(Box 2) The Effects of a Heightening of Global Uncertainties on Trade Activity
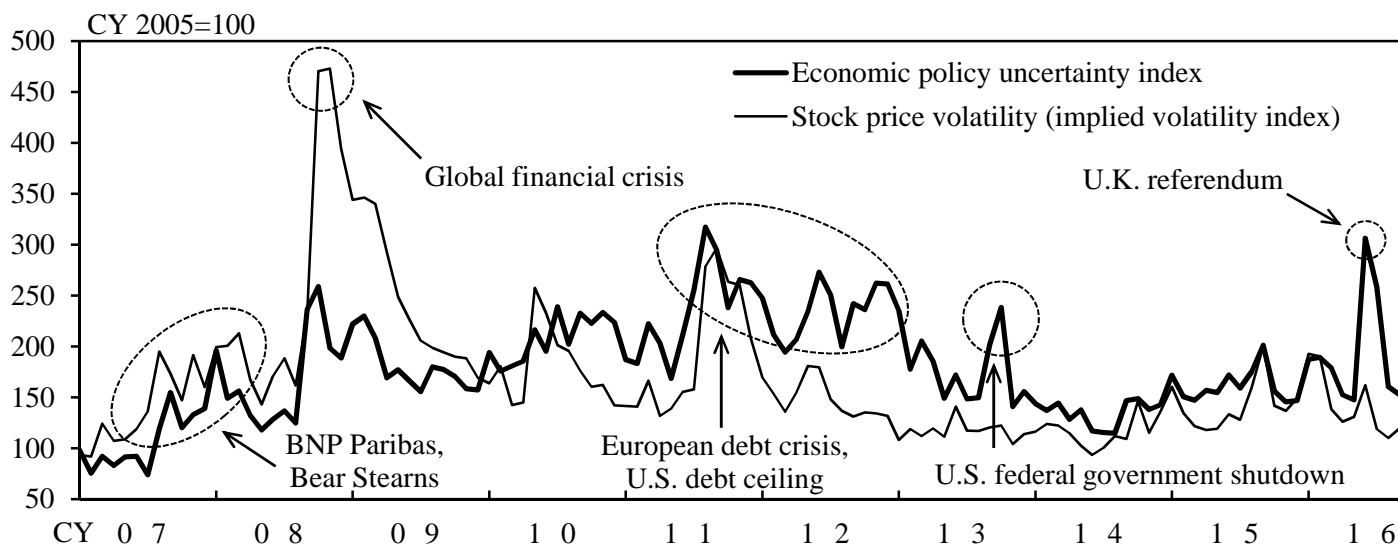
After the result of the United Kingdom's referendum in June 2016, uncertainties heightened globally to a significant level, and financial markets exhibited volatile developments temporarily (Box Chart 2 [1]). Nevertheless, uncertainties declined thereafter and financial markets seemed to have regained stability through summer.

In order to empirically assess the effects of these developments in global uncertainties on the world trade volume and Japan's exports, a vector autoregression (VAR) model was estimated, consisting of the following five variables: (1) the economic policy uncertainty index for the United States and Europe; (2) the financial conditions index (FCI) for the United States and Europe; (3) the world trade volume; (4) the yen's real effective exchange rate; and (5) Japan's real exports (Box Chart 2 [2]).[30] The estimated impulse response suggests that heightening uncertainties in the United States and Europe will likely lead to (i) a decline in the world trade volume through the postponement of business fixed investment and durable goods consumption globally and, simultaneously, (ii) an appreciation of the yen -- which is often regarded as a safe currency -- and the tightening of financial conditions, thereby temporarily exerting downward pressure on Japan's exports.

---

[30] The economic policy uncertainty index quantitatively measures the extent of uncertainties people perceive based particularly on the amount of coverage in major newspapers relating to uncertainties regarding economic policy and on dispersions in economists' outlook on economic activity and prices. For the details in compiling the index, see Scott R. Baker, Nicholas Bloom, and Steven J. Davis, "Measuring Economic Policy Uncertainty," *Quarterly Journal of Economics*, 131 (4), 2016, pp. 1593-1636.

Impact of Global Uncertainty Shock on Trade Activities

(1) Policy Uncertainty and Stock Price Volatility in the United States and Europe
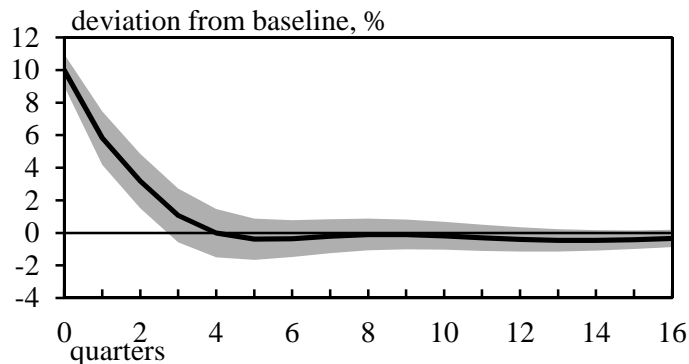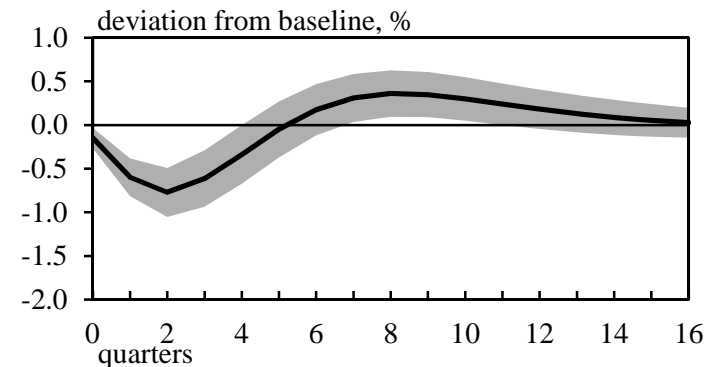

(2) Impact on Japan's Exports

- The VAR model is estimated using the five following variables: the economic policy uncertainty index, the FCI (financial conditions index), world trade volume, the yen's real effective exchange rate, and Japan's real exports. All variables other than the FCI are detrended using HP-filter. Shock identification is based on Cholesky decomposition in the above order.
- Estimation period: 1999/Q1-2016/Q2

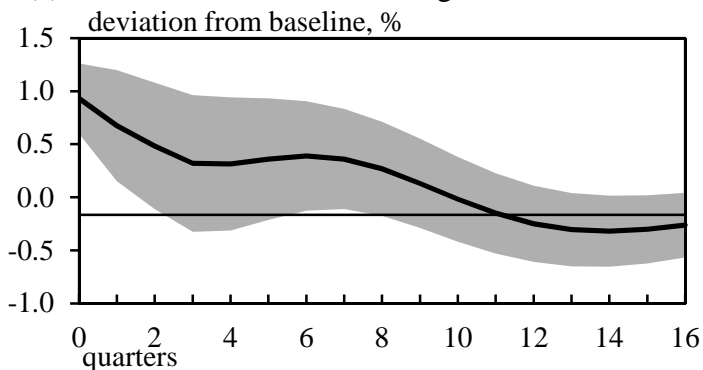- Responses to a 10% Shock in the Policy Uncertainty Index

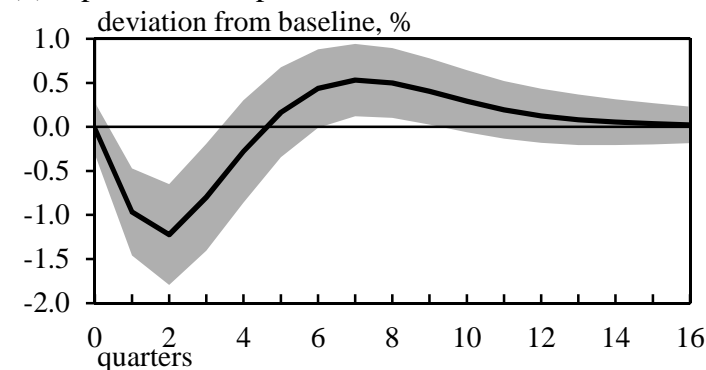### (a) Economic Policy Uncertainty Index

(b) World Trade Volume (Real Imports)

(c) Yen's Real Effective Exchange Rate

(d) Japan's Real Exports

Notes: 1. The economic policy uncertainty index is the weighted average of figures for the United States and Europe using shares of the United States and the EU in Japan's exports in 2015 as weights. The same applies to stock price volatility and the FCI.

2. Shaded areas indicate 75 percentile bands.

Sources: Economic Policy Uncertainty; Bloomberg; CPB Netherlands Bureau for Economic Policy Analysis; Ministry of Finance; Bank of Japan, etc.