

**(Box 1) Developments in Japan's Exports by Type of Goods**

Exports had been more or less flat for a prolonged period, but as the effects of the slowdown in emerging economies wane, they have moved out of that phase and started to pick up. The features of Japan's exports by type of goods in this pick-up phase are as follows.

When we look at exports by type of goods to advanced economies and emerging and commodity-exporting economies separately, exports of motor vehicles and their related goods to advanced economies have been increasing firmly of late, due in part to a shift of production sites from overseas back to Japan, and exports of IT-related goods -- including semiconductor production equipment -- have seen an increase in their momentum recently, mainly led by those to emerging economies in Asia (Box Chart 1). With regard to exports of IT-related goods, based on interviews with firms, demand for electronic parts has expanded in terms of variety recently, as seen not only in a rise in demand for new models of smartphones but also in (1) expanded memory capacity of Chinese smartphones, (2) an expansion of demand for data servers brought about by cloud computing, and (3) an increase in on-board equipment for motor vehicles. Meanwhile, exports of capital goods (metal cutting machines and construction machines, etc., excluding IT-related goods) and intermediate goods (iron and steel, as well as chemicals, etc.) to emerging and commodity-exporting economies have remained sluggish in part, although they have improved compared to before, reflecting a pick-up in commodity prices and the progress in inventory and capital stock adjustments in Asia.

Going forward, with regard to motor vehicles and their related exports, the pace of increase in export quantity is likely to decelerate, reflecting a peak-out of motor vehicle sales in the United States and Europe; however, a moderate increasing trend will likely be maintained on the back of a rising value-added (i.e., export unit value divided by a rise in the export price index) (Box Chart 2 and Chart 9 [1]).<sup>26</sup> Considering that world semiconductor

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<sup>26</sup> Export unit value is calculated as nominal export value divided by export quantity (for the case of motor vehicles, the number of those exported), and no quality adjustment is made in its calculation. Therefore, for example, even if the export quantity is unchanged, export unit value can rise as the export value increases reflecting improvement in the quality of exported goods. On the other hand,

shipments in the World Semiconductor Trade Statistics (WSTS) are expected to increase steadily even after 2017, supported by expanded memory capacity of smartphones and increasing demand for data servers brought about by cloud computing. Japan's IT-related exports are also projected to be on a moderate increasing trend, albeit with fluctuations. Meanwhile, the rate of increase in exports of capital goods other than IT-related goods is likely to accelerate at a fairly moderate pace, with global fixed investment picking up toward the end of the projection period in line with the IMF's projections.

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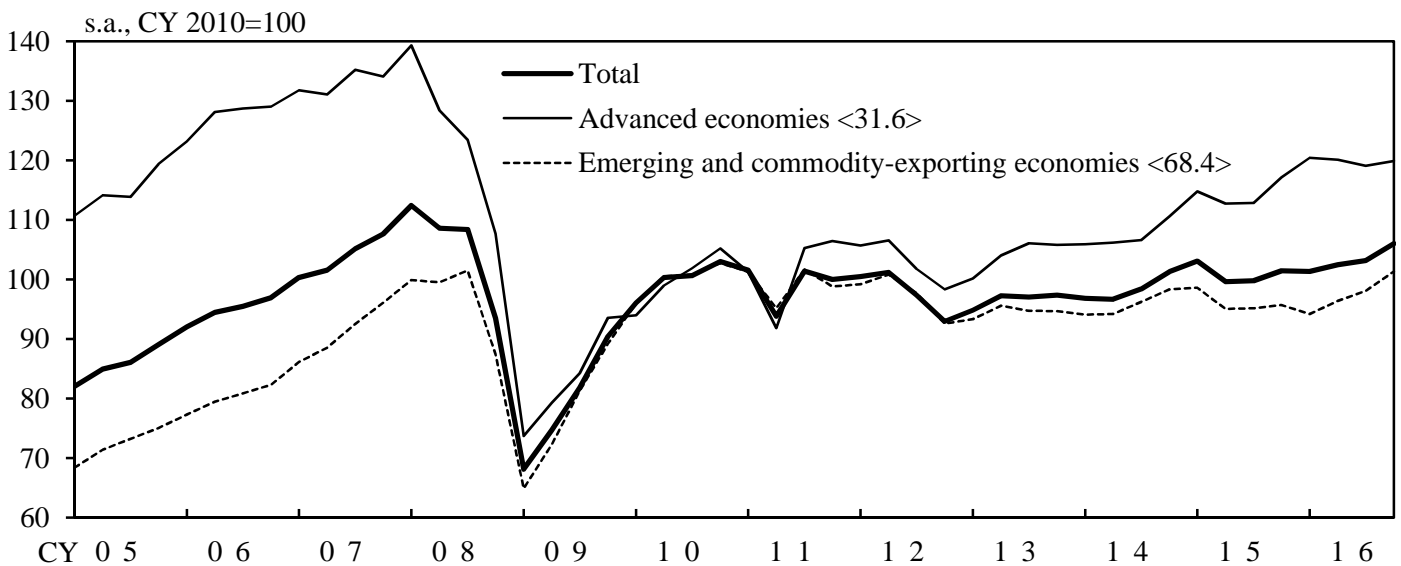
the export price index captures the change in prices of goods that are considered to be of the same quality. Therefore, for example, if the rise in export unit value solely results from an improvement in quality rather than pure changes in prices, conceptually the export price index will not rise.

Japan's exports of motor vehicles in recent years show that, although the increase in export quantity is sluggish, the export unit value (yen basis) clearly has risen at a faster pace than the increase in the export price index (yen basis), albeit with fluctuations (Box Chart 2 [1] and [2]). This increase in export unit value is likely to imply rising value-added and functionality of motor vehicles to be exported from Japan, as seen in the increasing weight of high value-added vehicles such as SUVs in exports.

The export price index (contract currency basis, mostly dollar basis) largely has been unchanged. This suggests that, taking account of improved quality, Japan's motor vehicle manufacturers tend to maintain the local prices (pricing-to-market), while exchange rate risks are absorbed by their profits.

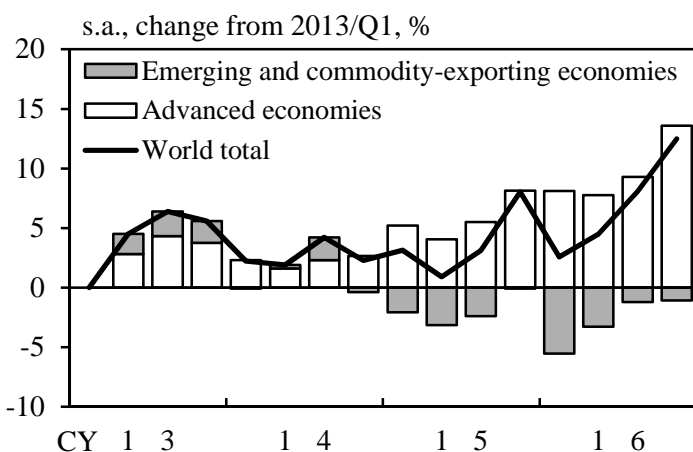
## Developments in Japan's Exports by Type of Goods (1)

### (1) Japan's Real Exports



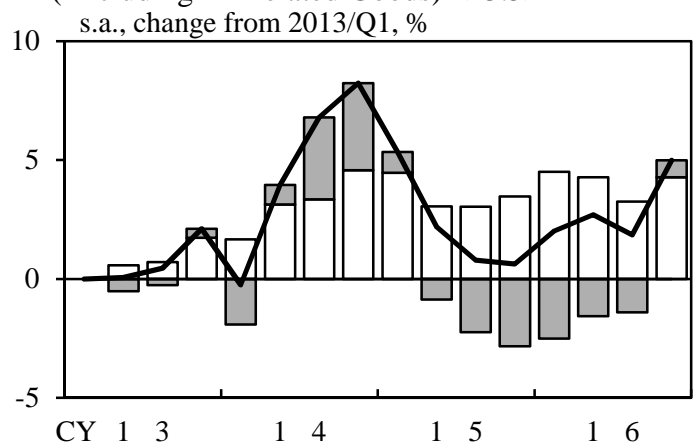
### (2) Real Exports by Type of Goods

#### (a) Motor Vehicles and their Related Goods <24.9>

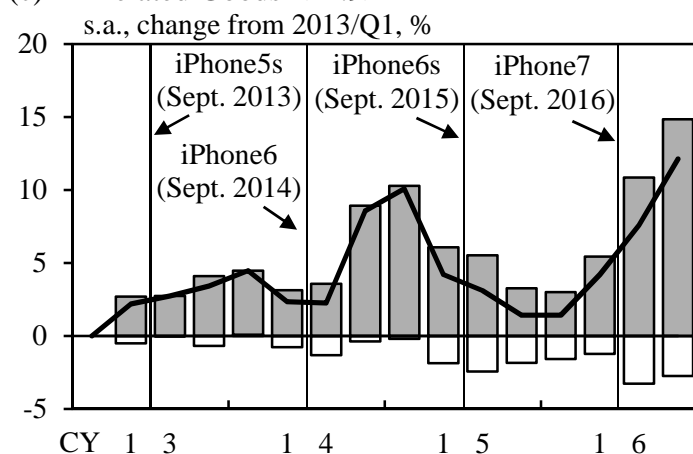


#### (b) Capital Goods and Parts

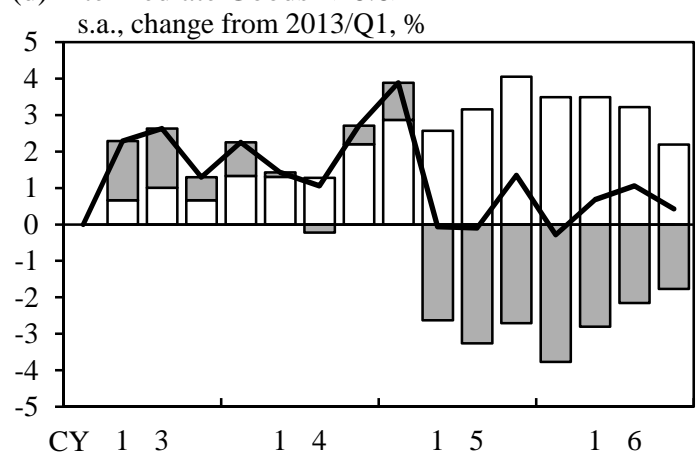
##### (Excluding IT-Related Goods) <23.5>



#### (c) IT-Related Goods <14.9>



#### (d) Intermediate Goods <18.8>



Notes: 1. Figures in angular brackets show the share of each region or each type of goods in Japan's total exports in 2016.

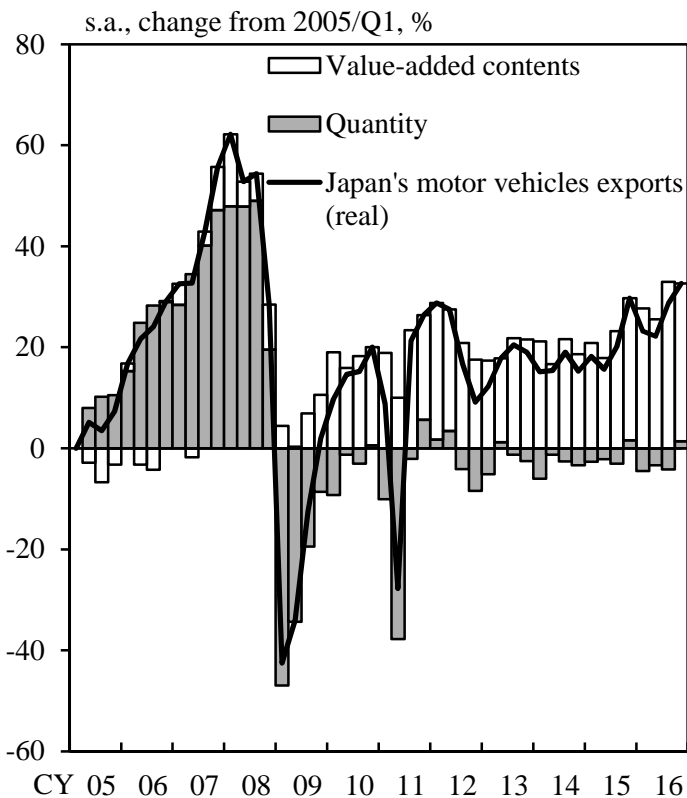
2. Advanced economies consist of the United States and the EU. Emerging and commodity-exporting economies consist of the rest of the world.

3. IT-related goods in this chart include semiconductor production equipment, computer parts, and audio and visual apparatus parts, which are not included in the IT-related goods defined in Chart 8 (2).

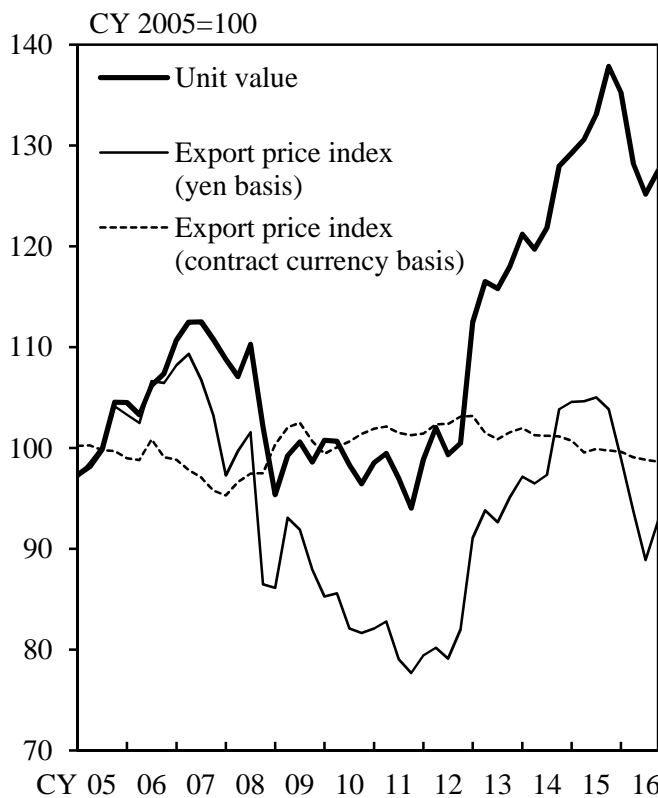
Sources: Ministry of Finance; Bank of Japan.

## Developments in Japan's Exports by Type of Goods (2)

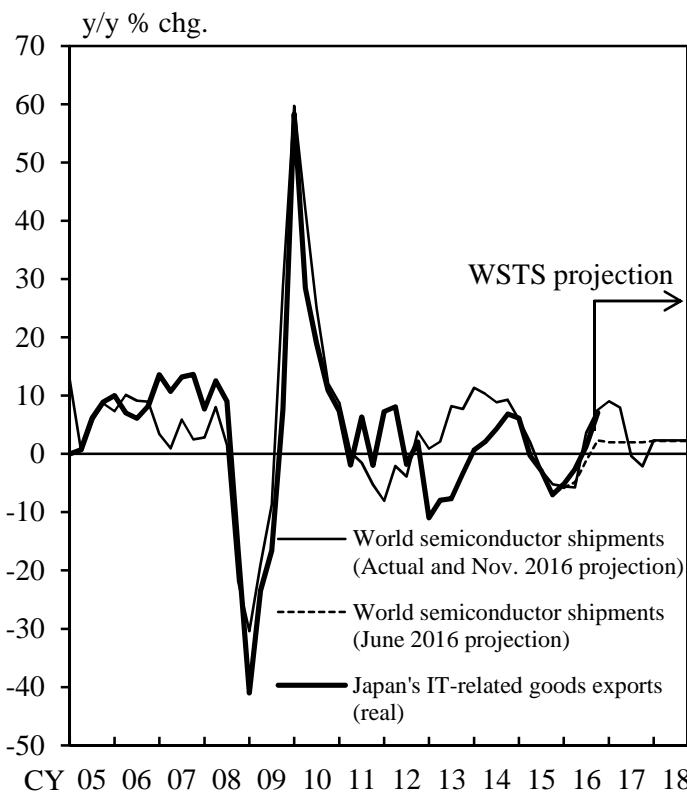
(1) Motor Vehicle Exports



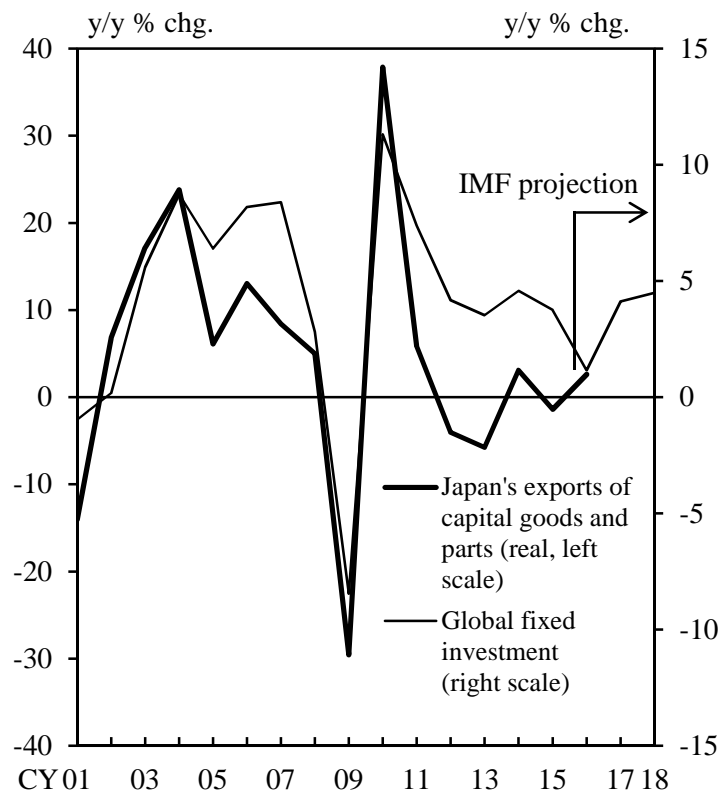
(2) The Rising Value Added of Motor Vehicle Exports



(3) World Semiconductor Shipments and IT-Related Goods Exports



(4) Global Fixed Investment and Japan's Exports of Capital Goods and Parts

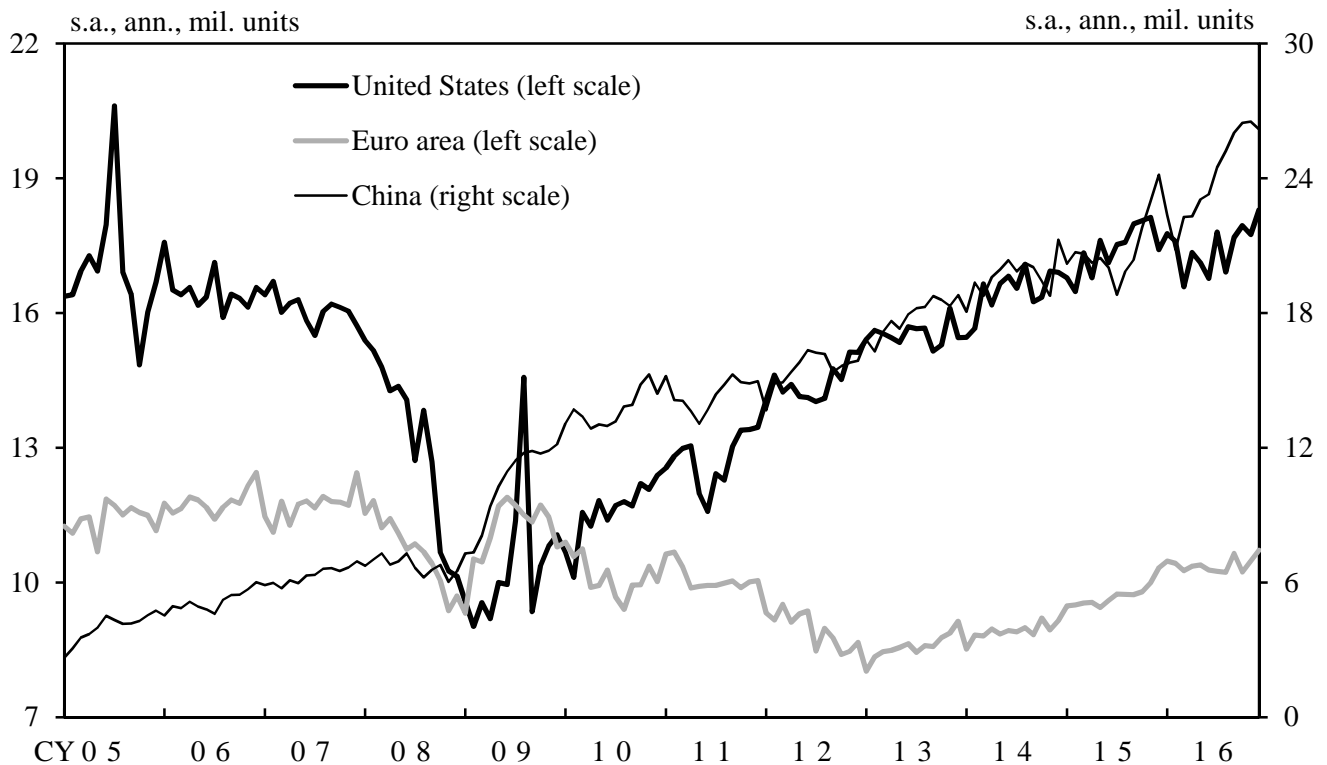


Note: Figures for global fixed investment of the world economy are estimated using global real GDP growth rates and investment-to-GDP ratio from the IMF's "World Economic Outlook." Figures are as of October 2016.

Sources: Ministry of Finance; Bank of Japan; World Semiconductor Trade Statistics (WSTS); IMF.

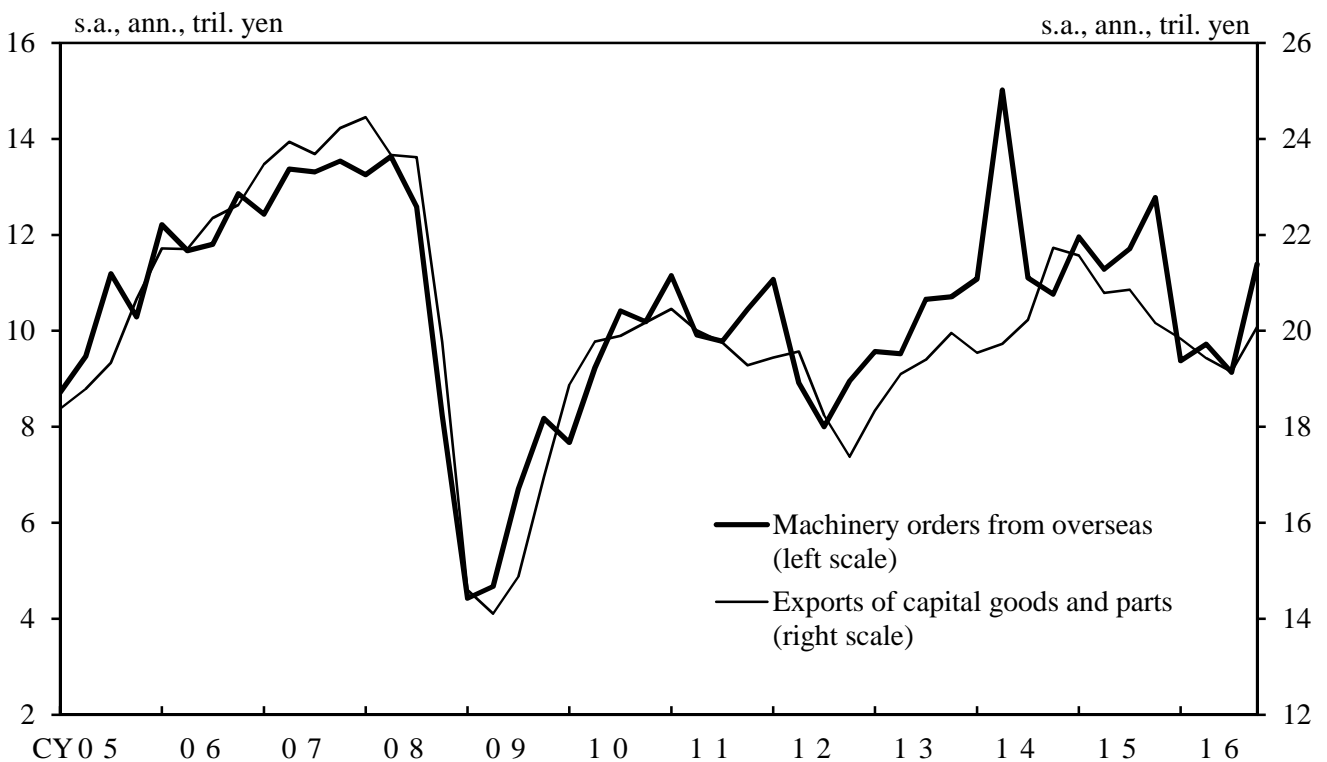
## Overseas Motor Vehicle Sales and Exports of Capital Goods

### (1) Motor Vehicle Sales in Major Economies



Note: Figures for the United States are based on motor vehicle sales excluding heavy trucks. Figures for the euro area are based on new passenger car registrations. Figures for China are based on passenger car sales.

### (2) Machinery Orders from Overseas and Exports of Capital Goods and Parts (Nominal)



Note: The figure for machinery orders from overseas for 2016/Q4 is the October-November average.

Sources: BEA; ECB; China Association of Automobile Manufacturers; Ministry of Finance; Cabinet Office.