | 4.7  | 3.0     | -5.3    | -3.5    | -2.2    | -0.7    | 7.1     |
| Thailand         | 4.2  | 2.3  | -6.1 | 1.9       | 4.1  | -2.1    | -12.1   | -6.4    | -4.2    | -2.6    | -       |
| Malaysia         | 4.8  | 4.4  | -5.6 | 4.3       | 6.5  | 0.7     | -17.2   | -2.7    | -3.4    | -0.5    | -       |
| The Philippines  | 6.3  | 6.1  | -9.6 | 5.2       | 6.3  | -0.7    | -17.0   | -11.6   | -8.3    | -3.9    | 11.8    |
| Vietnam          | 7.1  | 7.0  | 2.9  | 5.3       | 7.4  | 3.7     | 0.4     | 2.7     | 4.5     | 4.7     | 6.6     |
| <b>India</b>     | 7.3  | 4.8  | -7.0 | 9.6       | 5.5  | 3.0     | -24.4   | -7.4    | 0.5     | 1.6     | -       |
| <b>Australia</b> | 2.9  | 1.9  | -2.5 | 4.3       | 3.1  | 1.4     | -6.4    | -3.9    | -0.8    | 1.1     | -       |
| <b>Brazil</b>    | 1.8  | 1.4  | -4.1 | 4.8       | 2.2  | -0.3    | -10.9   | -3.9    | -1.1    | 1.0     | -       |
| <b>Mexico</b>    | 2.2  | -0.2 | -8.3 | 5.6       | 2.6  | -1.3    | -18.7   | -8.7    | -4.5    | -3.6    | 19.7    |
| <b>Russia</b>    | 2.8  | 2.0  | -3.0 | 3.1       | 3.3  | 1.4     | -7.8    | -3.5    | -1.8    | -0.7    | -       |

Note: Real GDP growth rate (y-o-y, %); the shaded areas are forecasts. Average figures are calculated based on the GDP share (PPP) by the IMF.

Source: Made by MHRT based upon releases by the IMF and the statistics of relevant countries and regions

## (5) Japanese economy: vaccine rollout expected to boost the economy from the second half of FY2021

- According to the *First Preliminary Quarterly Estimates of GDP* (“1<sup>st</sup> QE”), the pace of GDP growth registered +1.3% q-o-q, p.a. in the Apr-Jun quarter of 2021, recording positive growth for the first time in two quarters. Exports and capital investment increased, supported by strong overseas economies (especially in the US and China) and the booming semiconductor market. Although personal consumption weakened after the third declaration of a state of emergency in April, it recovered in June following the easing/lifting of restrictions, resulting in positive personal consumption growth, on a quarterly basis.
- FY2021 GDP growth is projected to be +3.8%. For the Jul-Sep quarter, weak growth is expected due to a decline in personal consumption as a result of spread of the Delta variant and the issuance and extension of the fourth declaration of a state of emergency, as well as continued downward pressure from a reduction in motor vehicle production due to shortages in the supply of semiconductors for motor vehicles. On the other hand, given the vaccine rollout spreading to the working-age population in the second half of the fiscal year, we expect a dramatic recovery of service consumption, with excess savings serving as the source of spending.
- FY2022 GDP growth is projected to be +3.7%. In addition to the carry-over from the previous fiscal year, pent-up demand mainly for high-end service consumption is expected to occur in the Golden Week holidays and summer vacations, boosting the economy in the first half of the fiscal year. Exports and capital investment are also likely to remain strong supported by the recovery in overseas economies.
- The risk that the vaccines could be less effective for the Delta variant and the risk that vaccine rollout could become sluggish should be considered. These could also affect the timing of the lifting of activity restrictions.

# Japan: economic growth rate projected to register +3.8% in FY2021 and +3.7% in FY2022, indicating ongoing recovery

- Japan's economy is expected to grow 3.8% y-o-y in FY2021. Jul-Sep quarter growth is projected to be weak due to continued downward pressure from the spread of variant infections, the issuance and extension of the fourth state of emergency declaration, and reduction in the production of motor vehicles due to shortages in the supply of semiconductors for motor vehicles. However, vaccines will be rolled out to the working-age population in the second half of FY2021, which will accelerate recovery, especially in the consumption of services accompanying face-to-face interactions.
- The economy is expected to grow 3.7% y-o-y in FY2022. Pent-up demand mainly for high-end service consumption is expected to occur during the Golden Week holidays and summer vacations, boosting the economy in the first half of the fiscal year. Exports and capital investment are also likely to remain strong supported by recovery in overseas economies.

## Outlook on the Japanese economy

|                          |                         | 2020   | 2021      | 2022      | 2021    |         |         |         | 2022    |         |         |         | 2023    |
|--------------------------|-------------------------|--------|-----------|-----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|                          |                         | FY     | (Outlook) | (Outlook) | Jan-Mar | Apr-Jun | Jul-Sep | Oct-Dec | Jan-Mar | Apr-Jun | Jul-Sep | Oct-Dec | Jan-Mar |
| GDP (real)               | Q-o-q % ch              | -4.5   | 3.8       | 3.7       | -0.9    | 0.3     | 0.5     | 1.2     | 2.1     | 0.8     | 0.6     | -0.1    | 0.4     |
|                          | Q-o-q % ch p.a.         | —      | —         | —         | -3.7    | 1.3     | 2.2     | 4.8     | 8.6     | 3.2     | 2.6     | -0.4    | 1.7     |
| Domestic demand          | Q-o-q % ch              | -3.9   | 3.2       | 3.4       | -0.7    | 0.6     | 0.5     | 1.2     | 2.3     | 0.6     | 0.4     | -0.2    | 0.3     |
| Private sector demand    | Q-o-q % ch              | -6.3   | 4.0       | 4.0       | -0.4    | 0.9     | 0.5     | 1.5     | 2.6     | 0.8     | 0.4     | -0.2    | 0.3     |
| Personal consumption     | Q-o-q % ch              | -5.9   | 4.3       | 3.7       | -1.0    | 0.8     | 0.0     | 1.8     | 3.8     | 0.1     | 0.1     | -0.7    | 0.2     |
| Housing investment       | Q-o-q % ch              | -7.2   | 3.2       | 2.7       | 0.9     | 2.1     | 2.5     | -0.5    | 0.7     | 1.2     | 0.5     | 0.5     | 0.2     |
| Capital investment       | Q-o-q % ch              | -6.8   | 4.1       | 3.9       | -1.3    | 1.7     | 1.2     | 1.0     | 1.1     | 1.0     | 0.9     | 0.8     | 0.5     |
| Inventory investment     | Q-o-q contribution, %pt | (-0.2) | (-0.1)    | (0.2)     | (0.4)   | (-0.2)  | (0.1)   | (0.0)   | (-0.3)  | (0.3)   | (0.1)   | (0.0)   | (0.0)   |
| Public sector demand     | Q-o-q % ch              | 3.5    | 1.2       | 1.7       | -1.5    | 0.1     | 0.6     | 0.5     | 1.2     | 0.1     | 0.5     | -0.2    | 0.4     |
| Government consumption   | Q-o-q % ch              | 3.3    | 1.6       | 2.0       | -1.7    | 0.5     | 0.5     | 0.3     | 1.4     | 0.4     | 0.4     | -0.5    | 0.4     |
| Public investment        | Q-o-q % ch              | 4.2    | -0.3      | 0.9       | -1.0    | -1.5    | 1.0     | 1.0     | 0.3     | -1.0    | 0.8     | 0.6     | 0.3     |
| External demand          | Q-o-q contribution, %pt | (-0.6) | (0.6)     | (0.3)     | (-0.2)  | (-0.3)  | (0.0)   | (-0.0)  | (-0.2)  | (0.1)   | (0.2)   | (0.1)   | (0.1)   |
| Exports                  | Q-o-q % ch              | -10.4  | 15.1      | 6.1       | 2.4     | 2.9     | 1.8     | 1.6     | 1.7     | 1.8     | 1.6     | 0.7     | 0.7     |
| Imports                  | Q-o-q % ch              | -6.8   | 11.4      | 4.6       | 4.0     | 5.1     | 1.7     | 1.6     | 2.5     | 1.0     | 0.5     | 0.0     | 0.2     |
| GDP (nominal)            | Q-o-q % ch              | -3.9   | 3.0       | 5.0       | -1.0    | 0.1     | 0.3     | 0.9     | 2.4     | 2.6     | 0.0     | -0.2    | 0.6     |
| GDP deflator             | Y-o-y % ch              | 0.7    | -0.8      | 1.3       | -0.1    | -0.8    | -1.1    | -0.9    | -0.4    | 1.6     | 1.2     | 1.3     | 1.1     |
| Domestic demand deflator | Y-o-y % ch              | -0.2   | 1.0       | 1.2       | -0.4    | 0.7     | 1.1     | 1.2     | 1.2     | 1.6     | 0.8     | 1.2     | 1.0     |

Note: Figures in the shaded areas are forecasts. The deflator does not reflect the the 2020 base-revision of the CPI.  
Source: Made by MHRT based upon Cabinet Office, *Quarterly Estimates of GDP*

# Japan: Recovery of employment and wages expected to be slow; Bank of Japan's core CPI for FY2021 to be negative y-o-y

- With a background of cautious corporate behavior, labor compensation in FY2021 is on the way to recovery, but the increase is likely to be small considering the decline in FY2020. With the re-extension of subsidy programs for employment adjustment, the unemployment rate is expected to avoid a significant increase.
- In the new outlook, the core CPI is revised downward (about -0.7% pt) based on 2020 standards. Although energy will push up the CPI, lower telecommunication rates will be a downward factor, and the core CPI will remain near 0% in FY2021. BOJ's core CPI (y-o-y) is expected to remain negative.

## Outlook on the Japanese economy (key economic indicators)

|   |                    | 2020  | 2021      | 2022 | 2021    |         |         |         | 2022    |         |         |         | 2023    |
|---|--------------------|-------|-----------|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|   |                    | FY    | (Outlook) |      | Jan-Mar | Apr-Jun | Jul-Sep | Oct-Dec | Jan-Mar | Apr-Jun | Jul-Sep | Oct-Dec | Jan-Mar |
| Industrial production                     | Q-o-q % ch         | -9.5  | 10.2      | 4.7  | 2.9     | 1.0     | 1.7     | 0.8     | 1.2     | 1.2     | 1.2     | 1.2     | 1.0     |
| Ordinary profits                          | Y-o-y % ch         | -15.6 | 28.0      | 14.0 | 26.0    | 62.7    | 30.8    | 12.9    | 18.8    | 24.7    | 17.2    | 10.0    | 6.4     |
| Nominal compensation of employees         | Y-o-y % ch         | -2.0  | 1.0       | 1.6  | -0.4    | 1.9     | 0.4     | 1.0     | 0.4     | 1.6     | 1.6     | 2.1     | 1.2     |
| Unemployment rate                         | %                  | 2.9   | 2.9       | 2.6  | 2.8     | 2.9     | 3.0     | 2.9     | 2.8     | 2.8     | 2.6     | 2.6     | 2.6     |
| New housing starts                        | P.a., 10,000 units | 81.2  | 86.5      | 87.2 | 83.0    | 83.0    | 85.1    | 87.1    | 87.1    | 87.6    | 87.6    | 87.4    | 87.2    |
| Current account balance                   | P.a., JPY tril     | 18.3  | 13.4      | 9.5  | 20.5    | 20.8    | 12.2    | 12.0    | 9.1     | 7.4     | 9.0     | 9.8     | 10.0    |
| Domestic corporate goods price            | Y-o-y % ch         | -1.4  | 3.3       | 0.2  | -0.3    | 4.6     | 3.4     | 2.9     | 2.0     | 0.2     | 0.6     | 0.5     | -0.4    |
| (ex consumption tax)                      | Y-o-y % ch         | -2.1  | -         | -    | -       | -       | -       | -       | -       | -       | -       | -       | -       |
| Consumer prices, ex fresh food            | Y-o-y % ch         | -0.4  | -0.2      | 0.6  | -0.5    | -0.6    | -0.0    | 0.2     | -0.2    | 0.2     | 0.1     | 0.8     | 1.1     |
| (ex institutional factors)                | Y-o-y % ch         | -0.4  | -0.2      | 0.7  | -0.4    | -0.6    | -0.2    | -0.2    | 0.2     | 0.6     | 0.5     | 0.8     | 0.7     |
| Consumer prices, ex fresh food and energy | Y-o-y % ch         | 0.0   | -0.6      | 0.3  | 0.0     | -0.9    | -0.6    | -0.3    | -0.7    | 0.2     | 0.1     | 0.4     | 0.7     |
| (ex institutional factors)                | Y-o-y % ch         | 0.2   | -0.7      | 0.4  | 0.1     | -1.0    | -0.8    | -0.7    | -0.3    | 0.6     | 0.5     | 0.4     | 0.3     |

Note: 1. Figures in the shaded areas are forecasts. The readings above may differ from public releases because the rates of change are calculated on the basis of real-terms data.  
 2. Ordinary profits are based upon the *Financial Statements Statistics of Corporations by Industry* (all industries basis) (ex finance & insurance).  
 3. The Consumer Price Index reflects the 2020 base-revision. "Institutional factors" in consumer prices refer to the impacts of the consumption tax, free education, and the GoTo Travel program.  
 Source: Made by MHRT based upon relevant statistics

# Japan: area subject to the state of emergency expanded, extension expected until late September due to strains upon the healthcare system

- The state of emergency is likely to be extended to the end of September.
  - The government has decided to extend the period covered by the state of emergency until September 12, due to the continuing strain upon the healthcare system (the situation where new patients cannot be admitted by hospitals due to overcapacity), especially in Tokyo since August. Further, as the infection is spreading outside the Tokyo metropolitan area and in Osaka, the areas subject to the state of emergency have been expanded.
  - Regulations have also been tightened, including restricted admission to and the temporary closure of large commercial facilities.
  - Due to the effects of the state of emergency and the announcement about a surge in infections and healthcare collapse, the number of people on the streets is expected to decline. It is assumed that the hospital bed occupancy rate will gradually improve from the latter half of August, and that the state of emergency will finally be lifted in late September.

## Details of previous declarations of a state of emergency

|   |                                       | 3rd  |  | 4th  |
|---|---------------------------------------|--|--|--|
|   |                                       | Apr 25–May 11  | May 12–Jun 20  | From July 12   |
| Residents   |                                       | Request for refraining from unnecessary outings and traveling, including daytime | Request for refraining from unnecessary outings and traveling, including daytime | Request for refraining from unnecessary outings and traveling, including daytime |
| Commercial facilities<br>Entertainment facilities | Larger than 1,000m <sup>2</sup>       | Request for temporary closure  | Request for temporary closure  | Request for shorter business hours (5:00–20:00)                                  |
|   | 1,000m <sup>2</sup> or smaller        | Request for cooperation on temporary closure                                     | Request for cooperation on temporary closure                                     | Request for cooperation on shorter business hours (5:00–20:00)                   |
| Restaurants                                       | Serving alcohol and karaoke           | Request for temporary closure  | Request for temporary closure  | Request for temporary closure  |
|   | Not serving alcohol and karaoke       | Request for shorter business hours (5:00–20:00)                                  | Request for shorter business hours (5:00–20:00)                                  | Request for shorter business hours (5:00–20:00)                                  |
| Large events                                      | Accommodating 10,000 people or less   | No audience in principle   | Up to 50% of the maximum capacity  | Up to 50% of the maximum capacity  |
|   | Accommodating more than 10,000 people |  | 5,000 people   | 5,000 people   |

Source: Made by MHRT

## Assumptions for future government actions

|                |   | Date  | Government actions, etc.   |
|----------------|---|---|--|
| Actual         | July  | July 12   | - State of emergency declared for Tokyo (until August 22)<br>- State of emergency period extended for Okinawa (until August 22)<br>- Quasi-emergency measures in Saitama, Chiba, Kanagawa, and Osaka extended (until August 22)  |
|                |   | July 23   | - The Olympics started (held until August 8). No audiences were allowed in Tokyo and three surrounding prefectures.  |
|                | July 30   | - State of emergency declared for Saitama, Chiba, Kanagawa, and Osaka<br>- State of emergency period extended (until August 31)   |  |
|                | Early August  | - Tokyo under healthcare strains (due to sudden increase in hospitalized and serious cases)<br>⇒ Number of people on outings declined due to the announcement of a rapid increase in patients and healthcare strains. |  |
| Assumption     | August  | August 17   | - State of emergency declared for Ibaraki, Tochigi, Gunma, Shizuoka, Kyoto, Hyogo, and Fukuoka<br>- State of emergency period extended (until September 12)<br>- Stricter regulations (Restricted admission to and request for temporary closure of large commercial facilities) |
|                |   | Late August onward  | - Number of new infection cases and hospital bed occupancy rate to decline gradually   |
|                | August 24   | - The Paralympics started (held until September 5) with no audience, in principle.  |  |
|                | Mid-September   | - State of emergency extended until late September  |  |
| Late September | - Number of serious cases to decline to below the Stage IV level<br>- State of emergency lifted |   |  |

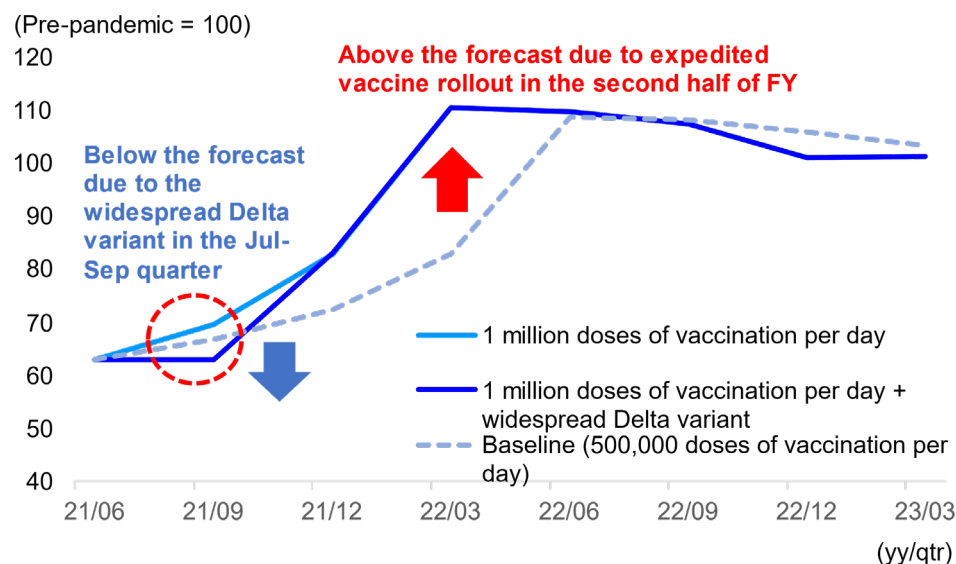
Source: Made by MHRT



# Japan: despite downward pressure due to the Delta variant over the short-term, vaccine rollout expected to boost consumption in the second half of the year

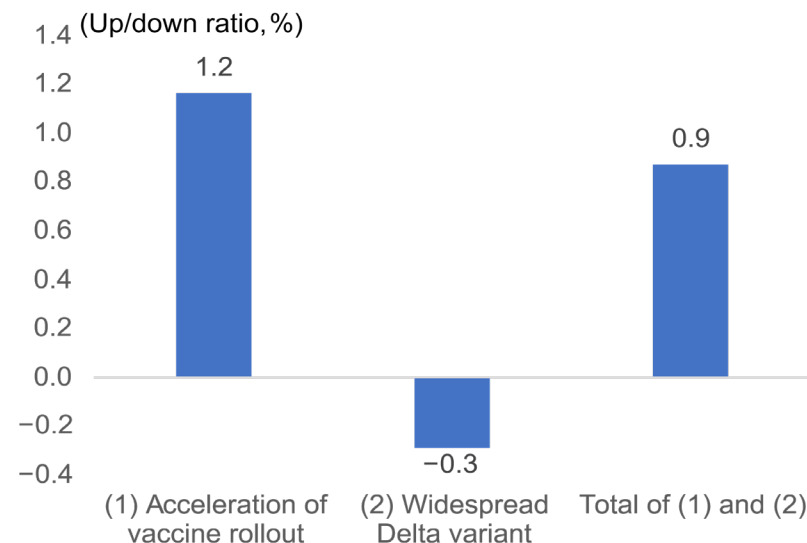
- Sluggish personal consumption is expected in the Jul-Sep quarter due to the spread of the Delta variant and the issuance and extension of the fourth declaration of a state of emergency.
  - Mobility in the Jul-Sep quarter is expected to be restrained to the same level as in the Apr-Jun quarter period due to various factors including the announcement effect of the healthcare strains. Given downward pressures on personal consumption including services accompanying face-to-face interactions, FY2021 GDP is expected to decline by approximately -0.3%.
- In the second half of the year, consumption of services accompanying face-to-face interactions will recover significantly due to the acceleration of vaccine rollouts.
  - The earlier-than-expected occurrence of (1) the effect of service consumption returning to pre-pandemic levels and (2) pent-up demand pushed up FY2021 GP by 1.2%. Even after taking into account the impact of the Delta variant, service consumption is expected to be higher than the previous estimate for the full year, pushing up FY2021 GDP by +0.9%.

## Path of consumption of services accompanying face-to-face interactions



Source: Made by MHRT based upon JCB & Nowcast, "JCB Consumption NOW"

## Impact on FY2021 GDP (vs. the baseline)



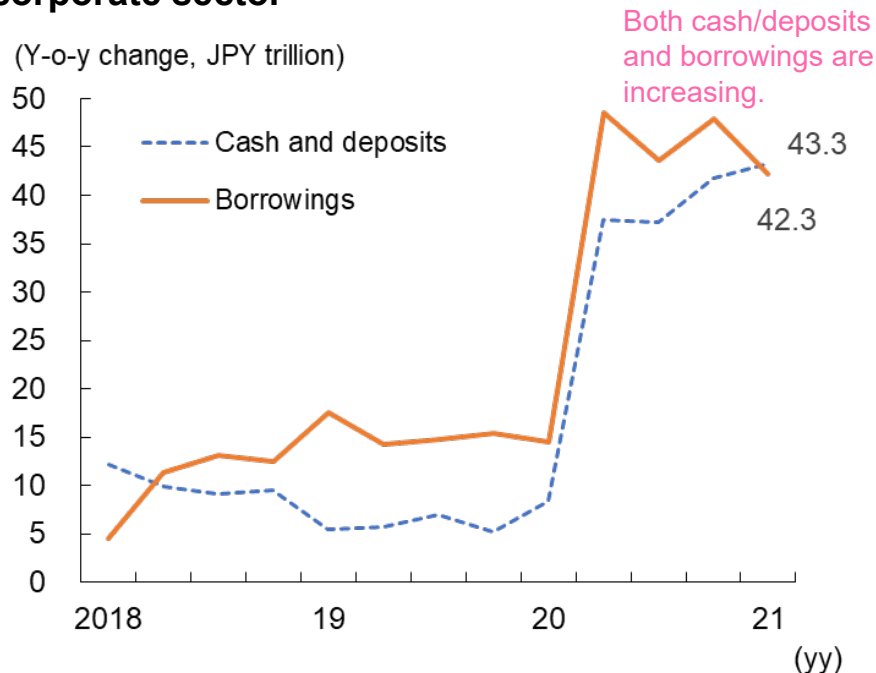
Note: The effect of "acceleration of vaccine rollout" is estimated as a boost to GDP resulting from an acceleration of the pace of vaccination to 1 million doses per day, using the case where the average daily vaccination is 500,000 doses as a baseline. Calculations are based on the assumption that the above effects will emerge in the order of (1) to (2).

Source: Made by MHRT based upon the releases by the Cabinet Office, etc.

# Japan: given ongoing strong future uncertainties, investment not expected to return to pre-pandemic levels until FY2022

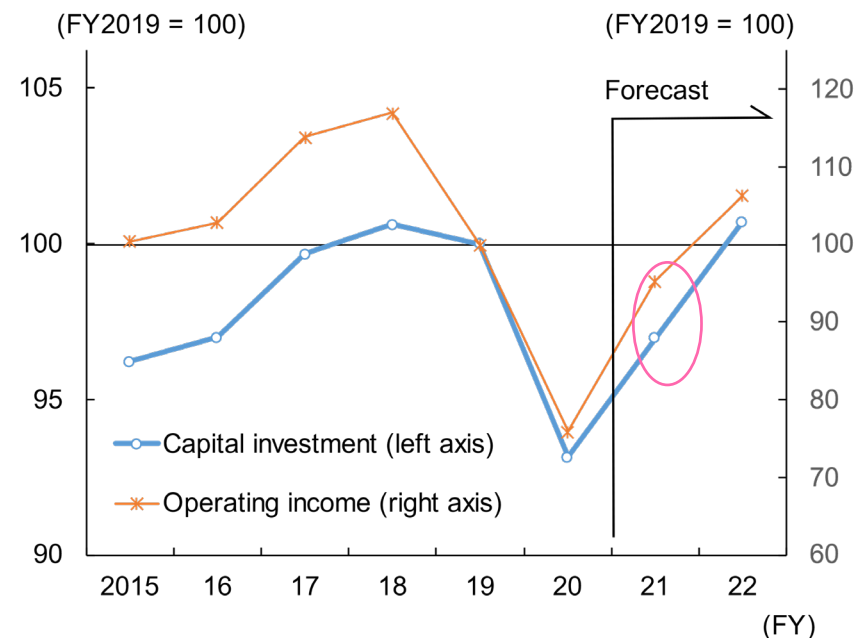
- As corporate activities will remain cautious during FY2021, capital investment will not be able to return to pre-pandemic levels.
  - Amid lingering uncertainty about the future, many companies will continue to secure sufficient liquidity on hand (both cash and borrowings). Given lingering cautiousness in corporate behavior, the recovery of capital investment should be tepid for the moment.
  - Although capital investment will pick up in FY2021 (4.1% y-o-y), it will not be able to recover its fall in the previous fiscal year (-6.8% y-o-y).
  - It will only be sometime after the start of FY2022 that capital investment returns to pre-pandemic levels (FY2019) when corporate profits return to pre-pandemic levels reflecting the normalization of economic activities and the emergence of pent-up demand (FY2022 capital investment: +3.9% y-o-y).

## Balance of cash, deposits, and borrowings of the corporate sector



Source: Made by MHRT based upon Bank of Japan, *Flow of Funds Accounts*

## Outlook of corporate income and capital investment



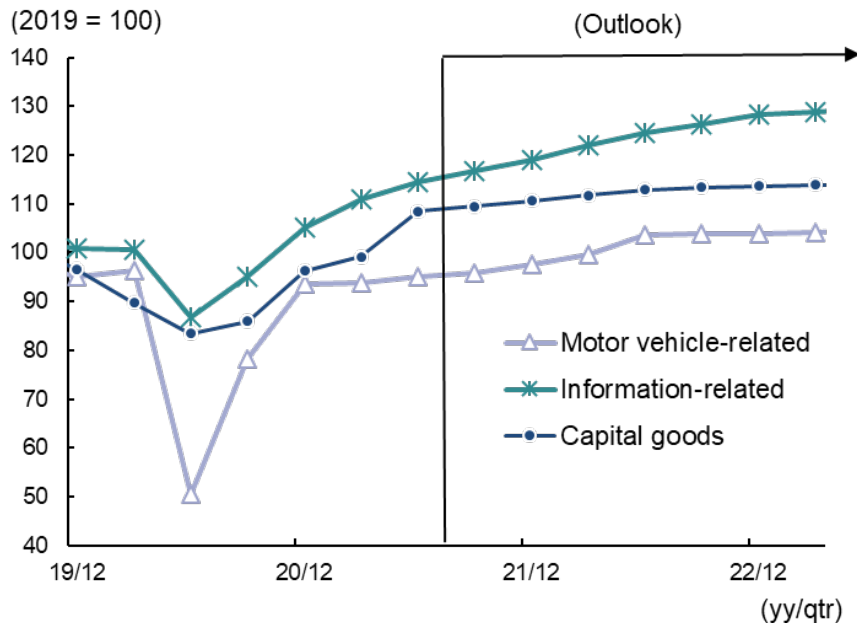
Note: Operating income is based on the *Financial Statements Statistics of Corporations by Industry* and capital investment is based on SNA.

Source: Made by MHRT based upon Ministry of Finance, *Financial Statements Statistics of Corporations (Quarterly)* and Cabinet Office, *Quarterly Estimates of GDP*

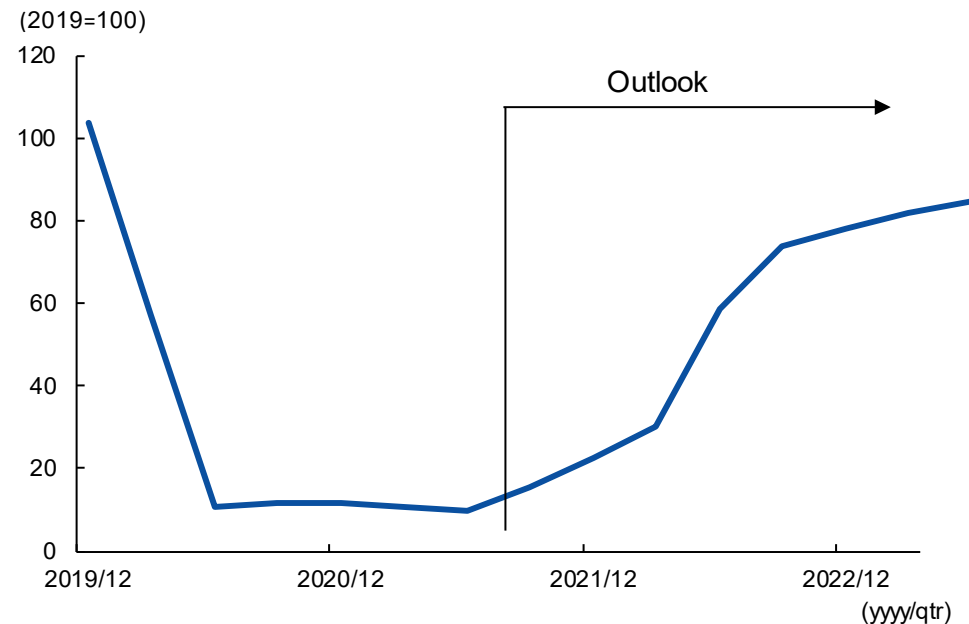
# Japan: exports of goods are steady, but inbound traffic not expected to recover to pre-pandemic levels

- Exports of goods continue to increase. Although motor vehicle exports are negatively affected by the prolonged impact of the semiconductor shortage, information-related materials supported by strong online demand and an increase in exports of capital goods, mainly to the US and China, will continue to drive the overall economy.
- Inbound traffic will moderately increase but will not recover to pre-pandemic levels during the forecast horizon.
  - Some delay is expected for the recovery of inbound travel, due to the slow vaccine rollout in regions such as Southeast Asia, a decline in business travelers (business travel demand) accompanying the spread of online meetings, and supply constraints (labor shortages) at overseas carriers which have taken steps to downsize.

## Export outlook by major goods



## Inbound outlook



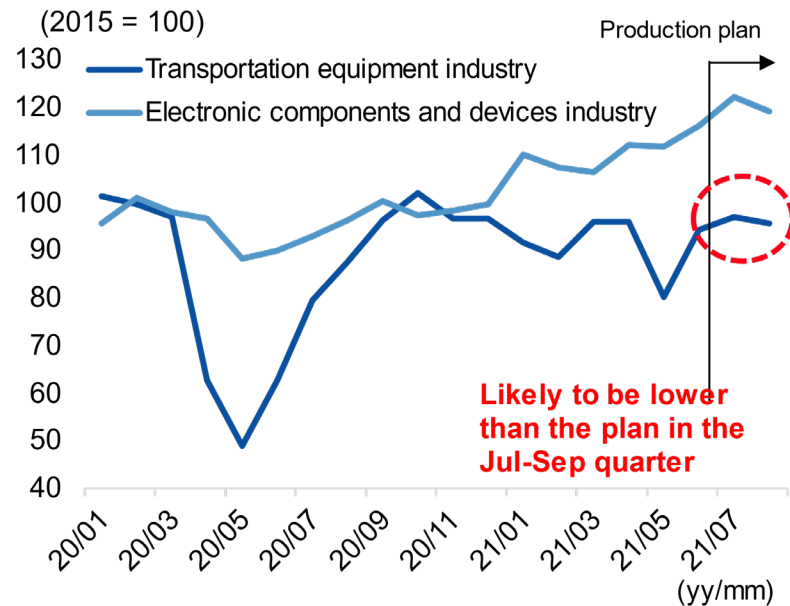
Source: Made by MHRT based upon Bank of Japan, *Developments in Real Exports and Real Imports*

Source: Made by MHRT based upon Cabinet Office, *Quarterly Estimates of GDP*

# Japan: output cuts of motor vehicles to continue until the first half of 2022 due to the prolonged impact of semiconductor shortages

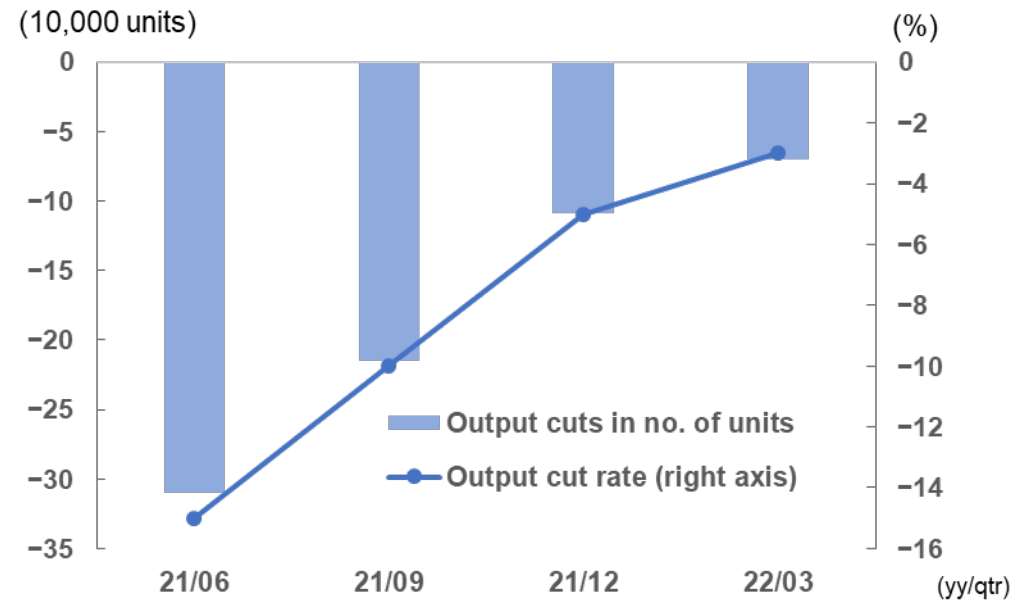
- The shortage of semiconductor supply is persisting. The problem is expected to be resolved in mid-2022 as auto manufacturers revise down their production plans.
  - The output cuts in motor vehicles is expected to continue until the first half of 2022 after bottoming out in the Apr-Jun quarter (more than -300 thousand units). In the Jul-Sep quarter, in addition to the shortage of semiconductors, the shortage of parts due to infections spreading in Southeast Asian countries is expected to put downward pressure on production, resulting in a decline of -200 thousand units or over.
  - The output cuts of motor vehicles due to the shortage of semiconductors is expected to be about -700 thousand units for the full year of FY2021. This will put downward pressure on motor vehicle exports and domestic sales. Considering ripple effects on other industries, FY2021 GDP will be pushed down by approximately -0.6%.

## Production actuals and forecast index for transportation equipment and electronic components/devices



Note: The actual figures are based on the *Indices of Industrial Production*, and the plans are based on the *Survey of Production Forecast in Manufacturing*.  
Source: Made by MHRT based upon Ministry of Economy, Trade and Industry, *Indices of Industrial Production*

## Impact on motor vehicle output cuts due to a shortage of semiconductors, etc.



Note: Declines in production volume and rate represent the number of units and rate of deviation from the baseline.  
Source: Made by MHRT based upon releases by motor vehicle manufacturers, etc.

# Japan: FY2021 supplementary budget expected to be JPY 20-30 trillion; the key is its speedy implementation

- The FY2021 supplementary budget is expected to reach JPY 20-30 trillion due to political pressure to increase spending ahead of the Lower House election.
  - The government could reduce existing expense accounts, including the balance of reserve funds (about JPY 4 trillion, at present), and could reclassify them into the FY2021 supplementary budget. Part of the FY2020 surplus (JPY 4.5 trillion) due to higher-than-forecasted tax revenues, etc., is expected to be used as a financial resource.
  - Support for corporate cash flow will not directly boost GDP, and the measures of the *Basic Policy on Economic and Fiscal Management and Reform* and the growth strategies (green growth strategy, economic security, etc.) are expected to have limited effect on boosting GDP in the short term.
  - In the FY2020 budget, there has been a large carryover due to delays in providing subsidies to restaurant businesses that cooperated with the government's restriction measures. The speedy implementation of the budget is important.

## Carryover in FY2020 financial results (general account)

| Carryover breakdown   | Amount (JPY trillion) |
|---|-----------------------|
| Essentially interest-free unsecured loans (Finance to government-affiliated financial corporations)   | 6.4                   |
| Public works-related expenses   | 4.7                   |
| Temporary Funding for Regions Implementing COVID-19 Prevention (Subsidies for restaurants that cooperate with the government's request for shorter hours and temporary closure) | 3.3                   |
| Temporary Funding for Regions Implementing COVID-19 Prevention (Other than the above)   | 2.0                   |
| "Go To Travel" campaign   | 1.3                   |
| Emergency Comprehensive Support Grant For Novel Coronavirus (Medical care)  | 1.5                   |
| <b>Carryover total</b>  | <b>30.8</b>           |

Source: Made by MHRT based upon releases by the Ministry of Finance and relevant media reports

## Anticipated economic measures (supplementary budget)

| Area  | Measures  |
|---|---|
| <b>Measures against Covid-19</b>  | - Support for medical institutions (Compensation for declines in income, reward payments, etc.) |
|   | - Cash subsidy for low-income earners   |
|   | - Support for corporate cashflow  |
|   | - Temporary Funding for Regions Implementing COVID-19 Prevention                                |
| <b>Basic Policy on Economic and Fiscal Management and Reform and growth strategies</b>            | - Accelerating digitization in the public and private sectors                                   |
|   | - Realization of green society  |
|   | - Vitalizing local economy  |
|   | - Childcare support   |
|   | - Economic security (support for semiconductor production, etc.)                                |
| <b>Size of expenditure: Around JPY 20-30 trillion (including switching of existing expenses)?</b> |   |

Source: Made by MHRT

# Financial markets: US long-term interest rates expected to reach the upper 1% range at the end of 2021

- US long-term interest rates are expected to follow an uptrend, against a backdrop of the normalization of economic activities, reaching the upper 1%-range at the end of 2021.
- Japanese and US stocks are expected to follow a gradual uptrend, given the recovery of the global economy.
- We expect a moderate depreciation of the yen against the dollar due to the widening interest rate differential, reflecting differences in the directions of monetary policies of the two countries.

## Outlook for financial markets

|  | 2020<br>FY      | 2021<br>FY          | 2022<br>FY          | 2021            |                 |                     |                     | 2022                |                     |                     |                     | 2023                |
|--|-----------------|---------------------|---------------------|-----------------|-----------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|  |                 |                     |                     | Jan-Mar         | Apr-Jun         | Jul-Sep             | Oct-Dec             | Jan-Mar             | Apr-Jun             | Jul-Sep             | Oct-Dec             | Jan-Mar             |
| Japan  |                 |                     |                     |                 |                 |                     |                     |                     |                     |                     |                     |                     |
| Interest rate on the policy rate balance (%)       | -0.10           | -0.10               | -0.10               | -0.10           | -0.10           | -0.10               | -0.10               | -0.10               | -0.10               | -0.10               | -0.10               | -0.10               |
| Newly issued JGBs (10-year, %)                     | 0.03            | 0.00<br>to 0.15     | 0.05<br>to 0.20     | 0.07            | 0.07            | 0.00<br>to 0.10     | 0.05<br>to 0.15     | 0.05<br>to 0.15     | 0.05<br>to 0.15     | 0.05<br>to 0.15     | 0.05<br>to 0.15     | 0.05<br>to 0.15     |
| Nikkei Stock Average (JPY)                         | 24,462          | 28,500<br>to 31,300 | 30,150<br>to 31,650 | 28,988          | 28,962          | 28,500<br>to 29,500 | 29,500<br>to 30,500 | 30,000<br>to 31,000 | 30,300<br>to 31,300 | 30,300<br>to 31,300 | 30,300<br>to 31,300 | 30,150<br>to 31,650 |
| US   |                 |                     |                     |                 |                 |                     |                     |                     |                     |                     |                     |                     |
| Federal Funds rate (End-of-period value, %)        | 0.00<br>to 0.25 | 0.00<br>to 0.25     | 0.00<br>to 0.25     | 0.00<br>to 0.25 | 0.00<br>to 0.25 | 0.00<br>to 0.25     | 0.00<br>to 0.25     | 0.00<br>to 0.25     | 0.00<br>to 0.25     | 0.00<br>to 0.25     | 0.00<br>to 0.25     | 0.00<br>to 0.25     |
| Newly issued government bonds (10-year, %)         | 0.87            | 1.40<br>to 1.80     | 1.50<br>to 2.00     | 1.30            | 1.58            | 1.40<br>to 1.60     | 1.60<br>to 1.80     | 1.60<br>to 1.80     | 1.55<br>to 1.75     | 1.50<br>to 1.70     | 1.55<br>to 1.75     | 1.60<br>to 1.80     |
| Dow Jones Average (USD)                            | 28,110          | 34,100<br>to 35,600 | 34,550<br>to 36,250 | 31,493          | 34,121          | 34,100<br>to 35,100 | 34,500<br>to 35,500 | 34,500<br>to 35,500 | 34,600<br>to 35,600 | 34,550<br>to 36,050 | 34,550<br>to 36,050 | 34,650<br>to 36,150 |
| Eurozone   |                 |                     |                     |                 |                 |                     |                     |                     |                     |                     |                     |                     |
| ECB deposit facility rate (End-of-period value, %) | -0.50           | -0.50               | -0.50               | -0.50           | -0.50           | -0.50               | -0.50               | -0.50               | -0.50               | -0.50               | -0.50               | -0.50               |
| German government bonds (10-year, %)               | -0.48           | -0.35<br>to -0.10   | -0.30<br>to -0.05   | -0.41           | -0.22           | -0.35<br>to -0.15   | -0.30<br>to -0.10   | -0.30<br>to -0.10   | -0.30<br>to -0.10   | -0.30<br>to -0.10   | -0.30<br>to -0.10   | -0.30<br>to -0.10   |
| Exchange rate                                      |                 |                     |                     |                 |                 |                     |                     |                     |                     |                     |                     |                     |
| USD/JPY (USD/JPY)                                  | 106             | 109<br>to 112       | 109<br>to 112       | 106             | 109             | 109<br>to 111       | 110<br>to 112       | 110<br>to 112       | 110<br>to 112       | 109<br>to 112       | 109<br>to 112       | 109<br>to 112       |
| EUR/USD (EUR/USD)                                  | 1.17            | 1.15<br>to 1.19     | 1.16<br>to 1.19     | 1.21            | 1.21            | 1.17<br>to 1.19     | 1.16<br>to 1.18     | 1.15<br>to 1.17     | 1.16<br>to 1.18     | 1.17<br>to 1.19     | 1.17<br>to 1.19     | 1.16<br>to 1.18     |

Note: Forecast values (expressed in ranges) indicate that the average value for the period is expected to fall within the relevant range.

Source: Made by MHRT based upon releases by Bloomberg

## Reference: Key political events

|        | 2021   |  | 2022       |  | 2023        |   |
|--------|--------|--|------------|--|-------------|---|
| US     | Sep    | 20 years since 9/11  | Jan        | Expiration of the term of FRB Vice Chair Richard H. Clarida    | Mar         | 20 years since the Iraq War   |
|        | Oct    | Expiration of the term of FRB Vice Chair Randal K. Quarles (in charge of bank supervision) | Feb        | Expiration of the term of office of FRB Chair Jerome H. Powell |             |   |
|        |        |  | Nov        | Mid-term elections   |             |   |
| Europe | Sep    | Russia: Legislative election   | Apr        | France: Presidential election                                  | 1H          | Italy: Legislative election   |
|        | Sep    | Germany: Legislative election  | Jun        | France: Legislative election                                   |             |   |
|        | Autumn | Germany: Chancellor Angela Merkel scheduled to step down                                   |            |  |             |   |
| Japan  | Sep    | End of term of office of the LDP president   | Jul        | End of term of office of Upper House members                   | Apr         | End of term of Bank of Japan Governor Haruhiko Kuroda                             |
|        | Oct    | End of term of office of Lower House members   |            |  | Apr         | Nationwide local elections  |
|        |        |  |            |  | Apr         | End of term of office of the governor of Osaka prefecture and mayor of Osaka city |
| Asia   | Dec    | Hong Kong: Legislative Council election  | Feb–Mar    | Beijing Olympic and Paralympic Games                           | Until Mar   | Thailand: election of the House of Representatives (lower house)                  |
|        |        |  | Mar        | South Korea: Presidential election                             | Until Jul   | Cambodia: general election  |
|        |        |  | Mar        | Hong Kong: Chief Executive election                            | Until Aug   | Myanmar: general election   |
|        |        |  | Around May | The Philippines: Presidential and legislative elections        | Until Sep   | Malaysia: general election  |
|        |        |  | Autumn     | China: 20th National Congress of the Communist Party           |             |   |
| Other  |        |  | 1H         | Australia: Senate and House of Representatives elections       | By year-end | Turkey: presidential and legislative elections                                    |
|        |        |  | Oct        | Brazil: Presidential election                                  |             |   |

Source: Made by MHRT based upon media reports

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