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Japan's economy under pressure of yen depreciation and commodity price hikes

A wide range of firms and households will be directly hit by the demerits of yen depreciation

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The yen suddenly started to weaken. The merits of a weak yen for the Japanese economy have been limited compared with the past

On April 20, 2022, the Japanese yen briefly plummeted to the 129-yen range against the US dollar, dropping to the lowest level in two decades. The JPY/USD exchange rate hovered at the mid-110-yen level up until the beginning of March, but suddenly changed course, weakening by more than 10% in only two-months' time (**Chart 1**).

How will the sharp yen depreciation affect the Japanese economy? Normally, yen depreciation works positively on Japan's economy not only because it boosts the volume of exports, thanks to improved price competitiveness of Japanese products in the international market,[1] but also because the number of inbound tourists increases as Japanese prices become relatively cheaper for foreign travelers. But we hold that the Japanese economy will not likely benefit this time from the merits that yen depreciation usually bring.

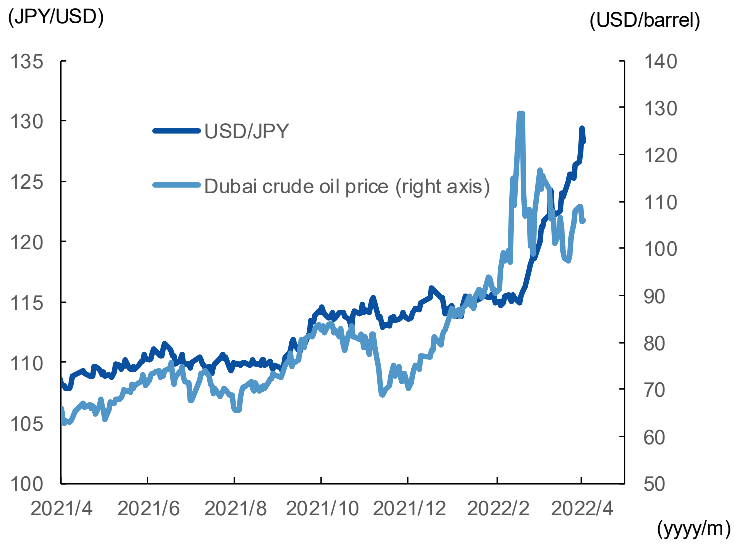
As for exports, with major supply constraints on a global scale now centering on semiconductors, it is difficult for manufacturers, such as carmakers, to increase their production significantly even if there is a strong demand. In addition, since Japanese manufacturers were transferring production facilities overseas even before the COVID-19 crisis (the share of overseas production has risen by about twofold over the past two decades), expanding overseas demand can now be covered by local production, and this structure has made it difficult to boost exports from Japan. In light of these factors, the push-up effect on export volume seems to have contracted compared with yen depreciation phases in the past. As travel restrictions due to the pandemic limit the number of inbound tourists, we do not foresee a full-fledged recovery in demand even if the yen continues to weaken. (A genuine recovery in inbound demand is projected to be delayed until after the second half of 2023, when vaccines and oral drugs to treat COVID-19 will have spread throughout the emerging nations.)

Another merit of yen depreciation may be the higher yen-denominated value of overseas investment income

[1] It should be noted that the impact of yen depreciation on boosting the export volume tends to materialize with a time lag. Ishikawa (2010) estimates that a change in export quantity driven by foreign exchange rate fluctuations (J curve effect) is maximized four quarters after the foreign exchange rate begins to change.

by Japanese global companies, but this income may not necessarily flow back to Japan. Reinvestment income, which is internal reserves of investee companies, accounts for roughly 40% to 50% of external direct investment income. In view of the growing uncertainty over the Ukraine-Russia war and low expectations for Japan's economic growth, it is difficult to imagine that foreign investment income which swells thanks to the yen's depreciation, will flow back to Japan for the purpose of funding domestic capital investment and increasing wages.

[Chart 1: JPY/USD and Dubai crude oil price]



Note: Daily data as of April 21, 2022.
Source: Made by MHRT based on Nikkei NEEDS-Financial QUEST.

The demerits of yen depreciation will deal a direct blow to firms and households

While the merits of yen depreciation will most likely fail to materialize under the current circumstances, the demerits will be a direct blow to the Japanese economy through import cost hikes. Simultaneous yen weakening and commodity price hikes in **Chart 1** are accelerating the rise in import prices. So demerits of a weak yen easily get attention in the current situation (albeit the primary factor behind import price hikes is rising commodity prices[2]).

Our next question is how will these demerits surface—whom will they affect and in what ways? In this report, we will examine the potential impact of yen depreciation on companies by size, industries, and the workforce.

First, from the company-size perspective, as Momma (2022) pointed out, the merits of yen depreciation will be concentrated on some global firms, while most of its burden will be shouldered by small to midsized enterprises (SMEs). Confirming the share of export in total sales by company size using the Bank of Japan's Tankan (Short-Term Economic Survey of Enterprises in Japan), we see that exports account for about 16% of sales for large companies, while the share falls to just under 2% for SMEs (data taken from the June 2020 survey, all industries basis). As SMEs are focused more on domestic business than large companies, the negative impact of yen depreciation seems to exceed the positive impact.

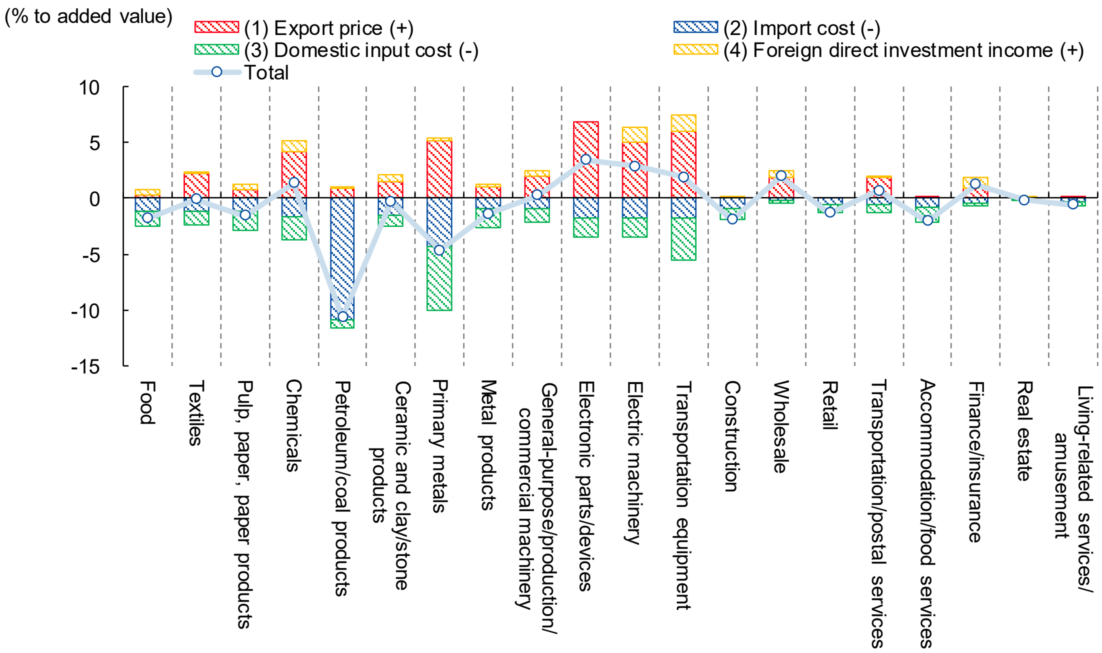
Next, we examine how yen depreciation may affect the respective industries. **Chart 2** shows the positive and negative impacts that may affect each industry in the short term in the case when the value of the Japanese yen

[2] In the January to March period of 2022, the impact of yen depreciation accounted for about one-quarter of the increase rate of import prices.

falls by 10%.[3] To be more specific, we depicted the following four impacts: (1) sales increase as a result of a rise in the yen conversion value of export prices contracted in US dollars (positive impact—**(1) of Chart 2**); (2) import cost hikes as a result of the yen conversion value of import prices rising (negative impact—**(2) of Chart 2**); (3) price increases of import items pushing up domestic input costs through the domestic supply chain (negative impact—**(3) of Chart 2**); and (4) increase in the yen conversion value of foreign investment income (positive impact—**(4) of Chart 2**).[4]

Looking at **Chart 2**, the total impact of yen depreciation is negative for many industries, suggesting that many companies will see their earnings pushed downward as a result of cost increases driven by yen depreciation in the short term. Industries that may benefit from increasing sales buoyed by higher export prices will be limited to competitive export industries, such as transportation equipment and electronic parts/devices.

[Chart 2: Short-term impact of a 10% yen depreciation on each industry]



Note: We calculated the domestic input cost assuming the price increases of import items are transferred to domestic items.
Source: Made by MHRT based on the Cabinet Office, *System of National Account (SNA)*, the Bank of Japan, *Component Ratio by Contract Currency in the EPI and IPI*, and the Ministry of Finance, Bank of Japan, *Direct Investment by Region and Industry*.

How many companies will benefit from the merits of yen depreciation as described earlier? In **Chart 3**, we categorized each industry as “industries that will benefit from yen depreciation” and “industries that will be negatively affected by yen depreciation,” and added up the numbers of such companies. The result revealed that only 30% of Japanese firms can profit from the merits of yen depreciation. Among these companies, large companies with a relatively large volume of overseas transactions that will most likely benefit from yen depreciation account for less than 1% (industries that benefit from yen depreciation 30% × large companies 0.7%). We can see that the benefits of yen depreciation are concentrated on a limited number of large global companies.

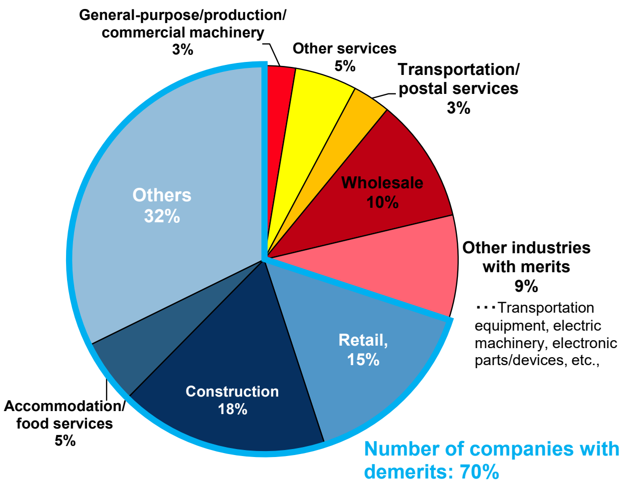
Lastly, we examine the impact on workers. **Chart 4** divides employees into those who will benefit from yen

[3] We assumed that the dollar-denominated import/export value for each industry will be affected by foreign exchange rate fluctuations, and estimated the potential impact on the prices of domestically produced items driven by rising input prices of import items using the SNA Input-Output Table in 2020. Refer to Onodera et al. (2019) for details. Since actual cost increases would be absorbed partially by each company, the estimated figures in this report may be overstating the increase in domestic input costs. Also, as the estimate only covers the impact on prices, it does not consider the increase in export quantity (J curve effect) fueled by the yen's depreciation.

[4] We calculated the income from foreign direct investment using a simplified method assuming that a 10% yen depreciation will increase the yen-conversion value of this income by 10%.

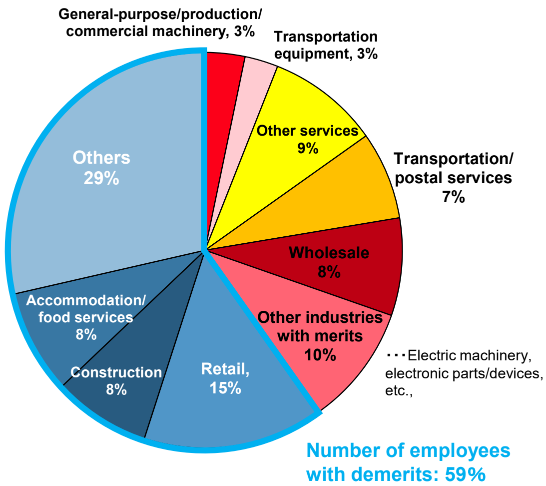
depreciation and those who will not by classifying them by industry, just as we did in **Chart 3**. We can see that about 60% of employees belong to industries that will be negatively affected by yen depreciation. Furthermore, the number of employees more likely to benefit from yen depreciation accounts for only a little more than 10% (industries that benefit from yen depreciation 40% × large companies 30%). This suggests that the majority of workers will be exposed to the downside effect of yen depreciation.

[Chart 3: Number of companies by industry]



Source: Made by MHRT based on the Ministry of Economy, Trade and Industry, *2016 Economic Census for Business Activity*.

[Chart 4: Number of employees by industry]



Source: Made by MHRT based on the Ministry of Economy, Trade and Industry, *2016 Economic Census for Business Activity*.

Yen depreciation and commodity price hikes expanded the outflow of domestic income to overseas

The current trend of the falling yen, coupled with the ongoing surge in commodity prices since the second half of last year, is inviting a substantial outflow of domestic income to overseas due to the sharp rise in import prices. The Dubai crude oil price, a major crude oil price indicator in the Asian market, reached USD130/barrel at the beginning of March. Although the price later pulled back, oil continues to be traded at a high price range of over USD100/barrel (**Chart 1**).

The trading losses, which reflect the impact of import/export price fluctuations on the real purchasing power of domestic residents, stood at -9.5 trillion yen in the October to December period of 2021 (reference year 2015) (**Chart 5**). This implies that the real income of Japanese residents has flowed outside Japan as a result of import prices rising relative to export prices. In **Chart 5**, we can see that although real GDP (Gross Domestic Product) is gradually recovering. But real GDI (Gross Domestic Income), an aggregated value of GDP and trading losses, has been declining since 2021.

Japan possesses the largest net external assets in the world,[5] and the country has managed to avoid falling into a current account deficit by covering the trade deficit with overseas investment income—current account balance in February 2022 was 6.2 trillion yen (2019:19.3 trillion yen) on an annualized basis, maintaining a slight surplus. But the current account balance could fall into a deficit at any time depending on the trend of yen depreciation and commodity price hikes.

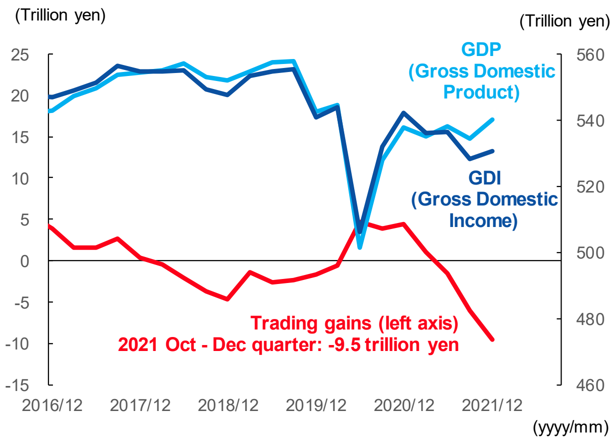
We estimate the current account balance in 2022 based on several crude oil price and JPY/USD exchange rate

[5] According to the Ministry of Finance's "International Investment Position of Japan," Japan's net external assets in major countries/regions around the world amounted to around 357 trillion yen, maintaining the world's top position for 30 consecutive years (followed by Germany with about 323 trillion yen).

scenarios[6]. Japan's current account would most likely turn into negative territory with annual average crude oil prices hovering at the USD110/barrel range and the JPY/USD rate moving beyond 130 yen (**Chart 6**). Although the average Dubai crude oil price in the January to March period of 2022 was USD96.5, falling short of the level that might cause a current account deficit, Japan may possibly see its current account balance turn negative in 2022 if the yen continue to weaken and commodity prices surge even higher going forward. If this scenario becomes a reality, it will be the first current account deficit since 1980—42 years ago.

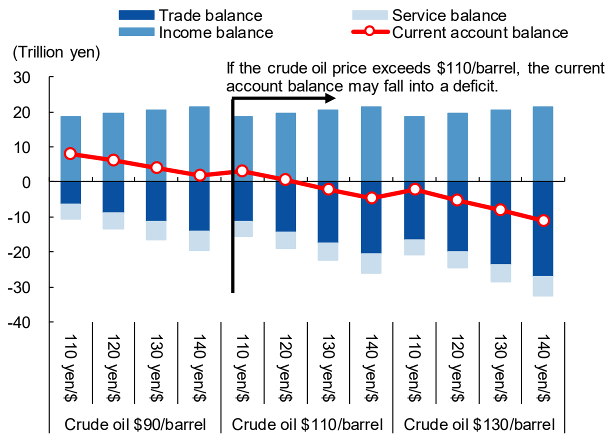
The current account deficit itself may invite another round of yen depreciation, since an increase in external payments made by Japanese firms causes more selling of the Japanese yen and the purchase of foreign currencies. We hold that Japan needs to ease the demerits of yen depreciation and commodity price hikes by introducing such measures in the short term, as mitigation package for rising fuel prices (since January 2022) and providing cash handouts to low-income households. In the medium to long term, Japan also needs to lower its dependency on fossil fuels through consistent decarbonization efforts, thereby improving the resilience of the economy against import price hikes.

[Chart 5: Real GDP/GDI and trading gains]



Source: Made by MHRT based on the Cabinet Office, *System of National Account (SNA)*.

[Chart 6: Estimate of the current account balance in various crude oil price/foreign exchange rate scenarios]



Source: Made by MHRT based on the Ministry of Finance, *Trade Statistics of Japan*, the Bank of Japan, *Balance of Payments Statistics*, and Nikkei NEEDS-Financial QUEST.

Reference

Refer to the original Japanese report by clicking the URL below for the reference material.

https://www.mizuho-rt.co.jp/publication/report/research/express/2022/express-jp220422.html

6 We used trade balance, balance of payment, Dubai crude oil prices, and JPY/USD exchange rates for the October to December period of 2021 to estimate the current account balance on an annual basis. We assumed that for import/export, only the USD-denominated portion would increase as a result of yen depreciation based on the Ministry of Finance's "Share of Currency in Trade." For the mineral fuels and services balance, we set the USD ratio at 100%. Primary income was based on the Ministry of Finance's "International Investment Position of Japan," and assumed that the USD ratio of assets and liabilities is applied. For secondary income, we assumed there would be no impact from foreign exchange rate fluctuations. Natural gas price was calculated by 0.1485 × crude oil price + 0.5. For details of the formulation, refer to 日本経済新聞電子版「LNG 値決め、産ガス国優位に　激変緩和消え原油と連動強く」(the electronic edition of Nikkei, "Gas producing countries more dominant in LNG price decision-making. Stronger ties with crude oil with measures to mitigate sharp price hikes no longer in place" (March 21, 2012). We did not, however, consider the effects of a rise in export volume and inbound tourists (services export) due to yen depreciation. Since estimate results vary depending on how the assumptions are set, we need to interpret the results with a certain degree of latitude.