

### (Box 3) Background to the Increase in Corporate Savings and the Impact on Business Fixed Investment

Box 2 showed that corporate savings have been increasing recently. This box considers the background to this increase, which can be broadly divided into the following four factors: (1) the increase in overseas investment; (2) a rise in precautionary saving; (3) the decline in growth expectations; and (4) time lag.

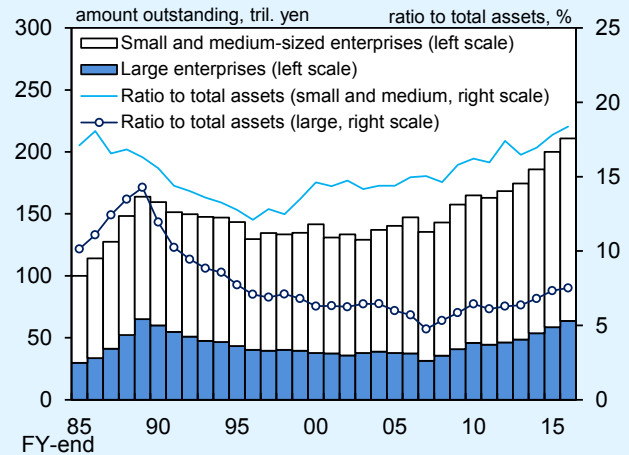
#### (1) Increase in overseas investment

The business fixed investment ratio depicted by the thick line in Chart B2-2 in the previous box only represents firms' investment on a solo (non-consolidated) basis, meaning that investment abroad, as well as the acquisition of firms (both at home and abroad), are not included. Adding acquisitions of foreign firms by Japanese firms to domestic investment, firms' investment stance appears to be more proactive (thin line in Chart B2-2). Therefore, not taking such investment into account may exaggerate the extent to which corporate savings are increasing.

#### (2) Rise in precautionary saving

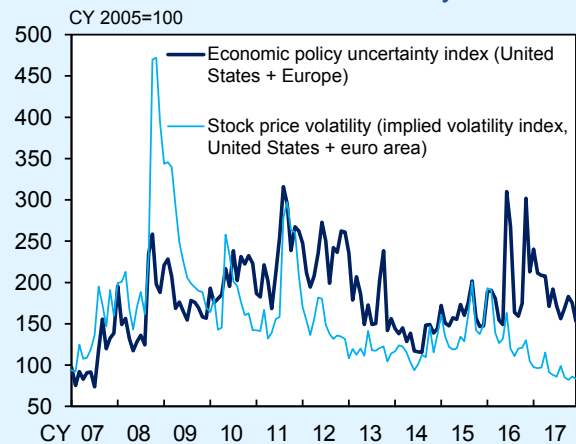
With memories of the severe funding conditions during the global financial crisis still fresh, some firms even today are saying that, for the time being, they prefer to accumulate earned cash as liquidity on hand to be prepared for any future crisis. Looking at developments in the ratio of cash and deposits to total assets by firm size, it is small and medium-sized enterprises rather than large enterprises that are showing a pronounced

**Chart B3-1: Amount Outstanding of Cash and Deposits by Firm Size**



Source: Ministry of Finance.  
 Note: Based on the "Financial Statements Statistics of Corporations by Industry, Annually." Excluding "finance and insurance." Large enterprises are defined as enterprises with a capitalization of 1 billion yen or more, and small and medium-sized enterprises are defined as enterprises with a capitalization of less than 1 billion yen.

**Chart B3-2: Global Uncertainty Indicators**



Sources: Ministry of Finance; Economic Policy Uncertainty; Bloomberg.  
 Note: The indexes are the weighted averages of those for the United States and Europe/euro area using the shares of the United States and the EU in Japan's exports in 2016 as weights.

increase recently (Chart B3-1). Assuming that this is because such enterprises will be more in need of a buffer in a time of crisis, it seems that the precautionary motive plays some role in the increase in corporate savings. However, given that indicators of uncertainty are not particularly elevated lately, it is unlikely that a rise in precautionary saving is the main reason for the recent increase in corporate savings (Chart B3-2).

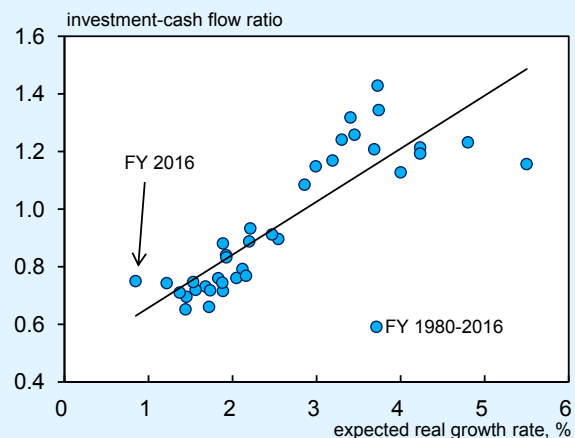
### (3) Decline in growth expectations

As reflected in the increase in overseas investment mentioned earlier, another likely contributing factor to the increase in corporate savings is that Japan's expected growth rate of firms remains at a low level. In fact, as is well known, the (domestic) investment-cash flow ratio is correlated with firms' expected growth rate (Chart B3-3). The reason why small and medium-sized enterprises' ratio of cash and deposits to total assets is increasing likely is that, in addition to the above-mentioned precautionary saving, their expectations of economic growth are lower and they have fewer opportunities than large enterprises to expand their business overseas.

### (4) Time lag

It can be assumed that, from firms' perspective, the recent rapid increase in corporate profits represents an unexpected windfall. While the unexpected increase in profits is being accumulated in the form of corporate savings for the time being, it is likely to lead to an increase in fixed investment in the future. Moreover, if the rise in labor productivity currently underway boosts

**Chart B3-3: Business Fixed Investment and Expected Real Growth Rate**



Source: Cabinet Office.

- Notes: 1. The expected real growth rate represents the growth rate in 5 years calculated using the real economic growth rate forecast from the "Annual Survey of Corporate Behavior."  
 2. The investment-cash flow ratio is based on the SNA. Figures up through fiscal 1993 are from the 1993SNA (benchmark year: 2000). Cash flow = consumption of fixed capital + (operating surplus + net property income)/2.

the expected growth rate through a rise in the potential growth rate, firms' investment stance is expected to gradually become proactive. In addition, if real wages rise in line with labor productivity, the personnel expenses ratio should also rise. Therefore, the recent rise in corporate savings is only a temporary phenomenon and corporate savings are likely to gradually decline in the future.

In order to empirically examine the role of these factors, a vector auto-regression (VAR) model with the following three variables is estimated: the ratio of operating profits to sales; the ratio of investment to tangible fixed assets; and the ratio of net cash and deposits to assets (Chart B3-4). The results indicate that, since the second half of 2016, the ratio of operating profits to sales has exceeded the values predicted by the model, so that the error term is positive (Chart B3-5). The impulse responses obtained from the model indicate that positive profit shocks tend to boost the net cash and deposit ratio and, with some lag, the fixed investment ratio (Chart B3-6).<sup>35</sup> Therefore, while the unexpected increase in profits since the second half of 2016 is leading to a rise in corporate savings in the short run, it is likely to result in an increase in fixed investment over the long run.

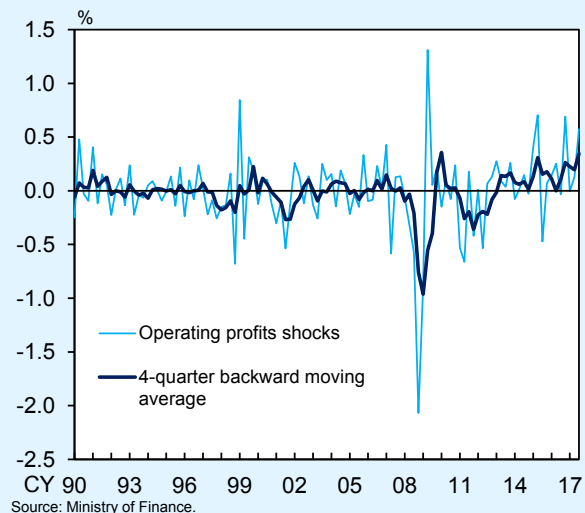
**Chart B3-4: VAR Model Specifications**

Estimation Model: 3-Variable VAR

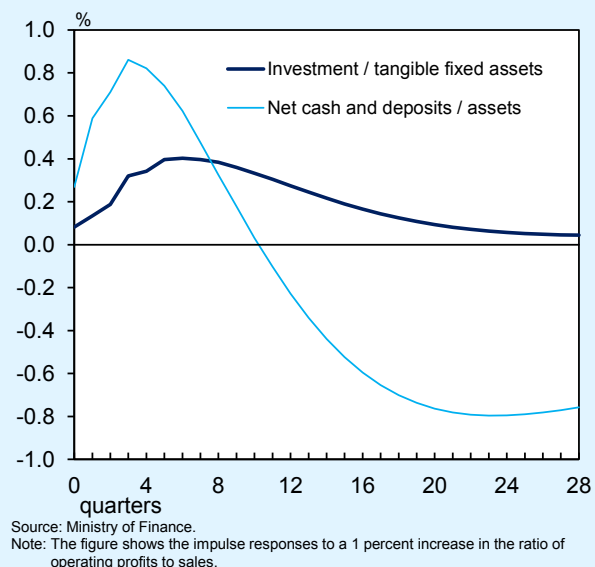
1. Ratio of operating profits to sales, s.a., %
2. Ratio of investment to tangible fixed assets, s.a., %
3. Ratio of net cash and deposits to assets, s.a., %  
 Net cash and deposits = cash and deposits - loans - corporate bonds

Shock identification is based on Cholesky decomposition in the above order.  
 Lags: 4 quarters  
 Data: Large enterprises. Based on the "Financial Statements Statistics of Corporations by Industry, Quarterly." Excluding "finance and insurance."  
 Estimation period: 1985/Q1-2017/Q3

**Chart B3-5: Operating Profits Shocks Identified by the VAR Model**



**Chart B3-6: Responses to Operating Profits Shock**



<sup>35</sup> The ratio of net cash and deposits turning negative in the long run likely reflects a boost in total assets, due to the rise in fixed investment, and an increase in borrowing.