COVID-19 and structural changes to the Japanese economy - Some things have changed, while some have not

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Abstract

With the end of the COVID-19 pandemic gradually coming into sight, we believe the time is right to consider the structural changes to the Japanese economy brought about by the pandemic, particularly in terms of the flow of funds. At the start of the pandemic, the employment environment was expected to undergo major structural changes once the pandemic ended owing in part to the spread of teleworking; however, the pandemic failed to bring about drastic changes in the Japanese labor market, with the rate of teleworking effectively declining as time went on. Drastic changes in the industrial structure were also avoided by holding down the number of corporate bankruptcies through generous cash flow assistance measures. As a result, the pandemic had the effect of increasing household and corporate net savings. In terms of what is being done with financial assets, in effect net savings held, and while there have been signs of a partial increase in households' preference for risk assets, the pandemic has not brought about a drastic change in the uneven slant toward cash & deposits seen to date. Even bearing in mind deterioration in the fiscal balance and a rise in public debt as a result of the pandemic, we think the sustainability of public debt, which is supported by demand from net savings and net financial assets in the private sector, is basically unchanged. There is growing concern globally about accelerating inflation, mainly due to supply constraints as the pandemic winds down, since accelerated inflation could significantly change the composition of private-sector financial assets and undermine the sustainability of public debt. We think it is unlikely that this situation will lead to a sharp acceleration in inflation in Japan. However, we see mounting latent risk of punctuated adjustments to the differences in prices between Japan and other countries stemming from the weaker yen as well as to the gaps in inflation.

Foreword

Even in the early stages of the spread of COVID-19, the question of the post-pandemic world was already a hot topic. People were forced to change the way they live and work as public health measures were adopted in an effort to prevent the spread of infection, as the world faced up to a pandemic unprecedented in recent times. It is not surprising then that discussion[i] emerged on whether or not the radical changes might be here to stay even after the pandemic is over, or whether or not new technologies and businesses resulting from the radical changes would transform the post-pandemic society and economy from what they looked like prior to the pandemic.

We think the post-pandemic world that has been the focus of this discussion is drawing closer in Japan and the rest of the world, thanks in part to rising vaccination rates. It is becoming clear that there were many mistaken assumptions about the post-pandemic world, things that surprisingly are not going to be discontinued from before the pandemic, and some things that are probably just going to return to the way they were before the pandemic.

In this report, we examine what changed and what did not in Japan and the Japanese economy during the pandemic in terms of household and corporate behavior. In particular, we focus on changes that did and did not occur in the flow of funds for households and companies. We focus on household and corporate fund flows because we think they are key to ascertaining the paths to be taken by the fiscal balance and public debt, which changed drastically during the pandemic, a point of interest and concern not just for Japan but for the rest of the world as well.

1. Changes to working styles and labor market

COVID-19 and Japanese-style adjustments to employment

Employment and the labor market were seen as likely to undergo considerable structural change after the end of the COVID-19 pandemic. Potential changes included not only major shifts in overall labor supply-demand stemming from the pandemic, but also sectoral shocks specific to the pandemic, including negative impact on personal and face-to-face services, resulting in structural changes stemming from asymmetrical shocks on the labor market by industry and job type. Another focus was on changes in market structure brought about by working from home and other new working styles that rapidly became commonplace as an effective means of preventing the spread of COVID-19.

With respect to macro-level changes in labor supply-demand conditions brought about by the pandemic, we have seen developments unique to Japan's labor market, such as moves to limit job losses and the number of unemployed. Even when the downturn in the labor market was most severe in April 2020, the number of people in employment fell by just 1.2% y-y and the number of unemployed rose by just 0.8%. Meanwhile, the rapid contraction in business activity due to the pandemic, such as falling sales, was absorbed in labor supply-demand terms by employees being placed on temporary leave. The number of employed people not at work peaked in April 2020, representing 6.3% of the number of employed people in April 2019 (***Figure 1***).

In addition to the safety net provided by the government, such as payments to those on temporary leave under the employment adjustment subsidy program, Japan's system of lifelong employment that underpins this safety net proved to be effective in avoiding adjustments in employment via sharp declines in the number of employed and sharp rises in the number of unemployed.

Trade-off in return for gradual adjustment in employment

The abovenoted labor market adjustments during the pandemic may have exacerbated the low liquidity of Japan's labor market, a feature that that has been pointed out for some time now. Looking at the number of employed persons by employment type during the pandemic shows that growth in the number of regular employees remained fairly consistent while the decline in employed persons was centered on non-regular employees such as casual, part-time, contract, and skilled contract workers (***Figure 2***).

Due to employment adjustments during the pandemic falling largely on non-regular employees, we estimate that the ratio of regular employees in the overall labor market increased. If the pandemic has not necessarily resulted in improved labor market liquidity for regular employees, we think it reasonable to conclude that the rise in the ratio of regular employees suggests that Japan's labor market liquidity has fallen even further.

The low level of labor market liquidity in Japan has generally thought to be a contributing factor to delaying labor market adjustments in response to structural changes in different industries and technological advances, and as a result contributing to reduced productivity and sluggish technological innovation on a macro level.

That said, if we take the view that a rise in the ratio of regular employees helps improve income levels and results in more stable income growth for workers in Japan, then this would likely ease upward pressure on household savings rates stemming from the precautionary saving motive and could therefore help boost household consumption demand.

Currently, we see few prospects for a rise in in the ratio of regular employees translating into increased income levels for workers in Japan or more stable income growth. This is because changes in employment brought about by labor market adjustments during the pandemic have largely centered on jobs providing relatively low salaries. The steep fall in the number of people employed in the accommodations, eating & drinking services sector, which was the sector hit hardest by restrictions on people going out and about and a sharp contraction in international travel during the pandemic, has been absorbed by increased hiring by medical institutions and long-term care service providers in the medical, health care & welfare sector (***Figure 3***)[ii]. Average salaries in the medical, health care & welfare sector are on a par with those in the accommodations, eating & drinking services sector, which tend to be somewhat low relative to other sectors. Even if workers moving between these two sectors results in an increase in regular employment, we still think this development is unlikely to result in marked improvements in salaries or income levels.

Changes in working practices and impact on labor market

We next examine the impact on Japan's labor market from changes in working practices, perhaps best exemplified by working from home gaining traction during the pandemic. One feature of changes in working practices during the pandemic in Japan has been a decline in working from home over time as people have become accustomed to living

with COVID-19.

Looking at the survey on changes in attitudes and lifestyle due to COVID-19 that the Cabinet Office has carried out three times during the pandemic, the telework rate was highest in the third survey carried out in Apr-May 2021 (each survey was carried out during a declared state of emergency). That said, the combined response rate for people with a telework rate of 50% or more (ie, those who answered they "telework almost all the time" or "mainly telework") was lower in the third survey than in the first survey (carried out in May 2020), both nationally and in the 23 Tokyo wards (***Figure 4***).

While this change could be explained by progress in implementing flexible working practices in response to the pandemic, we think it suggests signs of limits to telework and other changes to working styles being reached in Japan.

We can identify a modest positive correlation between uptake of telework and average monthly salaries by sector (***Figure 5***). Taking telework uptake as a proxy variable for the affinity of individual sector working practices with teleworking, and assuming that telework gradually gained traction in Japan during the pandemic and that sustained use of telework helped improve labor productivity, then labor supply-demand would have tended to ease in sectors with higher average salaries and tended to tighten in sectors that have low average salaries. This development should have resulted in a rise in salaries for workers in sectors with a strong affinity for telework as increased uptake of working from home improved productivity, while the workforce shifted from sectors with loose labor supply-demand conditions to sectors with tight conditions, thereby exacerbating a trend that has previously been observed in Japan's labor market—namely, widening salary and income disparities between sectors and average wages rising only modestly despite a structural tightening of the labor market due to Japan's declining population.

The effective decline in telework as the pandemic has gone on suggests that this aforementioned development is unlikely to gain much traction for now. If this is the case, however, we see a risk that it will prove difficult to develop momentum to overhaul Japan's labor market spurred on by unfavorable conditions being exacerbated by increasing disparities in salaries between sectors and limits to average wage increases. We think COVID-19 has ultimately not affected the structure of Japan's labor market to the extent initially expected at the outset of the pandemic.

2. Corporate finance and companies' investment behavior

COVID and companies' reactions from a financial perspective

Particularly in the early stages, COVID-19 brought economic activity to a standstill via public health restrictions, causing a sharp decline in corporate activity levels across a broad range of industrial sectors. Under such circumstances, companies had to raise funds from third-party sources to ensure they had enough working capital, especially to cover fixed costs, as their sales declined in the face of the pandemic. To address this need for funds, the government and the private sector collaborated to come up with a range of programs.

While such cash flow assistance measures were essential for companies to continue to operate despite the pandemic, there is also considerable concern that they will increase corporate debt and ultimately lead to solvency issues such as defaults and business failures.

In this chapter, we use macro data to identify the distinctive features of corporate finance during the pandemic and assess the risk of insolvency. If solvency risks arise, they tend to increase the credit costs of financial institutions, thereby threatening their financial soundness and the stability of the corporate bond market. They are also an important consideration when it comes to assessing risks to the stability of the financial system from the BOJ's continued large-scale monetary accommodation.

At the same time, changes in corporate finance, and particularly changes in fund-raising structures, during the pandemic, have brought with them changes in investment of funds, which also have ramifications for the financial and capital markets. In this chapter, we focus on such changes on the investment side.

COVID and corporate fund-raising

We start by using the BOJ's Flow of Funds Accounts (FFA) Statistics to look at changes in the level of private-sector nonfinancial companies' financial liabilities in Japan as a whole. Here, we focus in particular on changes in retained earnings and fund-raising from third-party sources arising from increased financial liabilities (ie, in macro terms, changes in financial surplus and deficit).

Comparing the pandemic with the global financial crisis of September 2008 (the so-called Lehman shock), we would say that whereas fund-raising via financial liabilities rose sharply during the pandemic thanks to the efforts of the Japanese government and the

BOJ to ensure smooth liquidity and credit supply, during the global financial crisis such fund-raising shrank owing to the rapid credit crunch. During the global financial crisis, nonfinancials unable to raise funds in this way were forced to rein in their capex and other physical investments to maximize retained earnings. Evidence of this is the way in which their financial surplus/deficit status was tilted firmly into positive territory. During the pandemic, we think that the sharp increase in fund-raising via financial liabilities made it possible to offset the portion of the decline in the capital surplus caused by the net decline in positive net cash flow and losses caused by rapidly falling sales (***Figure 6***).

We think the above moves helped avert in macro terms the situation of nonfinancials being pushed into cash flow problems by the pandemic.

Of course, in microeconomic terms, there were also cases where the pandemic had a major negative impact on businesses, resulting in severe cash flow problems, particularly in the services sector. Looking at the change in the ratio of interest-bearing debt to cash flow (from end-March 2020 to end-March 2021) in the Financial Statements Statistics of Corporations by Industry, we can see a notable deterioration in accommodations and eating & drinking services, and "other transportation" businesses, which include air transportation (***Figure 7***).

Bankruptcies have been kept under control; what now?

Another feature of the pandemic is that the deterioration in finances has not necessarily led to a rise in bankruptcies. Both the number of bankruptcies and total liabilities have been falling since the pandemic began (***Figure 8***). We think the decline in bankruptcies was partly supported by growth in the buffer against the depletion of funds as the rise in financial debt procurement in response to increased government support measures not only allowed companies to continue to meet their obligations but also enabled them to increase cash and deposits (***Figure 9***). The tendency for cash and deposit holdings to rise in tandem with procurement of financial debt can also be seen at companies in sectors most affected by the pandemic and at smaller companies, often viewed as having the most fragile finances (***Figure 10***).

The rise in procurement of financial debt witnessed at the start of the pandemic ran its course gradually as waves in the pandemic came and went. Just as debt procurement growth leveled off, capital surpluses, ie, net cash inflows, started to grow (***Figure 11***). This probably mainly reflects a recovery in sales at companies, even as infections continued to surge, on a partial resumption of economic activity, and simultaneously we

think this shows that companies did not necessarily expand investment in capex and other real assets in proportion to the growth in income. We think conditions for both the household and corporate segments are such that net savings could be maintained even during the pandemic.

Regardless of how tight finances were for companies during the pandemic, overseas direct investment continued to grow relatively stably. Despite increased uncertainty about business conditions because of the pandemic, this shows that appetites for expanding business overseas or acquiring technologies from overseas companies were never satisfied.

In part owing to relatively generous government measures to support businesses during the pandemic, bankruptcies were held in check, and companies built up ample cash and deposits and expanded net savings, with the result that visibility on avoiding financial solvency risk has increased. This suggests it is unlikely that the pandemic will lead to much of a change in the industrial structure of Japan in terms of the scale of companies and composition of sectors, for instance.

3. "Forced savings" and what happens next?

COVID-19 pandemic has caused "forced savings"

The coronavirus pandemic has given rise to "forced savings" on a major scale, as public health restrictions imposed on people's movements to rein in the spread of the virus had the effect of taking away people's opportunities to spend money, and at the same time government cash handouts and subsidies gave a one-time boost to incomes. The impact was not only seen in the household sector. During the coronavirus pandemic, financial liabilities rose sharply at companies facing a major decline in net cash inflows and at companies raising funds to prepare in case of such a decline. As corporations are likely trying to secure the funds to make eventual reductions in such liabilities, already we can clearly see the tendency for large increases in net savings at corporations.
This increase in net savings brought on by the coronavirus pandemic at both private households and corporations is sometimes referred to as "forced savings". As economic activity restarts after the pandemic, we can expect these forced savings to be drawn down and spent in the form of consumer spending and capital expenditure. The drawdown of forced savings may get under way comparatively quickly once pent-up demand is released. However, based on what has happened in the US and Europe, where the restart to economic activity is already under way, the probability seems low that the full amount of forced savings will be drawn down and spent.

Forced savings at households and outlook

Let's take a look at the situation regarding forced savings at households in Japan. Using data from income and outlay accounts from the national accounts of Japan, we see that the item "other current transfers, payable" is roughly comparable in size to the government's special cash handouts. If we deduct this amount from gross savings, and then compare the result to past average savings or the savings trendline, then we can see how much was accumulated in "backward-looking savings" as a result of the spread of the coronavirus or related lost opportunities to spend during the pandemic owing to public health restrictions on people's activities. In Apr–Jun 2020, when disbursement of the special cash handouts got started, the flow of household savings came to more than ¥70trn on an annualized basis. Even after the disbursements were completed and the boost to savings from "other current transfers, payable" dropped out of the picture, saving flows have stayed at a level in excess of ¥20trn on an annualized basis.

As the pandemic settles down, the size of the drawdown of forced savings will be determined by the degree to which pent-up demand emerges (such as in the form of so-called revenge spending), and by the extent to which incomes recover. If we make the somewhat bullish assumption that household disposable income from Oct–Dec 2021 onward will return to the average trend of 2017–2019, and apply our forecast for household consumption (our macroeconomic forecast as of 8 September 2021), then even in 2023, when we forecast household spending will largely return to normal, savings would be much higher than the pre-pandemic average, by more than ¥10trn (annualized). To put this another way, the forced savings caused by the pandemic will not necessarily all be released as spending, and it looks very likely that some amount will linger in the form of financial assets (***Figure 12***).

Financial assets as a destination for forced savings

To date, the ratio of forced savings held as savings and deposits has made up the vast majority of such funds held as financial assets. The pandemic has been a period of unprecedented uncertainty for both households and companies, a situation that we think generated strong incentives to hold financial assets as a defensive measure.

However as the pandemic subsides and economic activities are restarted, this kind of incentive to hold financial assets defensively should decline, and as a result, some room to change the way in which financial assets are held may emerge. Depending on the direction taken by interest rates, forex, and share prices accompanying such a shift in the form financial assets take, the real economy and underlying growth trend could take a positive turn, such as if private-sector investors in Japan become more active in taking on risk. Conversely, such a shift could lead to a seismic drop in demand for government bonds and resultant disruption of fiscal stability.

To gain some insight into potential shifts in how financial assets are held after the pandemic subsides, we take a look here at households' attitudes toward financial assets and the change in how households actually selected assets during the pandemic. To put it in a nutshell, a characteristic change in household attitudes toward holding financial assets during the pandemic was a greater appetite for holding higher risk assets such as equities and investment trusts (***Figure 13*** and ***Figure 14***).

Let's take a look at the BOJ's Flow of Funds statistics to see whether these changes in preferences for risk assets are reflected in actual household financial asset holdings. The type of asset with the most noticeable increase is cash & deposits, the rise in which stems from the emergence of and increase in the aforementioned forced savings (y-y increase

of more than ¥40trn as of end-June 2021). At the same time, the trend for investment trusts, holdings of which had been on a net downturn prior to the pandemic, turned to an increase (y-y increase of around ¥4trn as of end-June 2021) (***Figure 15***).

The shift of funds into investment trusts is consistent with the increase in appetite for holding higher risk assets mentioned above. However, the amount of that increase represents just a tiny percentage of the ¥1,800trn in individual financial asset holdings. The rate of increase is not higher than that seen from 2013, after the start of the second Abe administration and launch of *Abenomics*, when high stock prices and a weak yen prevailed. Moreover, with the restart to economic activity, it is possible that people will lose interest in financial assets as a way of managing their money or have less time available to make financial decisions and therefore the shift into higher risk financial assets may ebb[iii] . Our assessment at present is that there is insufficient evidence to say forced savings under the pandemic have accelerated risk-taking in private financial asset holdings, particularly those of households.

4. Fiscal balance, change in public debt, and change in supply-demand conditions

Pandemic sharply worsens fiscal balance

The pandemic sharply worsened the fiscal balance as fiscal spending was massively increased in response to a rapid contraction in economic activity. In FY20, the initial budget for total expenditures in the general account was ¥102.7trn, and grew to ¥175.7trn with the addition of three supplementary budgets. Consequently, income from bonds increased by roughly ¥80trn, from ¥32.7trn in the initial budget, to ¥112.6trn after the supplementary budgets. In the initial FY20 budget, public bonds outstanding were expected to amount to ¥906trn (159% of nominal GDP) at end-FY20, but ended up amounting to ¥985trn (184%) at end-FY20. In FY21, the initial budget for income from bonds was ¥43.6trn, and public bonds outstanding were projected to be kept at ¥990trn (177%) at end-FY21. However, the new Kishida administration has instructed related policy bodies to draw up stimulus measures, which are supposed to be on the scale of tens of trillion yen. We thus expect supplementary budgets for FY21 to lead to further growth in the fiscal deficit and in public bonds outstanding.

Points to watch in terms of fiscal policy and public debt after the pandemic

Key longer-term points of interest for after the pandemic are what happens with the heavily battered fiscal balance and management of the bloated public debt. For now, we see no need to think that the Japanese government will descend into fiscal management devoid of discipline. LDP Policy Research Council Chair Sanae Takaichi, who stood as a candidate in the LDP presidential election in September, argued for putting on hold fiscal discipline that targets returning the primary balance to a surplus until the 2% price stability target is achieved. However, the policy platform issued by the LDP on 12 October ahead of the general election did not include anything that could be construed as leading to a relaxation of fiscal discipline. We think it makes sense to assume fiscal management aimed at achieving fiscal consolidation targets, including returning the primary balance to a surplus, will be maintained, regardless of the deadlines for those targets. The problem then is whether or not worrisome conditions for debt arise, such as those that might destabilize the absorption of JGBs in the market even with the continuation of standard fiscal consolidation efforts.

When considering the sustainability of public debt, a key point of interest is the quantitative balance between Japanese private-sector net financial assets and public debt, as we have discussed and simulated in our medium-term projections for the Japanese economy[iv]. When based on what we have discussed thus far in the report, we think the pandemic is likely to have the effect of expanding private-sector net savings more than before, leaving the private sector with ample capacity to absorb public debt that has grown under the pandemic (***Figure 16***).

An important point of interest when considering long-term sustainability of public debt is the type of financial asset that will be used by the private sector to hold the increased portion of net savings. That's because stocks and other risk assets and foreign currency denominated assets would not support demand for yen-denominated public debt. As we discussed in Chapter 3, "forced savings" that rose under the pandemic have not been noticeably shifted into risk assets and we think they are unlikely to be going forward, a conclusion that should indicate that the pandemic has not necessarily reduced the sustainability of public debt.

Dilemma caused by sustainability of public debt and attaining 2% price stability target

Here, we review the conditions that will act against the sustainability of public debt. In the 2021 medium-term projections for the Japanese economy[v] one of the conclusions we drew was that a condition could be an increase in interest rates overall from a zero-interest state. This condition is important when considering the sustainability of public debt on the assumption that the BOJ holds about half of government debt as a result of the continuation over many years of quantitative (qualitative) monetary easing.

This is because, for the BOJ to be able to continue to hold more than ¥500trn in JGBs as assets on its balance sheet, we think it needs to treat its JGB holdings on an equal footing to banknotes and current account balances that do not pay any interest as a rule and are held on the liability side in about the same amount (***Figure 17***). Conversely, if JGBs produce positive yields, market demand for banknotes and BOJ current account balances will shift to JGBs and other assets that pay interest on a similar scale, which could destabilize the balance of the BOJ continuing to hold half of total JGBs that have been issued by way of pressure on the BOJ to reduce its liabilities. In connection with ***Figure 18***, our interpretation is that demand for the BOJ's interest-free debt with interest rates effectively in negative territory is about 25% of nominal GDP. When short-term interest rates were about 1%, such demand was equivalent to about 10% of nominal GDP.

This suggests to us that an increase in interest rates could make it difficult for the BOJ to continue holding JGBs as assets on the current scale as it would lower demand for the BOJ's interest-free debt.

The condition for destabilizing the public debt supply-demand structure in Japan, namely, when interest rates broadly start to rise from a zero-interest state, is, generally speaking, the same thing as when inflation in Japan starts rising to a new level. Achieving the 2% price stability target in Japan could be viewed as something that could cause great consternation in the sense that it might upset the sustainability of public debt.

The trend in public debt during the pandemic is not only about the large volume by which the balance rose. The expansion in expenditures in response to the increase in infections ended relatively quickly and spending via public financial institutions that helped keep businesses afloat is likely to be repaid soon, and another feature is that the average tenor of JGB and FILP bond issues is becoming shorter (***Figure 19***). The shortening tenor of public debt can also be viewed as evidence that sustainability of debt is more likely to be damaged as a result of the BOJ starting to raise the policy interest rate with market interest rates rising across the board and attainment of the inflation target coming into view. Overall, we think the pandemic had the effect of boosting sensitivity of public debt to price volatility and BOJ monetary policy.

5. Conditions surrounding prices and possible changes to those conditions

Growing inflationary concerns around the world as the pandemic fades

As activity resumes in global economy, a pickup in inflation could be a major problem. Supply shortages (most notably the shortage of semiconductors) are painted as the main reason behind rising prices for consumer durables, demand for which held surprisingly firm or even grew during the pandemic. If the pickup in inflation is rooted in such supply constraints, we think it should be viewed as temporary. However, the view that the pickup in inflation is temporary could collapse if crude oil, natural gas, coal, and other fossil fuel prices start rising on concerns that production capacity expansion is unlikely in the move to carbon neutral.

Japan has thus far not been much affected by the global pickup in inflation. That said, the view is growing that Japan will see a pickup in inflation eventually, as prices have been rising for crude oil, natural gas, and other goods for which Japan mostly relies on imports. However, we forecast that the pickup in inflation will be muted, owing to the low-inflation structure that has become entrenched over the years.

Emerging theory that prices are too low in Japan

At a time like this, it is uncanny that the theory about Japan being too cheap or prices being too low in Japan has been featuring in some news media of late, particularly articles [vi] in the *Nikkei*. Compared to other MEDCs (more economically developed countries), the stagnation in the level of per-capita wages in Japan is obvious, both on a nominal basis and a real basis adjusted for the still floundering inflation rate (***Figure 20*** and ***Figure 21***)

The difference in prices that have formed over time as a result of differences in inflation rates in Japan and overseas and the difference between yen-denominated selling prices of goods and services in Japan and foreign-currency denominated selling prices overseas caused by recent weakening of the yen are likely to have widened further. A simple illustration of this is the yen's weakening in Japan's real effective exchange rate (REER) (***Figure 22***). The rate is nearing the level of June 2015, when BOJ Governor Haruhiko Kuroda told the Diet that the REER was unlikely to move in the direction of a weaker yen, which the market interpreted effectively as an intervention aimed at stanching yen weakness. Given the expanding difference between prices in Japan and overseas as told

by the yen's depreciation in the REER, if, due to some kind of shock, arbitraging of prices in Japan and overseas suddenly were to be effective, it could cause low prices in Japan to swiftly close the gap over a short period with high overseas prices.
The types of shock that we envision are as follows.
The first is the case in which consumers in Japan, with the assumption that nominal wage growth is weak, would suddenly face high overseas prices with the emergence of or increase in online vendors that use the same selling prices in Japan as they do overseas as a result of the spread[vii] of online shopping under the pandemic (***Figure 23***). For example, this is already becoming reality when using music streaming services or smartphone apps with selling prices listed in foreign currencies. Online sales of merchandise delivered directly to consumers from an overseas vendor might already be based on a uniform price applied globally, including shipments to Japan.
Second is the case in which supplies are cut off because provision of goods and services at lower prices in Japan than overseas is abandoned or is no longer possible. We think this could happen if supply constraints at the root of inflationary pressures in the global economy now become critical enough that vendors in Japan can no longer procure goods at a price that allows them make money. Another possibility is that vendors in Japan suddenly decide to withdraw from business after abandoning the effort to continue to supply goods and service more cheaply in Japan than overseas. As we discussed in Chapter 2, overseas direct investment by companies in Japan, which has been carried out regularly during the pandemic, could be evidence that companies might feasibly decide to withdraw from the market in Japan.
As an aside, if companies in Japan were to transfer their registrations to an overseas location in conjunction with their withdrawal from the market in Japan, it would mean a portion of the corporate sector's ample net savings would be transferred overseas, lowering income credits that support Japan's current account surplus, which warrants caution as it could increase the risk of weakening confidence in the monetary justification that supports demand for public debt from a quantitative perspective.

Risk that prices are no longer too low in Japan

The asset choices discussed in Chapter 3 for households in Japan that have been exposed to inflation such as this that is accompanied by a tectonic shift in prices could themselves face tectonic changes. We think attention should be paid to the rising prevalence of online purchases since the pandemic, the growing risk that supply chains for high-tech goods and rare metals in particular are severed, stemming from economic and national

security tensions involving China, and other buds starting to sprout that could lead to a tectonic change in prices.

Conclusion

In anticipation of the end of the pandemic, if we consider the structural changes to the economy in Japan caused by the pandemic, particularly in terms of the flow of funds, we come to the following conclusions.

First, there is little evidence that the structure of the labor market in Japan underwent major changes via changes in working practices (an expected consequence of the pandemic), and as a result, we think changes to household income conditions and structures have been minimal.

Second, the corporate fund procurement structure changed markedly in terms of a sharp increase in financial liabilities and expansion of financial leverage as companies received liquidity support in response to a prolonged stagnation in economic activity. Along with expanded debt procurement, companies accumulated cash and deposits as assets, expanding net savings in preparation for future debt repayments. This held at bay the emergence of bankruptcy and other solvency risks and could be a factor in preventing the same risk further down the line.

Third, the pandemic had the effect of increasing household and corporate net savings (ie, the occurrence of forced savings), via reduced opportunities to spend and via income and the transfer of funds (mainly from the public sector). When examining whether forced savings led to changes in the types of financial assets being held, we see signs that households were slightly more motivated than before to own risk assets, but not a big enough shift to affect the sustainability of public debt, which we discuss next.

Fourth, we think the sustainability of public debt, which rose markedly amid the pandemic, has been maintained owing to: (1) an increase in net savings and net financial assets in the private sector; and (2) an increase in JGB holdings supported by the BOJ's monetary policy. The possibility of a shift to higher interest rates, which could adversely affect the sustainability of public debt, has thus far not emerged.

Finally, a pickup in inflation, which could play a part in shifting interest rates to a higher level as we just discussed, is a growing concern around the world, mainly owing to supply constraints as the end of the pandemic nears. We think the possibility that this will meaningfully accelerate inflation in Japan is currently low. However, we see mounting latent risk of tectonic adjustments to differences in inflation between Japan and overseas and differences in prices between Japan and overseas caused by yen weakness. We see signs that online vendors with global operations could adopt uniform pricing for all countries or that supply networks could be disrupted owing to the standoff between the US and China, both of which could trigger the tectonic adjustments

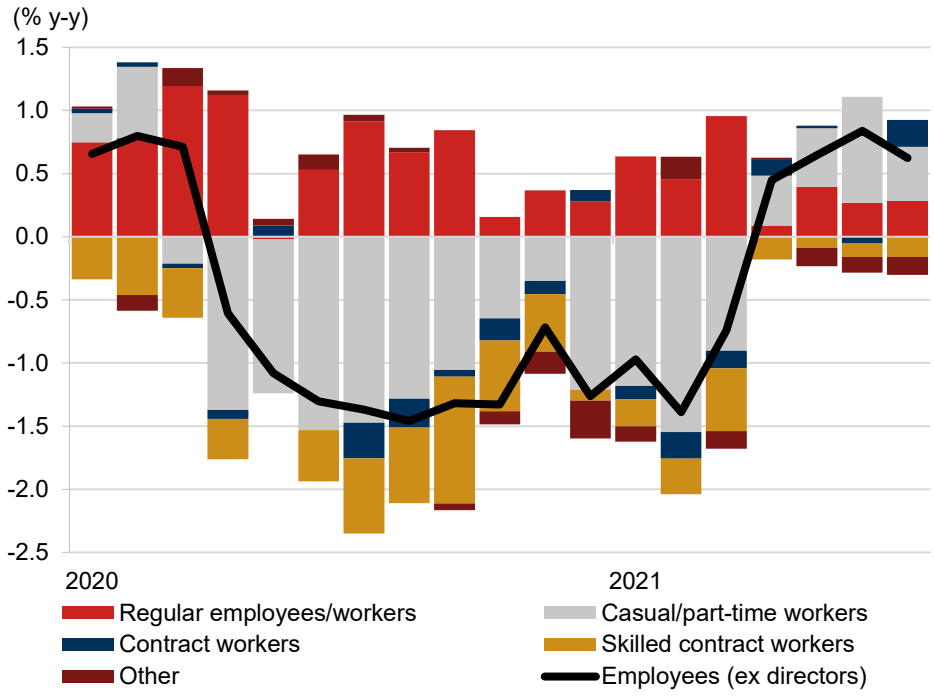
we speak of, but we think it can be summed up that one of the features of the pandemic was that it gave rise to those signs.

Figures

Figure 1: Changes in number of people employed, unemployed, and on temporary leave during the COVID-19 pandemic

Source: Nomura, based on Ministry of Internal Affairs and Communications data

Figure 2: Rate of increase in the number of employees by employment status

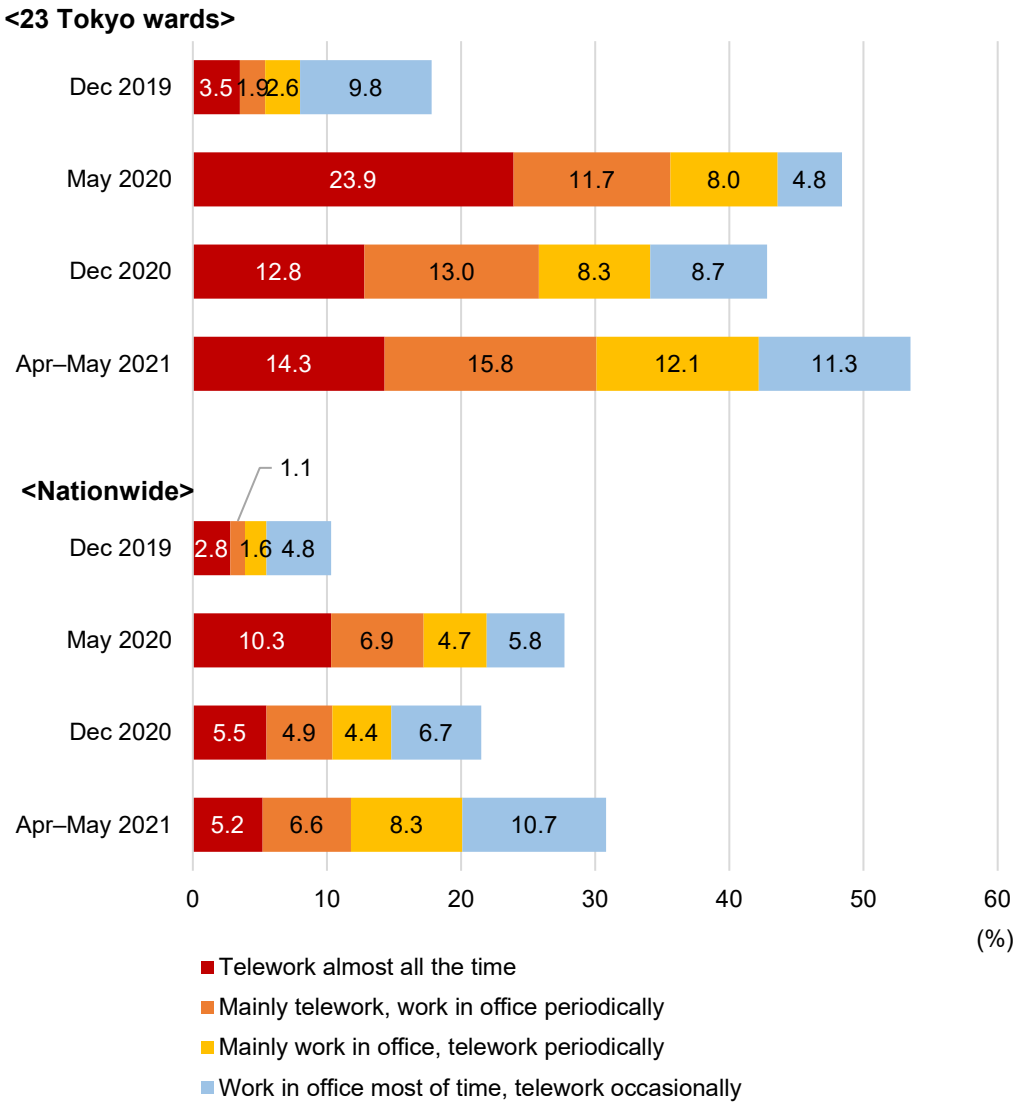


Source: Nomura, based on Ministry of Internal Affairs and Communications data

Figure 3: Change in number of employed persons by sector (Oct-Dec 2020)

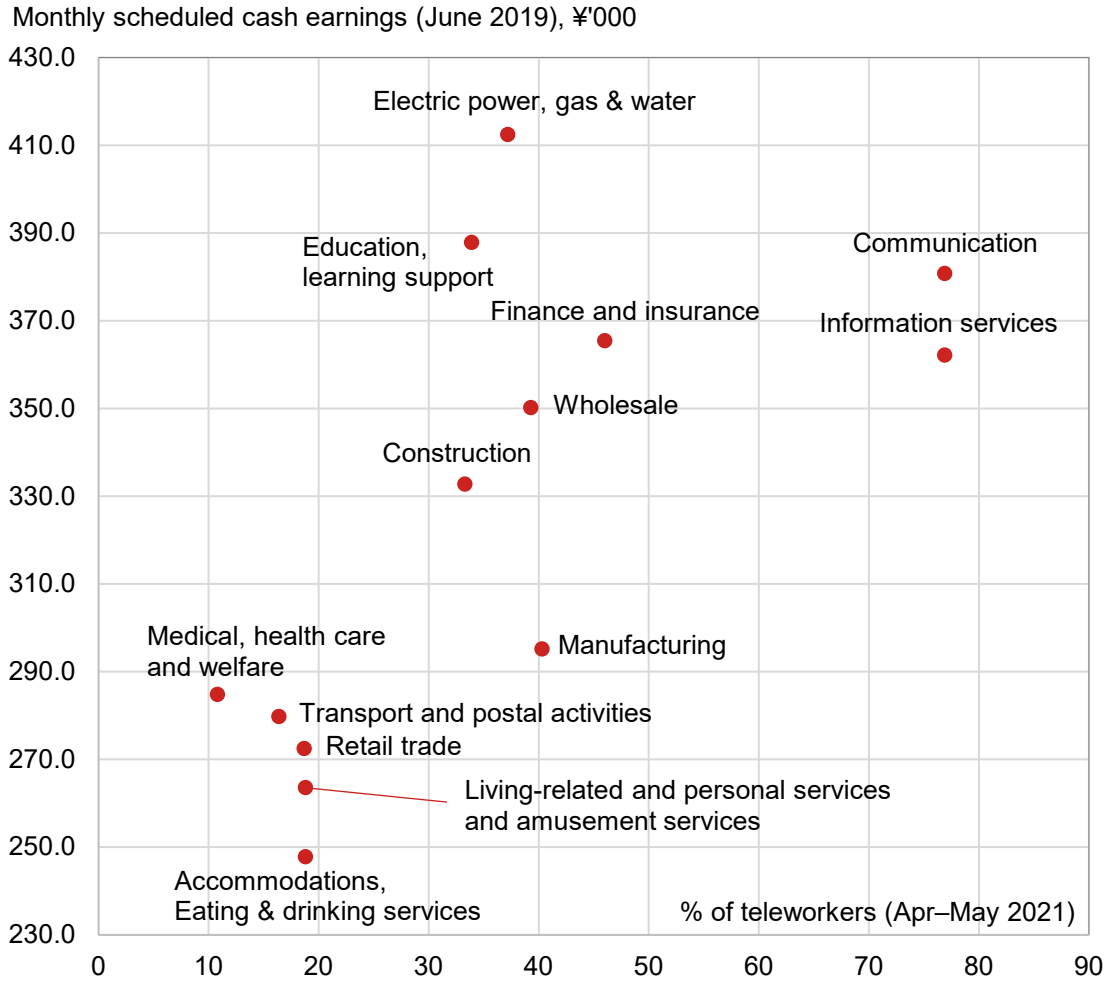
Source: Nomura, based on Ministry of Internal Affairs and Communications data

Figure 4: Changes in telework rate



Source: Nomura, based on Cabinet Office data

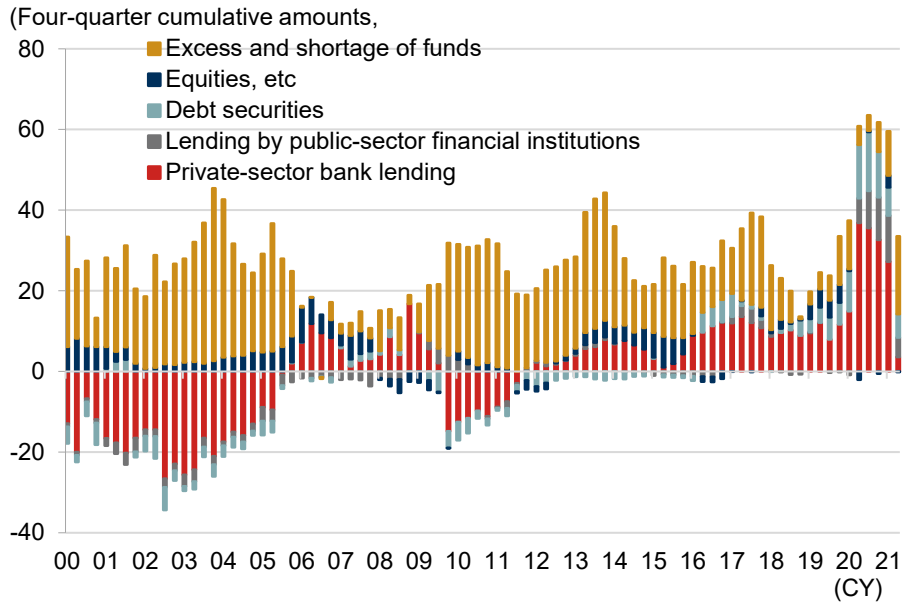
Figure 5: Telework uptake and average salary by sector



Note: Average salaries based on 2019 survey data to eliminate impact of COVID-19 pandemic. Sectors with differing classifications for telework uptake survey and average salary data allocated to closest corresponding sector.

Source: Nomura, based on Cabinet Office and Ministry of Health, Labour and Welfare data

Figure 6: Fund-raising by private-sector nonfinancial companies (absolute change in debt)



Source: Nomura, based on BOJ data

Figure 7: Change in the ratio of interest-bearing debt to cash flow (from end-March 2020 to end-March 2021)

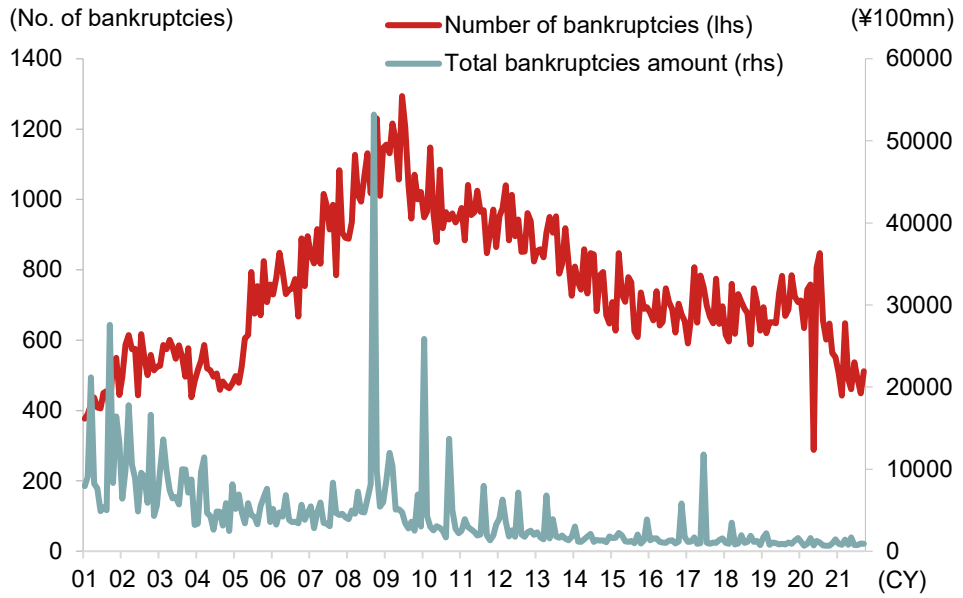
(x)

Sector \ Classifying by capital size	¥1bn or over	¥100mn–¥1bn	¥50mn–¥100mn	¥20mn–¥50mn	¥10mn–¥20mn
Manufacturing	0.2	0.1	1.4	0.2	2.8
Mining and quarrying of stone and gravel	5.7	0.8	-0.9	-0.2	-10.6
Construction	0.4	-0.6	-0.3	-1.1	2.6
Production, transmission and distribution of electricity	3.8	0.6	-0.6	2.5	2.7
Production, transmission and distribution of gas	0.4	0.7	-1.2	1.1	-2.8
Information and communications	0.7	0.0	9.6	6.7	11.2
Railway, road passenger and road freight transport	13.9	5.4	1.5	1.9	-0.7
Water transport	-1.0	1.8	3.7	7.6	-6.6
Miscellaneous transport		13.5	0.5	2.9	6.1
Wholesale trade	0.5	-0.9	1.6	3.6	2.6
Retail trade	0.0	-0.3	-2.8	9.9	2.9
Real estate	0.5	1.7	-0.7	-1.2	3.6
Goods rental and leasing	9.4	0.8	-1.3	0.4	6.9
Accommodations, eating and drinking services			8.0	38.2	132.7
Living-related and personal services and amusement services	11.0	5.3	0.0	5.3	103.6
Advertising	5.0	2.0	5.8	24.4	10.5
Pure holding companies	-1.2	2.0	-7.8	-5.0	24.8
Miscellaneous scientific research, professional and technical services	-1.1	-2.8	-5.5	-2.2	6.5
Education, learning support	1.2	-0.2	-12.2	0.4	9.9
Medical, health care and welfare	-1.1	0.7	-0.9	-9.9	-1.6
Employment and worker dispatching services	0.4	0.3	3.8	-0.1	6.8
Miscellaneous services	0.3	-0.8	1.0	-4.1	7.8

Note: Red indicates a big increase in the ratio of interest-bearing debt to cash flow, while green indicates a big decline in the ratio.

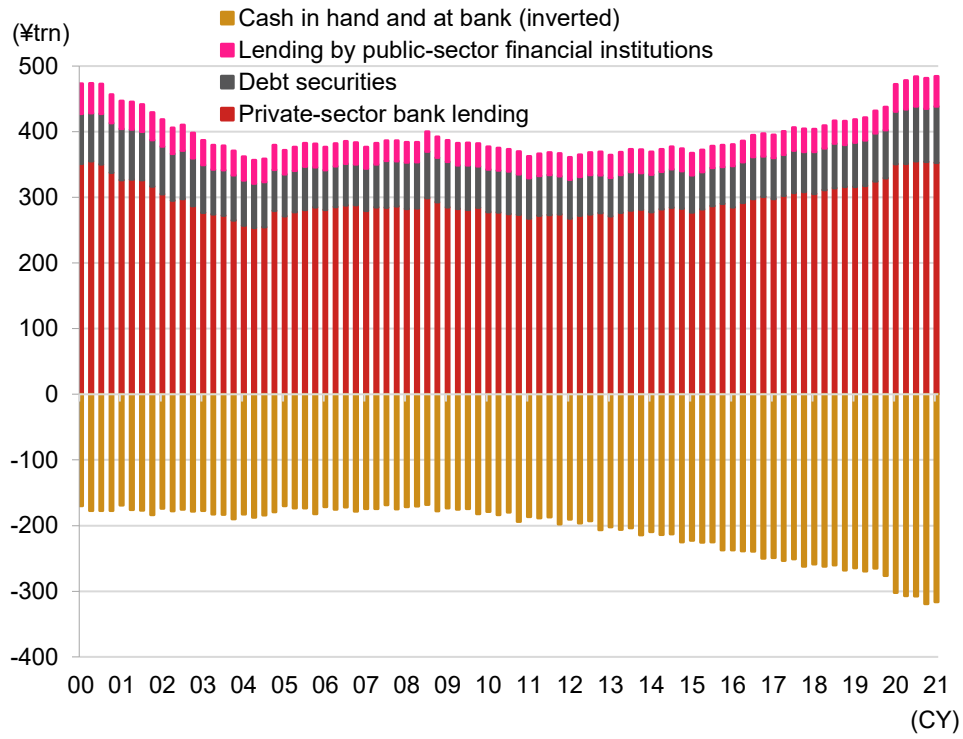
Source: Nomura, based on MOF data

Figure 8: Number of bankruptcies and total liabilities



Source: Nomura, based on Teikoku Databank data

Figure 9: Assets and liabilities of private-sector nonfinancial companies



Source: Nomura, based on BOJ data

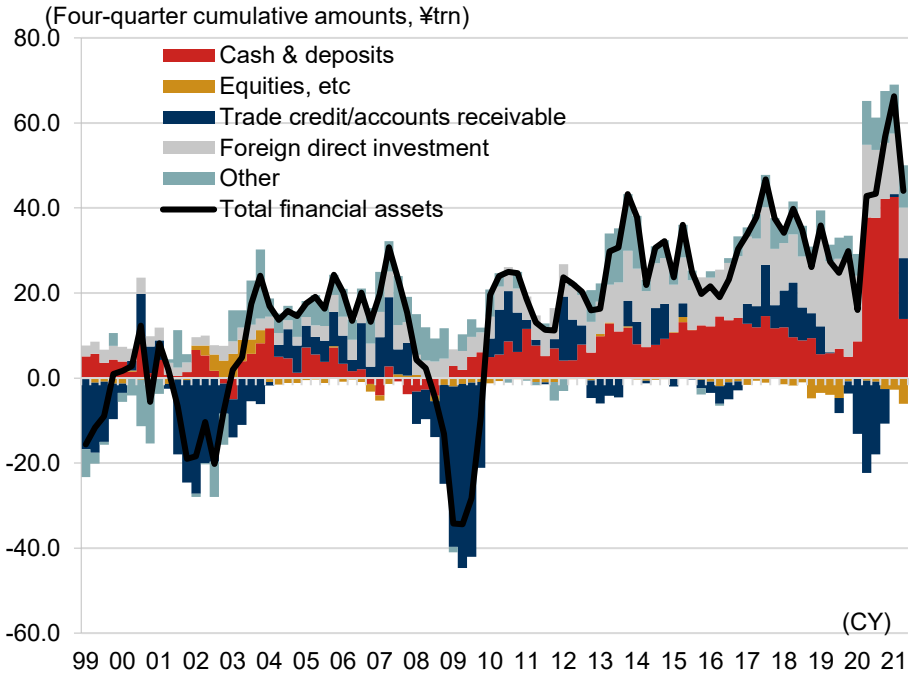
Figure 10: Cash and deposits/interest-bearing debt ratio (%) by sector and company size (end-March 2021)

Classifying by capital size / Sector	¥1bn or over	¥100mn–¥1bn	¥50mn–¥100mn	¥20mn–¥50mn	¥10mn–¥20mn
Manufacturing	31.8	38.2	49.0	51.9	70.2
Mining and quarrying of stone and gravel	24.8	57.5	62.3	41.2	16.1
Construction	47.1	76.3	83.5	89.8	80.9
Production, transmission and distribution of electricity	5.1	14.2	18.3	21.8	11.3
Production, transmission and distribution of gas	15.5	46.6	36.4	104.1	126.9
Information and communications	29.5	140.4	118.1	61.3	85.9
Railway, road passenger and road freight transport	9.1	14.5	34.4	57.0	72.2
Water transport	8.0	40.2	47.9	22.4	32.7
Miscellaneous transport	27.4	48.5	43.2	42.2	67.5
Wholesale trade	15.3	27.5	55.0	48.9	57.9
Retail trade	38.4	29.2	25.8	28.3	54.3
Real estate	11.3	29.1	54.3	46.3	33.2
Goods rental and leasing	5.8	5.5	16.9	49.0	64.2
Accommodations, eating and drinking services	33.2	22.5	21.4	21.9	39.2
Living-related and personal services and amusement services	48.6	47.4	140.9	65.7	55.7
Advertising	18.2	37.2	79.1	88.8	138.6
Pure holding companies	10.7	26.3	10.6	40.9	12.7
Miscellaneous scientific research, professional and technical services	78.9	55.7	87.3	84.6	91.3
Education, learning support	101.4	112.0	154.3	96.9	90.2
Medical, health care and welfare	54.3	50.1	33.5	19.6	97.6
Employment and worker dispatching services	87.6	227.4	134.4	195.3	49.8
Miscellaneous services	183.8	98.0	151.4	85.8	45.2

Note: The higher the ratio of cash and deposits to interest-bearing debt, the darker the blue.

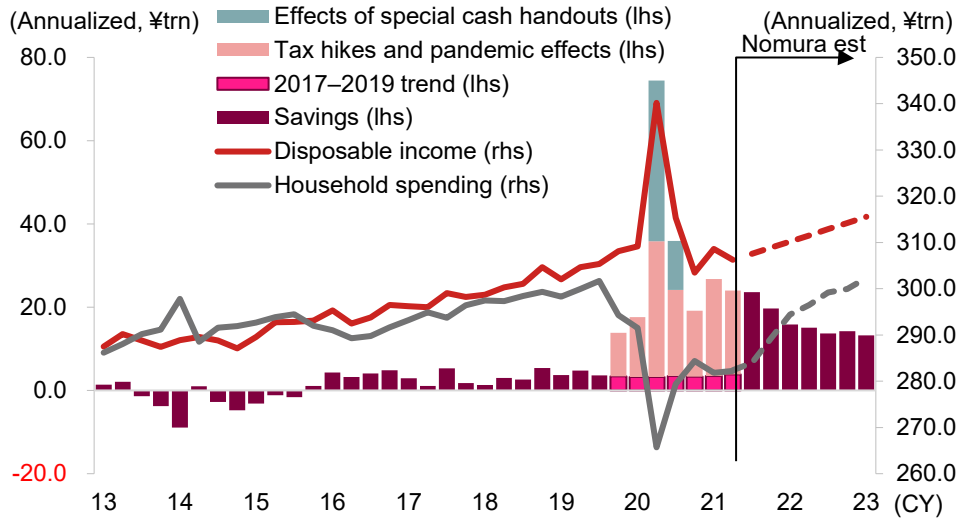
Source: Nomura, based on MOF data

Figure 11: Changes in financial assets at private-sector nonfinancial companies



Source: Nomura, based on BOJ data

Figure 12: Household savings rate

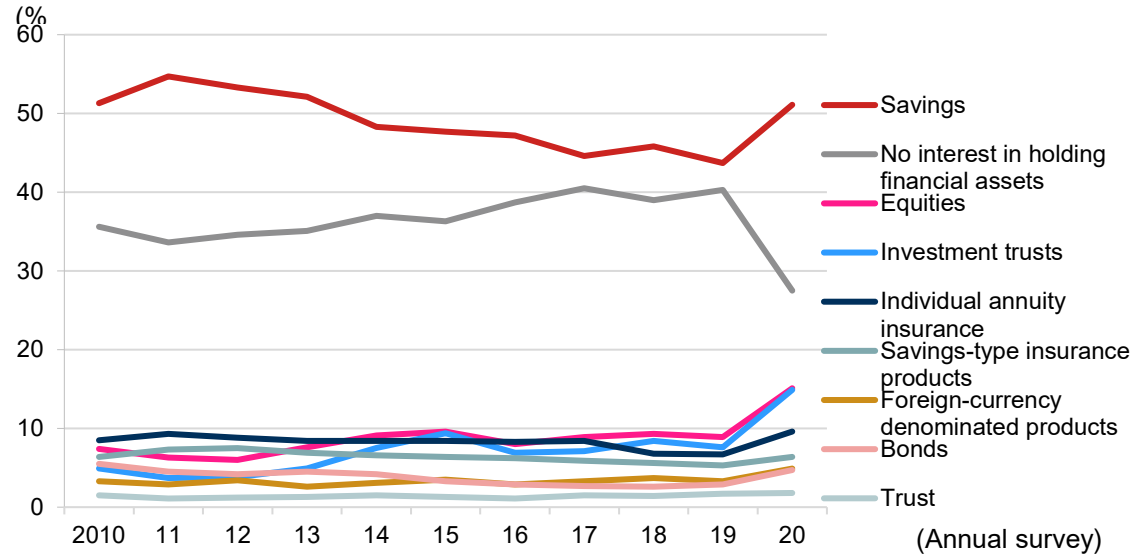


Note: See main text for posited explanations about savings in 2020 onward, and forward-looking assumptions.

Source: Nomura, based on Cabinet Office data

Figure 13: Interest shown by households in holding financial assets, by category

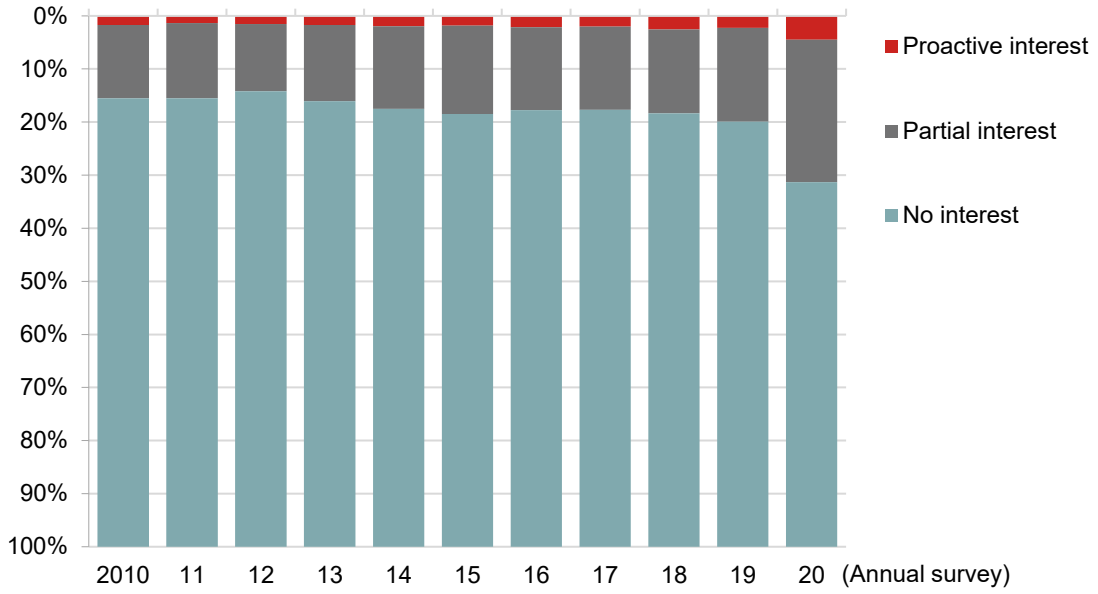
(Respondents were able to select multiple answers to indicate categories of financial assets in which they are interested)



Note: The survey method in 2020 differs from that in past years owing to the pandemic. Government bonds and other bonds are combined under "Bonds". Equity investment trusts, government bond investment trusts, and real estate investment trusts are combined in the category "Investment trusts".

Source: Nomura, based on Central Council for Financial Services Information data

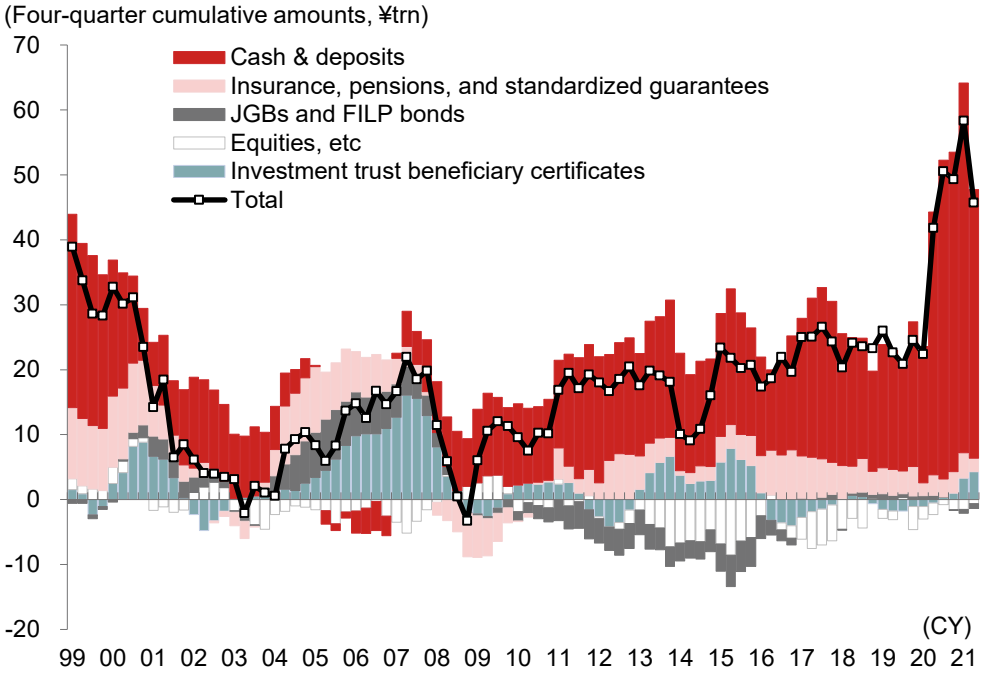
Figure 14: Interest in holding financial products for which there is no guarantee on principal



Note: The survey method in 2020 differs from that in past years owing to the pandemic.

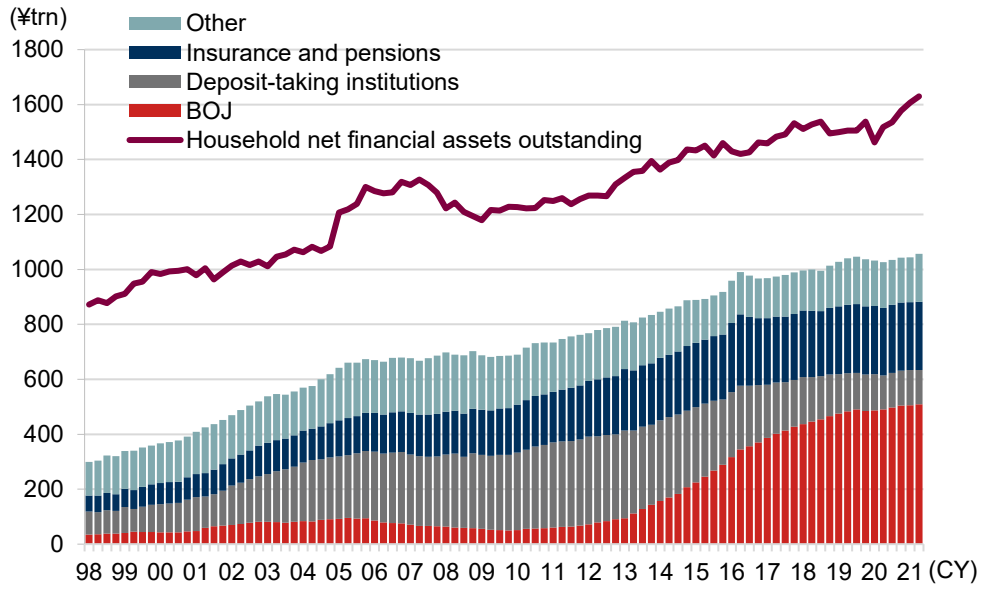
Source: Nomura, based on Central Council for Financial Services Information data

Figure 15: Change in main categories of household financial assets



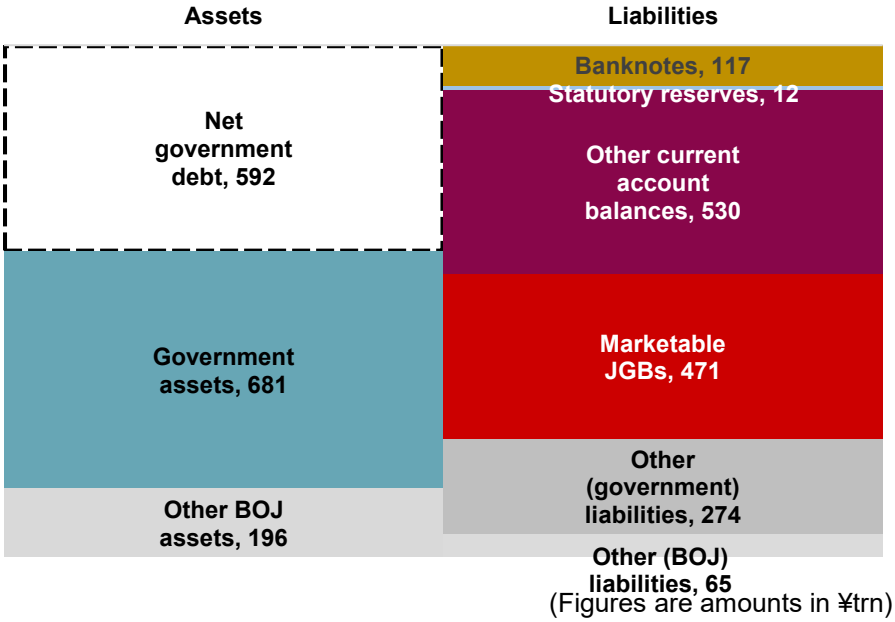
Source: Nomura, based on BOJ data

Figure 16: Owners of JGBs and FILP bonds, household net financial assets outstanding



Source: Nomura, based on BOJ data

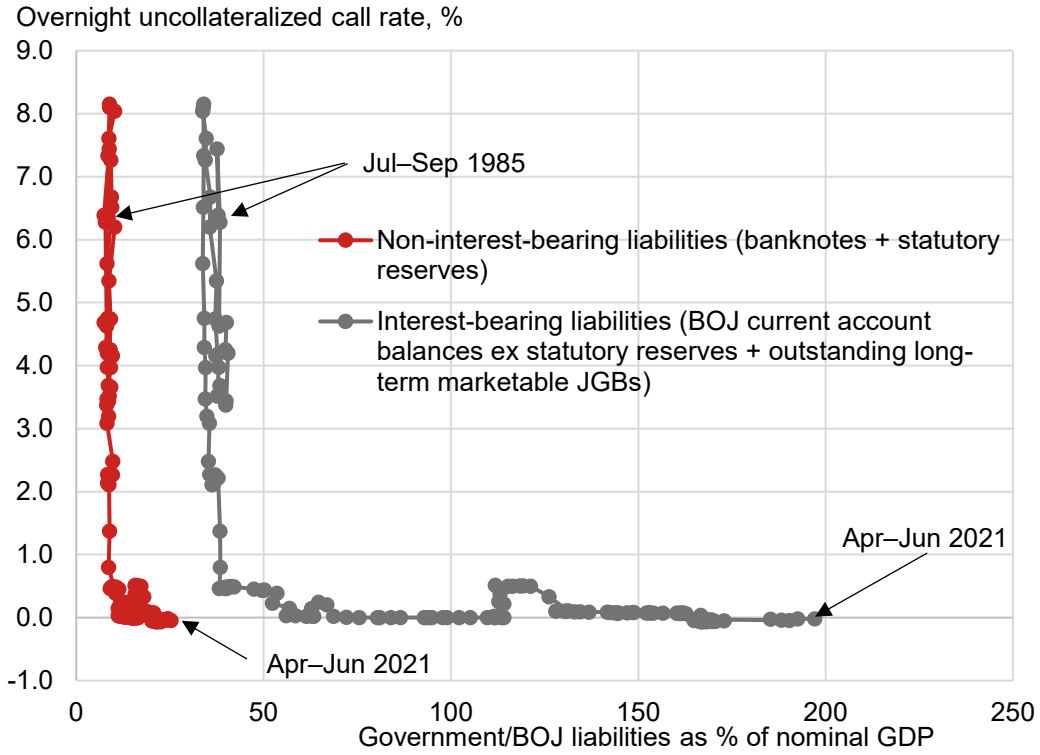
Figure 17: Consolidated government/BOJ balance sheet



Note: We have simply added together the general account assets and liabilities of the central government (end-March 2020) and the BOJ accounts (end-September 2021).

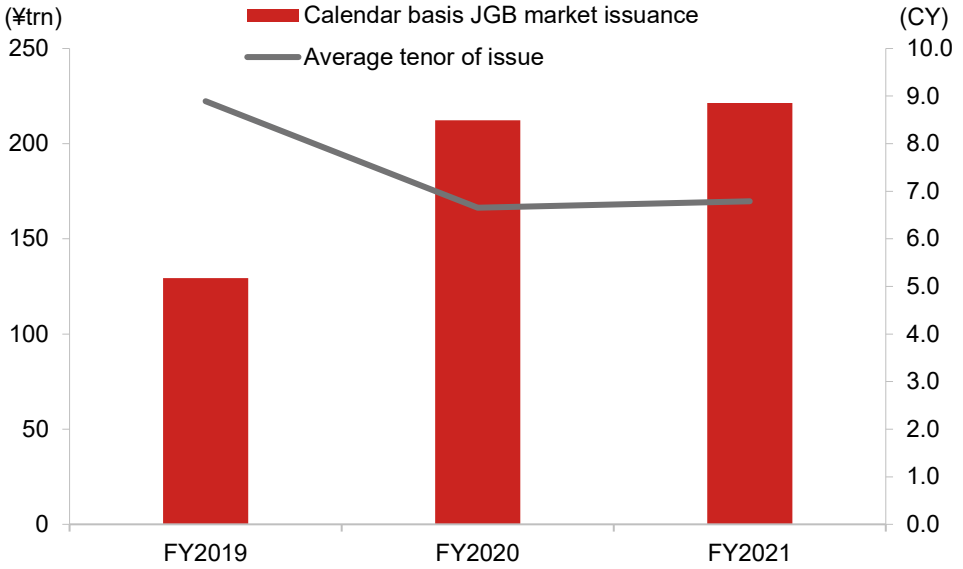
Source: Nomura, based on MOF and BOJ data

Figure 18: Government/BOJ liabilities and short-term interest rates



Source: Nomura, based on BOJ and Cabinet Office data

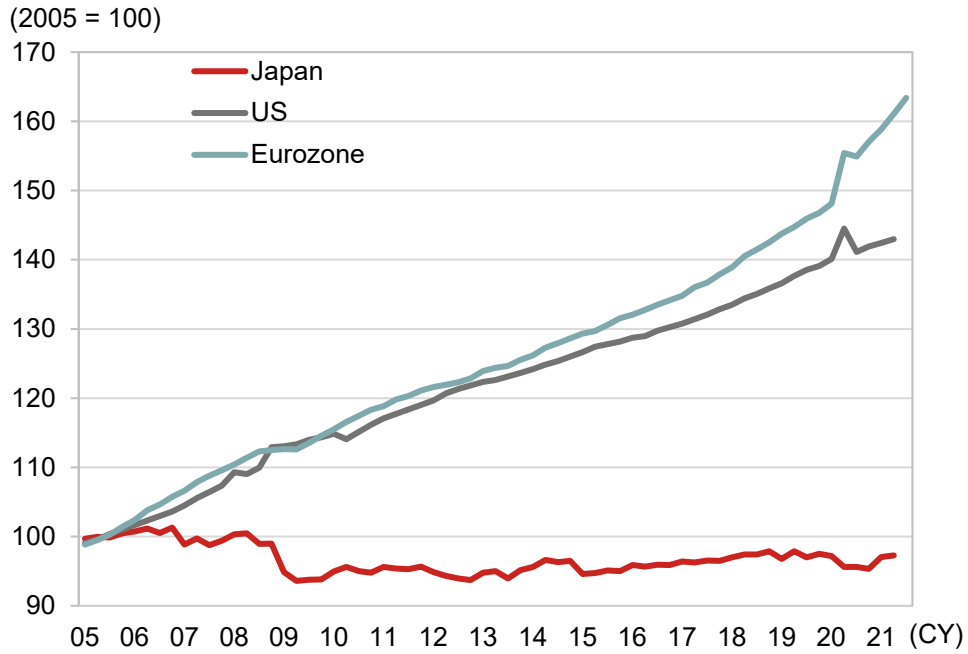
Figure 19: JGB issuance (calendar basis) and average tenor



Note: Figures through FY20 include supplementary budgets. Figures for FY21 based on initial budget.

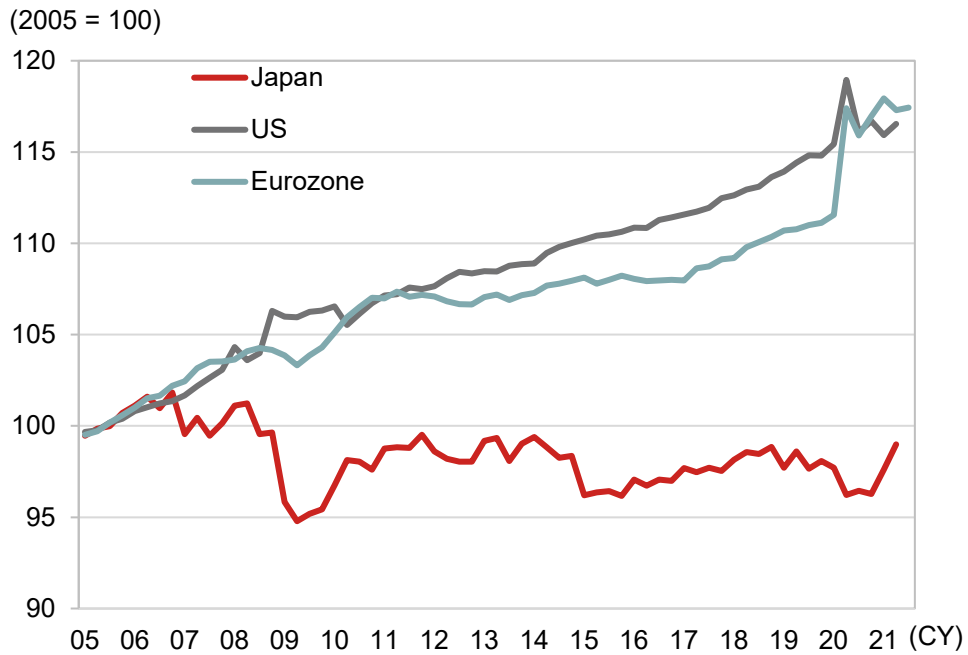
Source: Nomura, based on MOF data

Figure 20: Nominal wages per capita in MEDCs



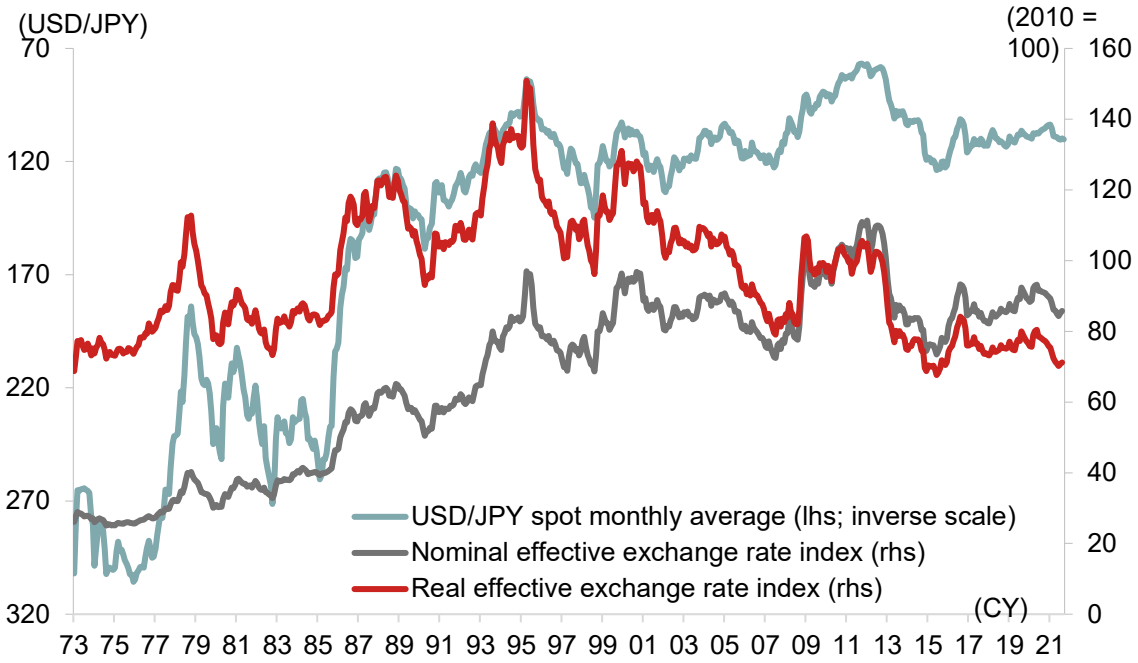
Source: Nomura, based on Haver Analytics data

Figure 21: Real wages per capita in MEDCs



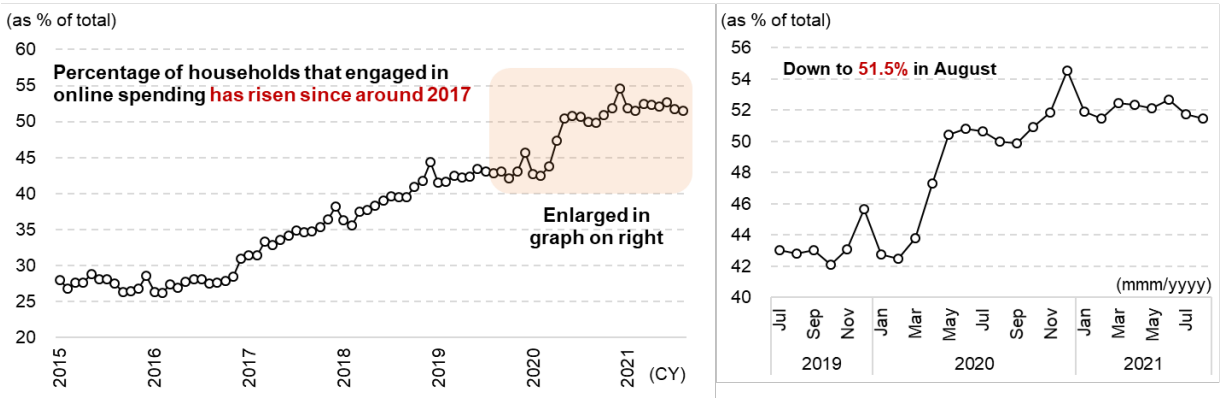
Source: Nomura, based on Haver Analytics data

Figure 22: USD/JPY and the effective exchange rate index



Source: Nomura, based on BOJ data

Figure 23: Household online shopping participation ratio



Note: Figures for households with two or more members.

Source: Nomura, based on Ministry of Internal Affairs and Communications data

Footnotes and references

[i] For reference, see Nomura's 15 May 2020 report *Anchor Report: Japan: Life after the coronavirus - Economic and societal changes ahead*

[ii] Here we have focused particularly on data for Oct–Dec 2020, one of the periods in which the COVID-19 pandemic had a particularly harsh impact on employment conditions, and not on the most recent data.

[iii] For reference, see our 12 July 2021 report *Japanese economy headed towards reopening (part two) - Revenge spending, prospects for forced savings, structural changes*

[iv] For reference, see our 28 November 2016 report *Japan medium-term macroeconomic outlook 2017 - Beyond the secular stagnation theory*, our 27 November 2017 report *Japan medium-term macroeconomic outlook 2018 - Implications of disappearing jobs*, our 27 November 2018 report *Japan medium-term macroeconomic outlook 2019 - In search of lost interest rates*, our 29 November 2019 report *Japan medium-term macroeconomic outlook 2020 - Where's the Worry: ultralow-temperature economy*, and our 30 November 2020 report *Japan medium-term macroeconomic outlook 2021 - The age of the Leviathan state: the need for "strength of the state" during the pandemic*

[v] For reference, see our 30 November 2020 report *Japan medium-term macroeconomic outlook 2021 - The age of the Leviathan state: the need for "strength of the state" during the pandemic*

[vi] One example is a series of articles published in the Nikkei in late June 2021 about Japan being too cheap and Japanese technology being divergent from global norms (Galapagos syndrome).

[vii] For reference, see our 8 October 2021 report *Japan: update on ''pandemic acceptance'' vs digitalization - Rising infections in August prompt only limited reaction in terms of online spending ratio*.