

Covid-19 and the Japanese Economy 2021

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I. Public Health

Daily new confirmed COVID-19 cases



Daily new confirmed COVID-19 deaths



<https://www3.nhk.or.jp/news/special/coronavirus/entire/>

The Third Wave

- By November 2021, a state of emergency was declared three times due to the spread of Covid-19 infection.
- With the arrival of the third wave, a state of emergency was declared in Tokyo and three prefectures (Tokyo, Kanagawa, Saitama, and Chiba) on January 7, 2021.
- The state of emergency was extended to 11 prefectures on January 13, 2021.
- The arrival of the third wave came as a shock to both the public and the Japanese government.
 - From the summer of 2020, the government recognized that the spread of coronavirus infection could be prevented through the preventive actions of the people, and rolled out a policy of consumption subsidies named GoTo Travel, GoTo Eat, etc.
 - Even though there was a boom in travel and eating until November, the number of infected people did not increase that much, which made people to lift off the guard.
- The emergency declaration was effective and was lifted nationwide on March 21.

The Fourth Wave 1

- The next emergency declaration was issued to four prefectures on April 25, and was extended to 10 prefectures on May 23. This time, a sharp increase in the number of newly infected people in Osaka Prefecture preceded the declaration.
- With the Tokyo Olympics scheduled to be held in July, the Japanese government took a particularly nervous approach, requesting that restaurants and bars close and shorten business hours.

The Fourth Wave 2

- Facilities managed by the government (like New National Theatre and Tokyo Bunka Kaikan) abruptly cancelled the scheduled events just before the actual date, even though tickets had already been sold.
- Large-scale commercial facilities such as department stores and shopping malls were also asked to close their doors, but this was met with great protest.
- Commercial facilities and show business strongly protested against the government, because there had been few reports of cluster outbreaks at events or commercial facilities.
- Those industries argued that each facility had already taken sufficient measures such as disinfection and ventilation.

The Fifth Wave 1

- The third declaration of a state of emergency was lifted on June 20, with the exception of Okinawa Prefecture.
- It did not take long for the fourth emergency declaration to be issued.
- The fifth wave of corona was caused by the delta strain, but the speed of spread was much faster than the government and researchers had predicted.
- Unfortunately, the greatest peak of corona infection came during the Tokyo Olympics and Paralympics.
- The peak of the 7-day moving average was on August 19, when the number of newly infected people was 4923.

The Fifth Wave 2

- Since coronavirus infection is considered to occur 10 days to 2 weeks before the definitive diagnosis, the peak infections occurred during the Olympics.
- However, according to infectious disease experts and researchers, the effect of holding the Tokyo Olympics on the spread of infection was limited in terms of quantity.
- What was a blow to the Suga administration at the time was that it had failed to predict that the number of infected people would not increase much, once the vaccination of the elderly was almost completed at the end of July.

The Crisis is over

- Most experts believed that the number of new infections would not decrease easily, given the infectious power of the delta strain, but the number of new infections decreased rapidly in September, and the state of emergency was lifted nationwide on September 30.
- According to the NHK report, the fifth wave was by far the largest among the past five waves in terms of the number of infected people, and people receiving treatment (hospitalized people plus people receiving treatment at home).

Why has the infection subsided?

- However, in terms of the number of deaths, the peak in September was lower than the peaks in February and May, which is thought to be the effect of vaccination among the elderly and middle-aged who are at higher risk of serious illness.
- However, the decrease in the number of new infections cannot be explained without considering factors other than a decrease in human flow or vaccination progress.

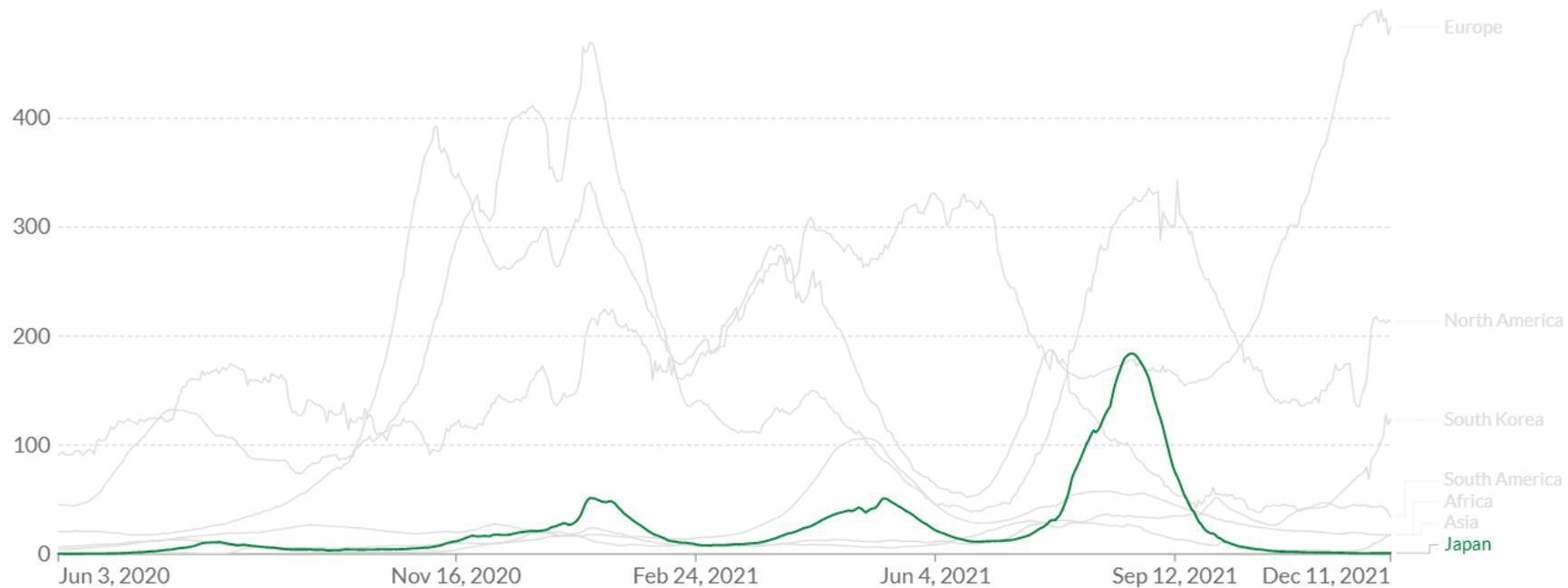
Covid-19 pandemic not so serious in Japan

Daily new confirmed COVID-19 cases per million people

7-day rolling average. Due to limited testing, the number of confirmed cases is lower than the true number of infections.

Our World
in Data

LINEAR LOG



Source: Johns Hopkins University CSSE COVID-19 Data

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▶ Jan 28, 2020 Dec 11, 2021

CHART

MAP

TABLE

SOURCES

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<https://ourworldindata.org/covid-cases>

Mutant strains

- The fifth wave was caused by the so-called delta strain, which originated in India, and is said to have been more infectious than the fourth wave.
- The mutant strains of the Covid-19 virus that affected Japan were the so-called alpha and delta strains.
- Initially, these strains were called the British and Indian strains, but under WHO guidelines, the world decided to avoid naming the virus after specific countries.
- It was reported that the alpha and delta strains are 1.3 and 1.7 times more infectious, respectively, than the conventional strains.
- In Japan, the British strain caused the fourth wave in April and the delta strain caused the fifth wave in July.
- As of December 2021, the Omicron strain, which was first reported in South America, is considered more infectious than the delta strain.

Medical Capacity

- Why is it that in Japan, despite the fact that the number of infected people is much lower than in Europe and the United States, a state of emergency is often declared and action is repeatedly taken to curb the spread of infectious diseases, resulting in huge economic losses?
- Was Japan's health care crunch in August more severe than the health care crunch in the West so far?

Moving-average case fatality rate of COVID-19

The case fatality rate (CFR) is the ratio between confirmed deaths and confirmed cases. Our rolling-average CFR is calculated as the ratio between the 7-day average number of deaths and the 7-day average number of cases 10 days earlier.

Our World
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LINEAR LOG



Source: Johns Hopkins University CSSE COVID-19 Data

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▶ Sep 1, 2020 ○ Dec 11, 2021

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- The percentage of people who are unable to be hospitalized even if they wanted to be has been indexed for Japan by a team of experts from the Ministry of Health, Labor and Welfare.
- However, the same statistics are not available for Europe and the United States.
- If we look at the ratio of new deaths to new infections (case fatality rate), there is no significant difference between Japan and Europe.

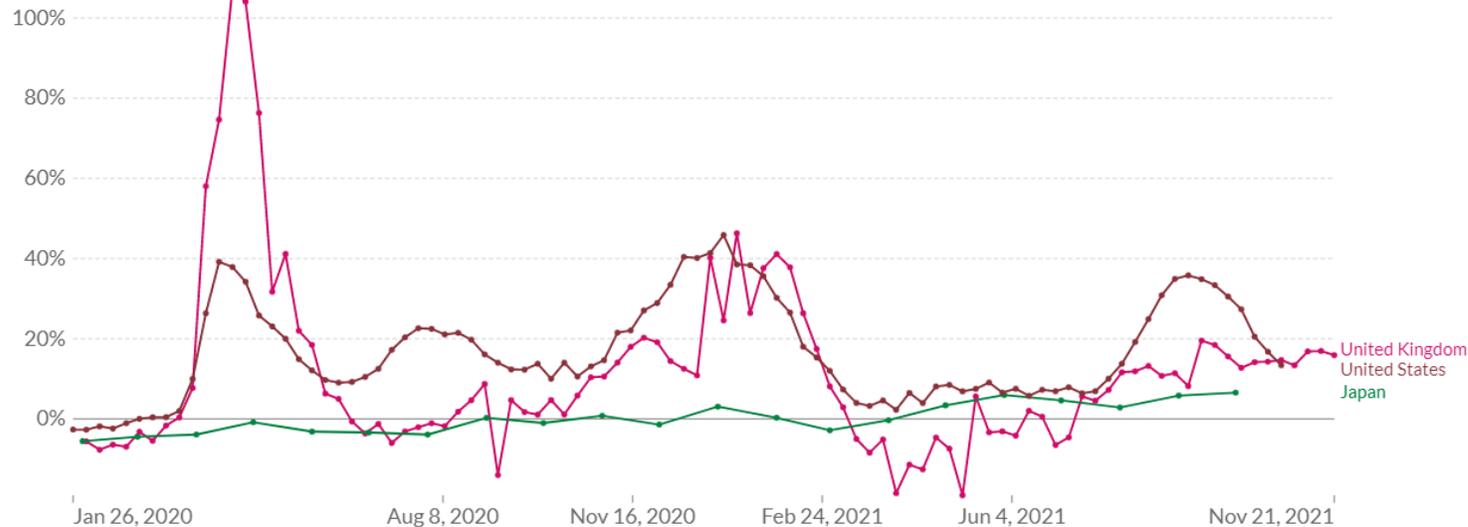
<https://ourworldindata.org/covid-cases>

Excess mortality: Deaths from all causes compared to projection based on previous years

The percentage difference between the reported number of weekly or monthly deaths in 2020–2021 and the projected number of deaths for the same period based on previous years. The reported number might not count all deaths that occurred due to incomplete coverage and delays in reporting.

Our World
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LINEAR LOG



Source: Human Mortality Database (2021), World Mortality Dataset (2021)

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Jan 26, 2020 Nov 21, 2021

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MAP

TABLE

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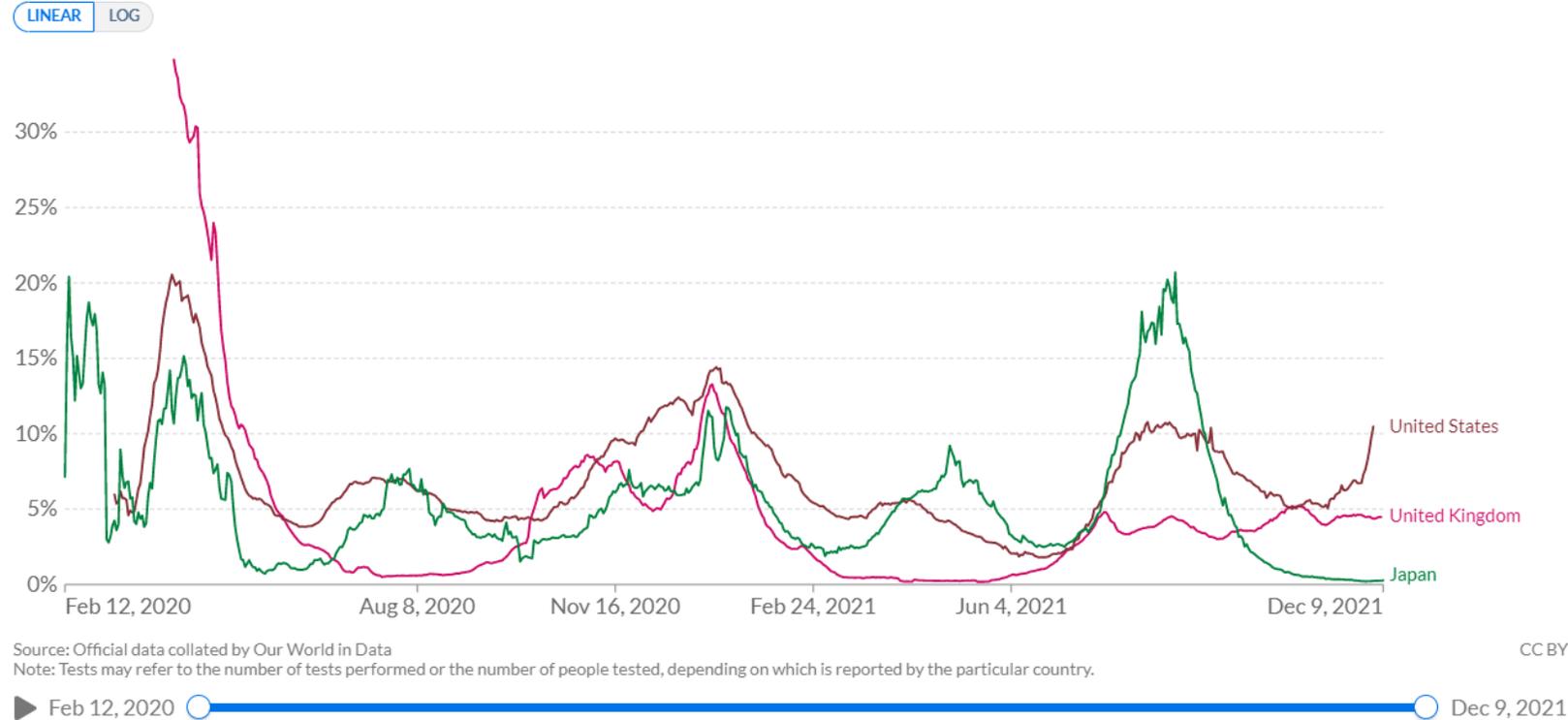
- The excess mortality rate is a measure of the number of deaths in a given year compared to a normal year in the past, expressed as a percentage.
- Japan's excess mortality rate is much lower and more stable than that of the U.K. and U.S.
- There is an upward trend in 2021 compared to 2020, but it is not a significant change.

<https://ourworldindata.org/covid-cases>

The share of daily COVID-19 tests that are positive

7-day rolling average. The number of confirmed cases divided by the number of tests, expressed as a percentage.

Our World
in Data



- As is well known, the number of tests in Japan is low among developed countries. Therefore, there is a persistent argument that positive cases are being overlooked.
- However, Japan's positivity rate was higher than that of developed countries only during the fifth wave in August, and the number of tests during other periods seems to have been sufficient.
- Currently, the positive rate in Japan is extremely low.
- Looking at the excess mortality rate, it seems unlikely that positive cases are dying at home without being tested and without receiving medical care.

<https://ourworldindata.org/covid-cases>

Education

- In March 2020, the government requested all elementary and secondary schools to close due to the spread of corona infection. The closure of schools was succeeded by the declaration of a state of emergency in April and continued until the end of May.
- Most of the university classes were also put online and continued almost until the summer vacation.
- In response, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) urged universities to return to face-to-face classes, but the rapid increase in the number of coronary infections and the declaration of a state of emergency led to the continuation of online classes.

Return to Campus Life

- In April 2021, universities nationwide fully returned to face-to-face classes, but the fourth wave of infection hit soon after, and many universities had to return to online classes.
- Many university students seem to be satisfied with the content of online classes, but it is hard to stay at home and face the PC all day long.
- In addition, there seems to be a great deal of dissatisfaction with the loss of campus life, as they are no longer able to enjoy friendships and club activities on campus.

Sports and Entertainment

- With the end of the second corona wave in August 2020, the government offered subsidy programs to the travel and food and beverage industries, named GoTo Travel and GoTo Eat. This brought many travel and restaurant businesses back to life, but the boom was interrupted by the spread of Corona in November.
- In January 2021, when the government declared a state of emergency in response to the third wave of coronas, it asked for shortened hours almost exclusively for restaurants.
- On the other hand, so-called general entertainment, such as sports, concerts and plays, were allowed to continue with restrictions on the number of people. As a result, most of the entertainment events were able to be held with customers, which supported economic activities.

II. Economic Impacts

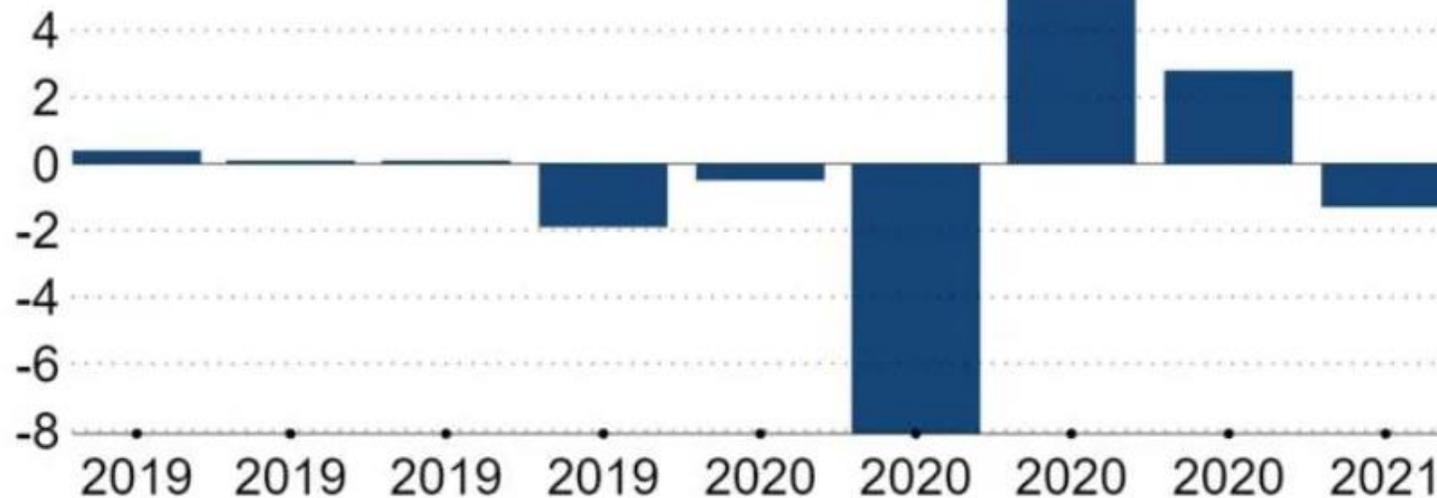
Economic Loss

- Until recently, the number of coronary infections and deaths in Japan was negligible compared to Europe and the United States, and was not a significant epidemic.
- However, the government has declared a state of emergency four times to curb the flow of people.
- Service industries that involve human contact, such as food and beverage, travel, and entertainment, have all been asked to close.
- The economic loss due to coronary infections in 2020 is equivalent to about 5% of GDP.

Economic Loss

Japan's post-COVID recovery stalls

■ Quarterly growth rate (In percent)



Source: Cabinet Office

- The quarterly growth rate was:

- 8% for Apr-Jun 2020
- +5% for Jul-Sep 2020
- +3% for Oct-Dec 2020
- 1% for Jan-Mar 2021

- The annual growth rate of Japan for 2020 was -4.6%.
- The -2% growth for Oct-Dec 2019 was the effect of a rise in the consumption tax rate from 8% to 10%.

Bubbles walk with Corona

- Oddly enough, the stock market is strong despite the economic losses from the Corona disaster.
- The economic loss in terms of GDP is greater than the Lehman crisis, yet the asset market is overheating and creating a bubble.
- Government benefits are being used to pay off the debts of the service sector, which was closed during the Corona disaster.
- Creditors are being enriched to invest in stocks and real estate.

Stock Market is in boom

28,642.19 (26日 15:00 大引) **+88.21 (+0.31%)** (単位:円)

2020/10/5 始値: 23,312.14 高値: 23,647.07 安値: 23,312.14 終値: 23,619.69
—13週移動平均: 22,954.36 —26週移動平均: 22,093.28 —売買代金: 10,272,840



- The stock market has been strong over the past year, despite the negative growth of the real economy in Corona Disaster.
- Many people believe that this is a bubble that will eventually burst.
- The boom in the stock market is common to most of the reading economies.

<https://www.nikkei.com/markets/marketdata/chart/nk25/?type=year>

Uniform Benefits Create Economic Bubbles

- In 2019, the Japanese government used a budget of just over 13 trillion yen as an economic stimulus in the Corona disaster to provide a flat benefit of 100,000 yen each to all citizens.
- However, the uniform benefit caused an asset price bubble.
- The uniform benefit is a huge financial burden and most of the benefits are given to people who are not in need, which results in a bubble.
- There are two channels through which economic measures in the Corona disaster can cause bubbles.

Government Transfer Creates Bubbles

- First, government benefits increase the deposits of those who receive them, giving purchasing power to industries that have suffered economic losses.
- People with no business income use the benefits to pay rent, pay off debts, and spend. As a result, their deposits will decrease and those with less economic loss will increase their deposits.
- Those who have not suffered much economic loss due to the Corona disaster will not use their deposits to spend even if their deposits increase. This is because they cannot spend their increased deposits in the three industries that were closed due to the Corona disaster: food and beverage, tourism, and entertainment.
- In normal times, the deposits that would have flowed back to the three industries do not, and are used to acquire assets.
- The increased deposits will be used to buy real estate, stocks, and virtual currencies, which will then flow into the deposit accounts of the owners of those assets.

Credit Creation by Private Banks

- Another channel through which economic policy can cause bubbles is by encouraging private credit creation.
- In other words, in the Corona disaster, the government became an implicit guarantor of unsecured lending by private banks.
- Private bank lending is not the act of lending out deposits, but the act of creating deposits equal to the amount of lending created by credit creation.
- Of course, not all deposits are lent, and the total amount of lending is controlled by the monetary authorities by monitoring the loan-to-deposit ratio.

The loan-to-deposit ratio

- The loan-to-deposit ratio is one of the indicators of a bank's business performance, and is the ratio of outstanding loans to outstanding deposits.
- If the loan-to-deposit ratio is too high, the financial authorities will judge that the bank is lending too much and engaging in speculative management.
- The loan-to-deposit ratio in March 2021 was 62.1%, the lowest since the survey began in FY03/08. Loans and bills discounted grew to 573.563 trillion yen (+3.3% YoY) due to aggressive funding support in response to the spread of the new coronavirus.
- On the other hand, deposits grew more than loans to 922,229 billion yen (+10.0% YoY), lowering the loan-to-deposit ratio.

The loan-to deposit ratio did not increase but decreases!



- The loan-to-deposit ratio is loans divided by deposits. If banks increased their lending due to the Corona disaster, and the denominator of the numerator increased by the same amount due to credit creation, then the loan-to-deposit ratio should increase.
- However, the fact that it went down indicates that the various benefits provided by fiscal policy were that large.

Stagnant Consumption does not Increase Deposits

- It is said that the corona disaster caused a decline in service consumption and an increase in corona deposits, but this should not have increased the deposits of private banks as a whole. This is because the money that companies originally paid to their employees either increased corporate deposits through consumption or remained unused as household deposits.
- However, the TCCI loan/deposit ratio survey is conducted twice a year, in March and September, and the results of the March survey were reported in July.

Government Benefits that Cause Economic Bubbles

- In any case, the effect of bank credit creation in creating bubbles is not that great, and it seems that government benefits are the main cause of asset price bubbles.
- At the same time, this discussion provides a clue to the chicken-and-egg debate: Is it consumption or investment that is stagnant?
- Even if consumption increases, deposits in the private sector will only move from right to left, and total private deposits will not increase.
- However, if investment increases, lending should increase and the loan-to-deposit ratio should rise. If the loan-to-deposit ratio does not rise, then it is investment that is stagnant.

Money Stock

第1図 マネタリーベースとマネーサプライ



(データ出所) 日本銀行

- The above argument can be confirmed by the Bank of Japan's "money stock" statistics.
- The monetary base surged in 2013 and growth has been slowing since then. This reflects the transition of Abenomics (inter-dimensional easing).
- In contrast, the growth of the broad money supply, which includes private deposits, was stable until 2019, but rose sharply in 2020. Needless to say, this is the effect of the corona measures.

Hanami Sake Economy

- The rakugo story "Hanami Sake" is a case in which the owner of an entertainment restaurant goes out to drink with other restaurants in the same business.
 - <https://www2.kumagaku.ac.jp/teacher/~sasayama/macroecon/mailmagahanami.html>
- In the rakugo story "Hanami-Sake" (cherry-blossom viewing party), two men, Hatsuan (A) and Kumasan (B), who wanted to make money by selling sake at a cherry-blossom viewing party, paid each other to drink sake, but the money never increased and only the sake ran out.
- The criticism by Shintaro Ryu (1962) that "Japan's economic prosperity is nothing more than a cherry-blossom viewing party" is that "Japan's economy is a service economy in which people pay each other for services and exchange services, but the economy is not growing.
- This was criticized by Ryutaro Komiya, and I think the point is that the service economy is not a cherry-picked drink.
- The service economy, however, is vulnerable to infection, similar to the fact that cherry blossom viewing in real life is no longer possible due to corona.

Rising Money Stock may create the Bubble

- In fact, there was no linkage between rising stock prices and M3 until spring 2020. The problem is after that.
 - (Nihon Keizai Shimbun, October 13, 2020, https://www.nikkei.com/article/DGXLASFL13HA4_T11C20A0000000/)
- The stock price bubble is said to be a "Hanami sake economy", but even if Mr. A and Mr. B buy and sell stocks to each other, the stock price will not rise by itself. This is because their total deposits do not increase.
- The asset price bubble at the end of the 1980s was probably caused solely by the expansion of private credit (increase in deposits).

Why total deposits increased?

- In normal times, when there is no increase in lending or government benefits, the total amount of deposits does not increase because restaurants take money from ordinary consumers to pay rent to landlords.
- In a corona disaster, however, restaurant owners will pay rent with benefits and loans created by the banks.
- Consumers' deposits have not been transferred to the restaurants, so total deposits have increased. This is what causes stock prices to rise.

Counter Corona Measures Created Bubbles

- The last Nikkei article on the relationship between money supply and stock prices is the one dated October 13 above.
- There has been a great rise in stock prices since the end of the year, when it was called "the three weeks of victory," but there has been no article on the relationship between M3 and stock prices during this period.
- The Nikkei article above says that the linkage between stock prices and money supply is fake or temporary, but the asset price bubble in the late 1980s was solely due to excessive lending by private banks.
- Based on the above considerations, it would be better to stop benefits and unsecured loans, and normalize economic activities even though the number of infected people will increase, in order to suppress the bubble.

What are the Investors afraid of?

- As Mr. Karakama, an economist, said, "What the market fears most is the end of the corona infection." I wonder if he means that the bubble will burst when the corona disaster ends because it is the corona countermeasure that supports the recent asset price bubble.
- The optimal strategy might be to achieve zero corona with a very strong lockdown of, say, two months, and then let the economy operate normally without benefits or unsecured loans. Continuing with-corona while providing benefits as we do now may be the worst, as the corona disaster will continue and bubbles will occur.

Why The Quantity Theory Fails

- It may be that the economic policies against Corona ultimately increased the assets of the wealthy while helping the restaurant and tourism industries.
- The quantity of money theory: $MV=PY$ expired because the increase in M was no longer reflected in PY due to the decline in V . However, if we consider PY as the total market value of assets, it may still be valid.

The mystery is solved!

- Last year's "Three Weeks of Victory" was right around the time the third wave of Corona began, and it was a mystery why stock prices soared even though the economy was supposed to deteriorate.
- However, the mystery can be solved if we interpret it as the market reading that fiscal and monetary policies would be implemented. Since economic activity itself would stagnate even if fiscal and monetary policies were implemented, the rise in stock prices was considered a mystery.