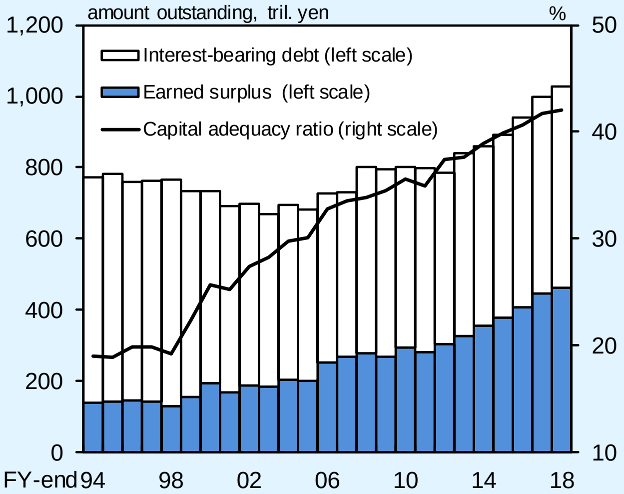
(Box 2) Firms' Behavior Affected by COVID-19

This box outlines the recent changes in firms' behavior due to the impact of COVID-19 by examining firms' stance on business fixed investment and employment.

The business fixed investment plan for fiscal 2020 shows that the investment has been relatively steady for both large firms as well as small and medium-sized firms despite facing a significant decline in their profits (Chart 23). This is largely attributable to the fact that downward pressure from the financial side has not intensified. Such pressure has been constrained by (1) financial conditions of firms, especially large ones, becoming more sound since the global financial crisis and (2) the Bank's and the government's measures to support financing, as well as active efforts made by financial institutions together with those measures.

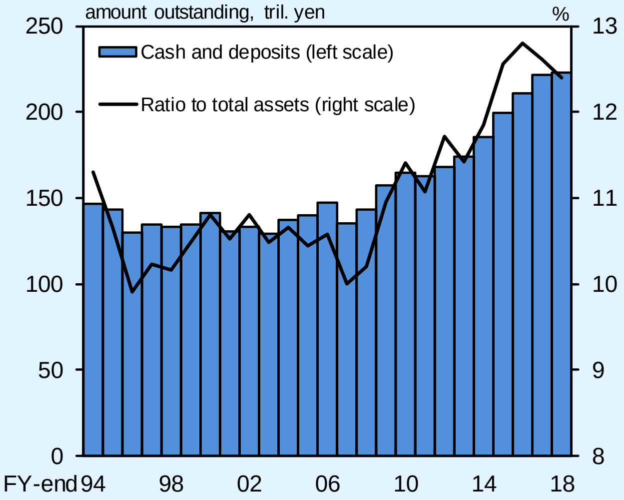
Since the global financial crisis, firms in Japan have continued to avert risks and prioritize improvement in their financial positions. Specifically, they have increased their capital adequacy ratios by actively repaying their loans (Chart B2-1). For firms that have made their repayments, they also have increased the on-hand liquidity ratios, mainly by saving a large amount of their profits in the form of cash and deposits (Chart B2-2). As a result, in Japan, there seems to be a considerable number of firms, mainly large ones, that have adequate financial capacity to undertake necessary investment for growth areas even when they are faced with

Chart B2-1: Earned Surplus and Interest-Bearing Debt



Source: Ministry of Finance.
Notes: 1. Based on the "Financial Statements Statistics of Corporations by Industry, Annually." Excluding "finance and insurance."
2. Interest-bearing debt = borrowings from financial institutions + borrowings from others + bonds

Chart B2-2: Developments in Cash and Deposits



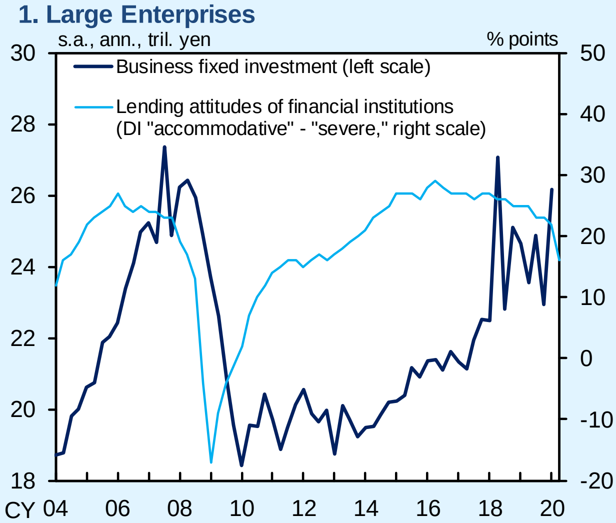
Source: Ministry of Finance.
Note: Based on the "Financial Statements Statistics of Corporations by Industry, Annually." Excluding "finance and insurance."

unexpected severe stress, as in the current situation.

Compared with large firms, the financial capacities of small and medium-sized firms are limited. That said, mainly through effectively interest-free and unsecured loans, financial institutions have been actively responding to meet firms' increasing demand for funds, and this seems to have eased, to a certain degree, pressure that reduces business fixed investment by small and medium-sized firms. In fact, looking at the DI in the *Tankan* for financial institutions' lending attitudes -- that is highly correlated to business fixed investment reported in the *Financial Statements Statistics of Corporations by Industry, Quarterly*, mainly for small and medium-sized firms -- it has maintained its considerably accommodative level compared with at the time of the global financial crisis (Chart B2-3). The active lending stance of financial institutions seems to have supported business fixed investment conducted mainly by small and medium-sized firms, many of which have limited access to capital markets and are facing liquidity constraints. The correlation between the DI for financial institutions' lending attitudes and business fixed investment can be examined by using a simple vector auto-regression (VAR) model consisting of the following five variables: (1) the macroeconomic uncertainty index, (2) the *Indices of Industrial Production*, (3) TOPIX, (4) the DI for financial institutions' lending attitudes, and (5) business fixed investment.[22] The results suggest that the deterioration in the DI has a

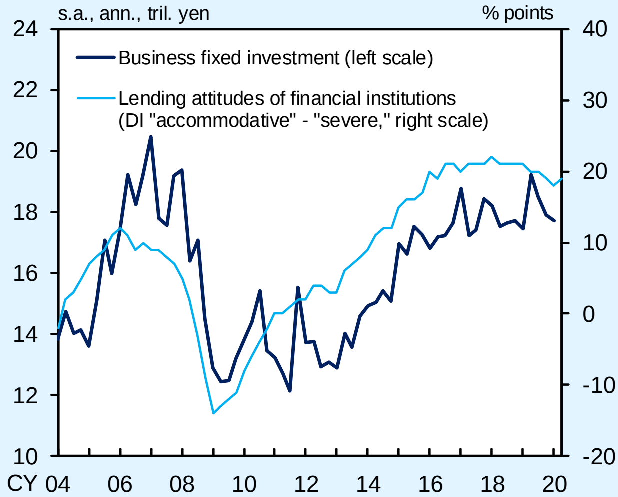
Chart B2-3: Lending Attitudes of Financial Institutions and Business Fixed Investment

1. Large Enterprises



Sources: Ministry of Finance; Bank of Japan.
Notes: 1. Figures for business fixed investment are based on the "Financial Statements Statistics of Corporations by Industry, Quarterly," excluding software investment, and are for all industries excluding "finance and insurance" and "goods rental and leasing." Large enterprises are defined as enterprises with a capitalization of 1 billion yen or more.
2. Figures for the lending attitudes of financial institutions are based on the *Tankan* and are for large enterprises.

2. Small and Medium-Sized Enterprises



Sources: Ministry of Finance; Bank of Japan.
Notes: 1. Figures for business fixed investment are based on the "Financial Statements Statistics of Corporations by Industry, Quarterly," excluding software investment, and are for all industries excluding "finance and insurance" and "goods rental and leasing." Small and medium-sized enterprises are defined as enterprises with a capitalization of less than 1 billion yen.
2. Figures for the lending attitudes of financial institutions are based on the *Tankan* and are for small enterprises.

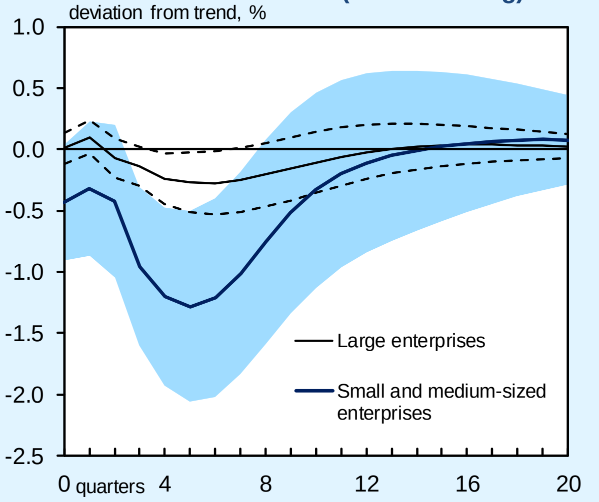
[22] The macroeconomic uncertainty index is based on staff calculations by aggregating the variance of forecast errors of the time-series models related to various macroeconomic indicators.

statistically significant negative impact on business fixed investment by small and medium-sized firms, and the impact could be much larger than that on large firms (Chart B2-4). The net "accommodative" for the DI for financial institutions' lending attitudes as perceived by small and medium-sized firms in the June *Tankan* has been roughly at the same level as last quarter, which indicates that it is unlikely that business fixed investment by those firms will be pushed down from the financial side.

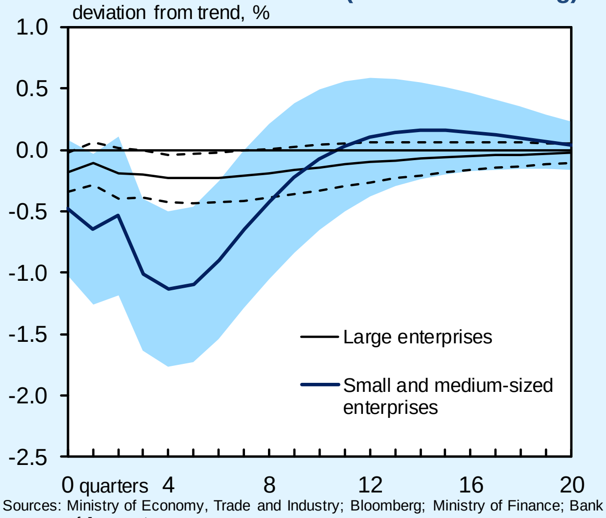
Looking at the employment side, firms' stance on employment has receded significantly due to the impact of COVID-19, but the degree of deterioration in that stance has been somewhat limited thus far compared with the pace of depression in economic activity. Due to the impact of COVID-19, the employment conditions DI in the *Tankan* shows that the perception of labor shortage has diminished and the unemployment rate has been under upward pressure. However, at this point, both the DI and the unemployment rate have not deteriorated as much as they did at the time of the global financial crisis (Chart B2-5). By industry, the DIs for accommodations as well as eating and drinking services, both of which have been directly affected by COVID-19, have turned to a significant net "excessive" to date. However, the DIs for many of the other industries, including construction as well as transport and postal activities, have remained a net "insufficient" (Chart B2-6). Firms seem to be somehow trying to retain their employees mainly through furloughs, while making active use of employment adjustment subsidies, which have been expanded significantly as part of the government's current

Chart B2-4: Financial Conditions and Business Fixed Investment

1. Response of Business Fixed Investment to a Negative 1% Point Shock to Lending Attitudes of Financial Institutions (Manufacturing)



2. Response of Business Fixed Investment to a Negative 1% Point Shock to Lending Attitudes of Financial Institutions (Nonmanufacturing)



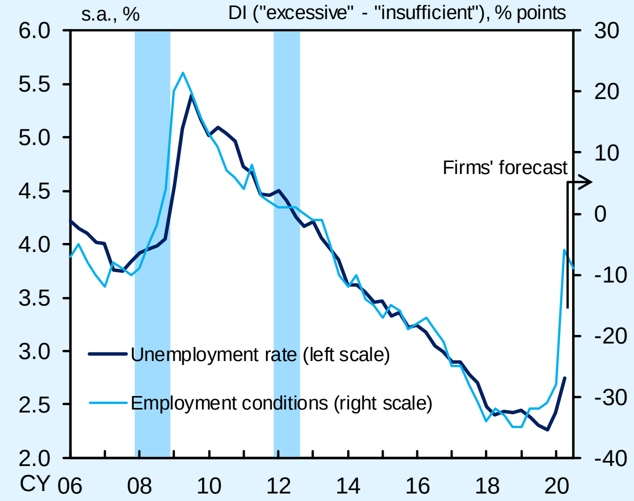
Sources: Ministry of Economy, Trade and Industry; Bloomberg; Ministry of Finance; Bank of Japan, etc.

Notes: 1. The VAR model (three-period lag) is estimated using the following five variables: Macroeconomic Uncertainty Index, IIP, TOPIX, the DI for lending attitudes of financial institutions (*Tankan*), business fixed investment ("Financial Statements Statistics of Corporations by Industry, Quarterly"). The estimation period is 1994/Q1-2020/Q1. Shocks are identified by Cholesky decomposition, where variables are orderd as above.
2. The shaded area and the broken lines indicate the 90 percentile bands.

economic measures, and of the financing support by financial institutions (Chart B2-7). This is probably against the background of (1) the prolonged labor shortage that continued to constrain business activities before the outbreak of COVID-19 and (2) the projection that the declining trend in the working-age population will continue in the long run.

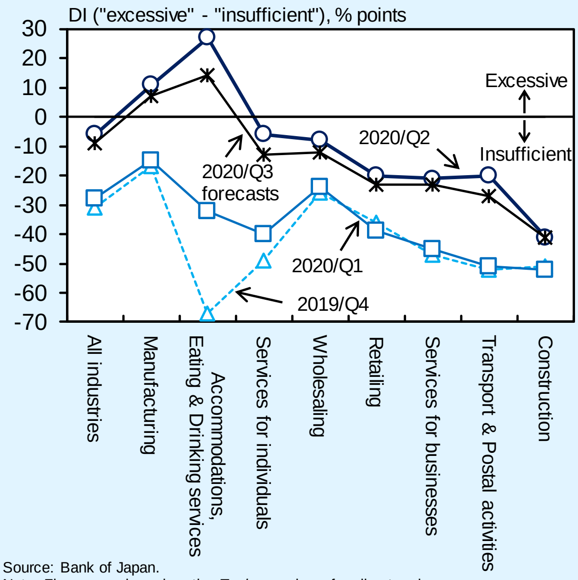
It is necessary to pay attention to the point that the aforementioned firms' stance on business fixed investment and employment could change substantially depending on developments in COVID-19. In particular, firms' stance on spending has a risk of becoming extremely cautious if the following happens, mainly reflecting the occurrence of a second wave of COVID-19 on a large scale: medium- to long-term growth expectations decline significantly as the impact of COVID-19 expands or lasts by more than expected, and financial conditions tighten, triggered by, for example, fluctuations in the global financial and capital markets.

Chart B2-5: Unemployment Rate and Employment Conditions



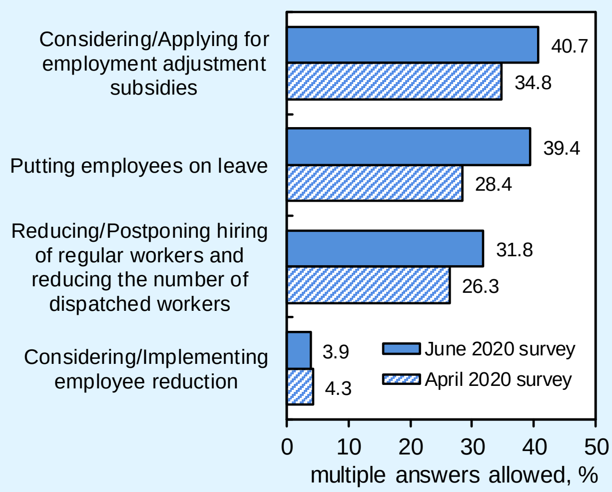
Sources: Ministry of Internal Affairs and Communications; Bank of Japan.
Notes: 1. The figure for the unemployment rate for 2020/Q2 is the April-May average.
2. Figures for employment conditions are based on the *Tankan* and are for all enterprises.
3. Shaded areas indicate recession periods.

Chart B2-6: Employment Conditions by Industry



Source: Bank of Japan.
Note: Figures are based on the *Tankan* and are for all enterprises.

Chart B2-7: Measures Related to Employment and Recruitment in Response to COVID-19



Source: Japan Chamber of Commerce and Industry, "LOBO survey."
Notes: 1. Figures are for firms who responded that their business was affected due to the outbreak of COVID-19.
2. The survey period of the April 2020 survey was from April 14 to 20 and that of the June 2020 survey from June 15 to 19.