

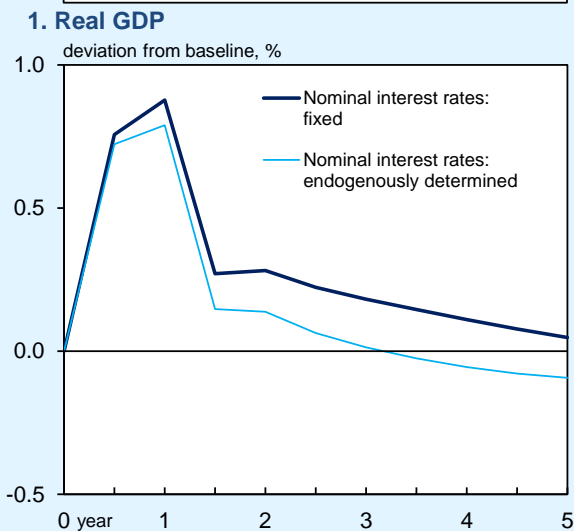
(Box 1) Policy Mix Effects

The baseline scenario in the January 2020 Outlook Report assumes that government spending will increase in response to the implementation of the economic measures decided by the Cabinet on December 5, 2019, with the Bank continuing with its current powerful monetary easing policy. Under these circumstances, domestic demand is expected to be underpinned by the synergistic economic stimulus effects of a so-called policy mix of monetary and fiscal measures.

Generally speaking, in the case where a government raises funds through increased issuance of government bonds and expands its spending, upward pressure on longer-term market rates will emerge and restrain private investment -- the so-called crowding-out -- and lessen the stimulative effects on economic activity. On the other hand, in the case where a central bank conducts monetary easing amid fiscal expansion, upward pressure on interest rates resulting from the issuance of government bonds will be contained, and fiscal expansion and monetary easing will synergistically act in a positive direction, resulting in stronger economic stimulus effects. The baseline scenario in this Outlook Report shows that domestic private demand sensitive to interest rates, such as business fixed investment, is likely to continue increasing steadily throughout the projection period, assuming that fiscal expansion will not create any "crowding-out" effects with the Bank continuing to pursue "QQE with Yield Curve Control."

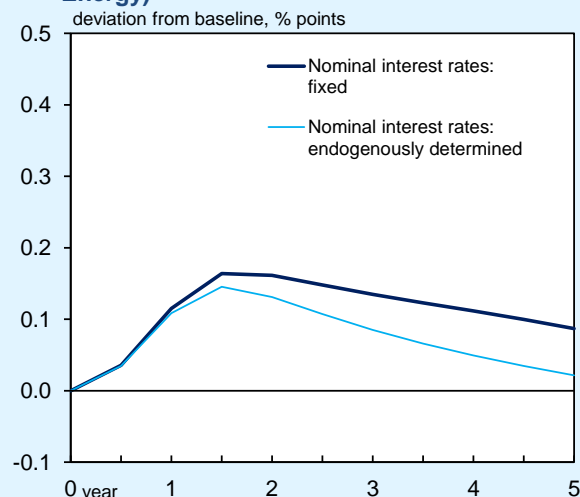
Chart B1: Simulation of the Effects of an Increase in Public Investment

Case: Public investment increases by 1% of nominal GDP during the 1st year



Sources: Cabinet Office; Bank of Japan, etc.
Note: The simulation is based on Q-JEM, a macroeconomic model developed by the Bank of Japan. For details of the model, see "The Quarterly Japanese Economic Model (Q-JEM): 2019 version," Bank of Japan Working Paper Series (19-E-7), etc.

2. Annual Change in the CPI (Less Fresh Food and Energy)
deviation from baseline, % points



Sources: Ministry of Internal Affairs and Communications; Bank of Japan, etc.
Note: The simulation is based on Q-JEM, a macroeconomic model developed by the Bank of Japan. For details of the model, see "The Quarterly Japanese Economic Model (Q-JEM): 2019 version," Bank of Japan Working Paper Series (19-E-7), etc.

To examine the economic stimulus effects of the policy mix, simulations have been carried out employing an increase in public investment using the Quarterly Japanese Economic Model (Q-JEM) developed by the Bank of Japan's Research and Statistics Department.²⁵ The simulations consider two cases: (1) nominal long-term interest rates are determined endogenously and fluctuate (interest rates rise and the yen appreciates) and (2) those rates are exogenously fixed. Regarding public investment, it is assumed that expenditure increases by 1 percent of nominal GDP in the first year.

The simulation results suggest that, in the case where nominal interest rates are fixed, the effects of pushing up GDP clearly will be large compared to the case where the rates are endogenously determined, since business fixed investment is not contained through crowding-out in the former case (Chart B1[1]).²⁶ Reflecting these developments in GDP, the effects of pushing up the CPI (all items less fresh food and energy) also will be somewhat larger in the case where nominal interest rates are fixed (Chart B1[2]).

However, these simulation results should be interpreted with some latitude as they are based on the average relationships in the past between

²⁵ While a similar simulation was conducted in Box 1 of the October 2016 Outlook Report, the results here differ somewhat, because more data have become available and the model specification has been changed. For details of the model, see these such as "The Quarterly Japanese Economic Model (Q-JEM): 2019 version," *Bank of Japan Working Paper Series*, no.19-E-7, June 2019.

²⁶ Moreover, in the case where nominal interest rates are fixed, the appreciation of the yen that reflects a rise in interest rates is avoided and there is no decrease in exports. This also contributes to making the increase in GDP larger.

economic variables. In addition, attention needs to be paid to the fact that there are uncertainties to some extent regarding the actual timing of the enactment and implementation of the budget as well as progress with construction work in the construction industry, which is experiencing severe labor shortage.