2015-E-5

Bank of Japan Review

Changes in the Environment Surrounding Japan's Exports: An Approach Focusing on Global Trade Volume and Export Share

Research and Statistics Department
Yoshiyuki Kurachi, Masatoshi Ando, Kanako Shoji*

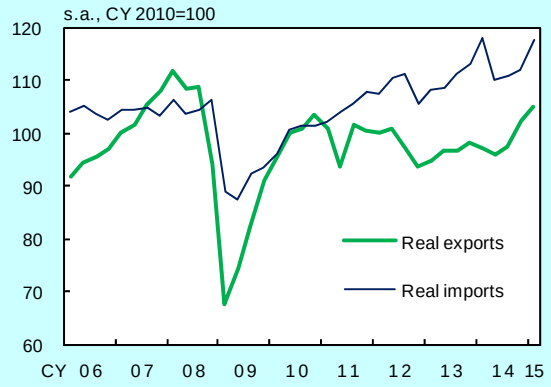
April 2015

Japan's exports have lacked momentum since the Lehman shock. In this paper, we examine export trends for the period by breaking them down into "global trade volume" and "Japan's share." This analysis finds: (1) in addition to sluggish growth for global trading activities, (2) there has been a secular decline in competitiveness in IT-related fields, (3) global fixed investment demand has been weak, and (4) overseas production has accelerated, accompanied by increases in local procurement, particularly in the automobile sector. These factors including structural ones have interacted with each other and depressed exports with other changes. It should be noted, however, that at the current point in time global trade volume is enjoying moderate growth, and the environment surrounding Japan's exports is gradually improving, specifically, (1) global demand for capital goods has turned upwards, particularly in the United States, and (2) the depreciation of the yen that began at the end of 2012 has improved price competitiveness in various fields including IT-related sectors. In this situation, Japan's exports are picking up.

Introduction

Japan's exports have recently been picking up, but in the process leading to this stage, it has lacked momentum ever since the Lehman shock (Chart 1).

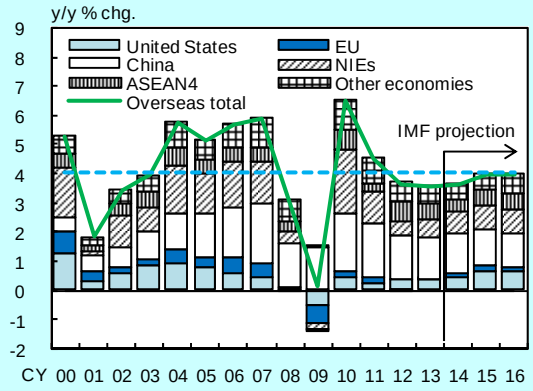
[Chart 1] Real Exports and Imports



Notes: 1. Figures are seasonally adjusted by X-12-ARIMA. The same applies to the following charts.
2. Figures for 2015/Q1 are the January-February averages.
Sources: Ministry of Finance, "Trade Statistics"; Bank of Japan, "Corporate Goods Price Index."

A review of the environment surrounding Japan's exports during this period reveals that sluggishness in the emerging economies, such as ASEAN that have deep economic ties with Japan, has been partly responsible for the lackluster export performance. However, overseas economies as a whole have continued to grow at a rate of the mid-3% (Chart 2). As for the foreign exchange market, the yen has continued to depreciate since the end of 2012, and in terms of the real effective exchange rate, the yen has depreciated below the level around 2007 (Chart 3).

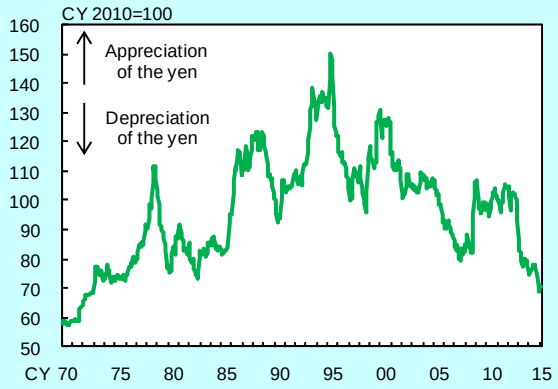
[Chart 2] Real GDP Growth Rates of Overseas Economies



Note: Figures for the overseas total are the weighted averages of real GDP growth rates, using countries' share in Japan's exports as weights. GDP growth rates are from the "World Economic Outlook." The broken line indicates the average of 1980-2013 (4.1 percent).
Sources: IMF, "World Economic Outlook"; Ministry of Finance, "Trade Statistics."

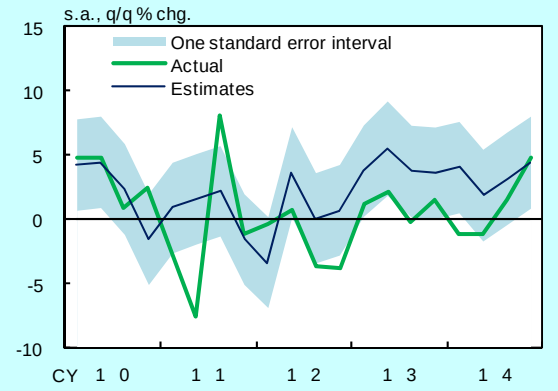
All else being equal, this external environment should lead to an increase in exports. Indeed, a basic export function that uses overseas economies and exchange rates as explanatory variables[1] shows a clear increase in exports. However, actual exports have been consistently below the estimates (Chart 4). This indicates that factors not captured with historical average relationships, in other words, different environmental changes, not previously observed, have worked to depress exports.

[Chart 3] Real Effective Exchange Rate



Note: The figure is based on the broad index, and that prior 1994 is calculated using the narrow index.
Source: BIS.

[Chart 4] Estimates of Basic Export Function



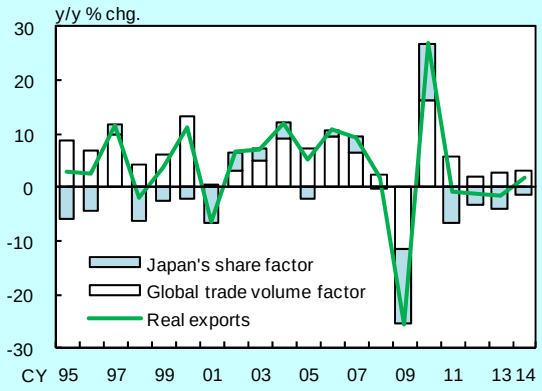
Note: For details on the function, see footnote 1.
Sources: IMF; Ministry of Finance, "Trade Statistics"; Bank of Japan, "Corporate Goods Price Index," etc.

We therefore identify several environmental changes considered to be important in discussions of recent Japan's export trends and attempt to observe their impact. As a starting point, we decompose Japan's exports into two factors, (1) global trade (exports) volume and (2) Japan's share in that volume, and find that the sluggishness of Japan's exports since the Lehman shock not only has characteristics in common with global phenomena, but also is affected by factors unique to Japan. From that foundation, we identify the main changes that have taken place in recent years and verify how they have depressed exports. However, it is also noted that some of these factors are currently moving in more positive directions or showing signs of doing so, and that is leading to a pick-up in exports. Finally, the conclusion comments on some points in the outlook for exports going forward.

Japan's Exports Analyzed in Terms of Global Trade Volume and Share

We begin by analyzing Japan's exports in terms of two factors: (1) global trade (exports) volume and (2) Japan's share in that volume. It finds that (1) in addition to slower growth in global trade volume, (2) a declining export share for Japan has contributed to slow growth of Japan's exports in recent years (Chart 5). A detailed investigation of each of these factors is found below.

[Chart 5] Decomposition of Japan's Exports



Note: Effects arising from the cross term between the factors are distributed to those factors on a pro-rata basis.
Source: CPB, "World Trade Monitor."

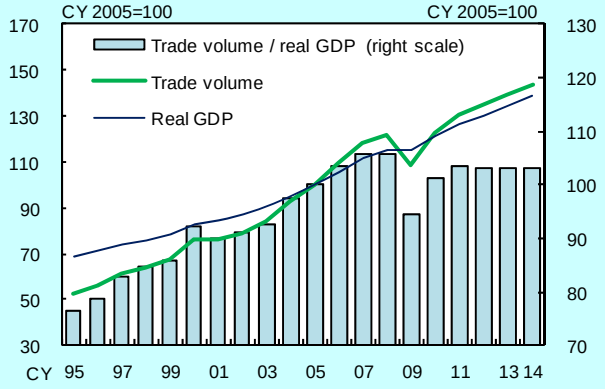
Sluggish Growth for Global Trading Activities

From the 1990s to the mid-2000s, global trade volume grew at a clearly faster rate than the world economy as a whole because of efforts to optimize the allocation of business resources on a global scale (Global Value Chain, GVC), including international fragmentation of production processes. It should be noted, however, that export growth slowed to the same level as world economic growth after the "Great trade collapse[2]" that followed the Lehman shock (Chart 6).

A similar phenomenon can be clearly confirmed by estimating the impact of world economic growth on the expansion of trade volume (income elasticity). After using statistical techniques to identify the points in time at which the relationship between the world

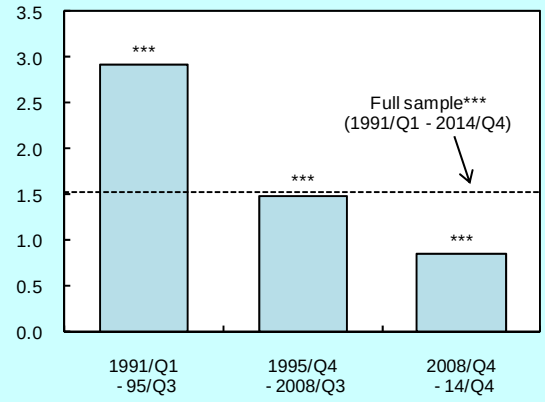
economy and global trade changed, we estimated income elasticity for each phase and found a large decrease in income elasticity immediately after the Lehman shock. This indicates that world economic growth has had a smaller inducement effect on global trade volume[3] (Chart 7).

[Chart 6] Real GDP and Trade Volume of the World Economy



Note: Figures for 2014 are the IMF projections.
Source: IMF, "World Economic Outlook."

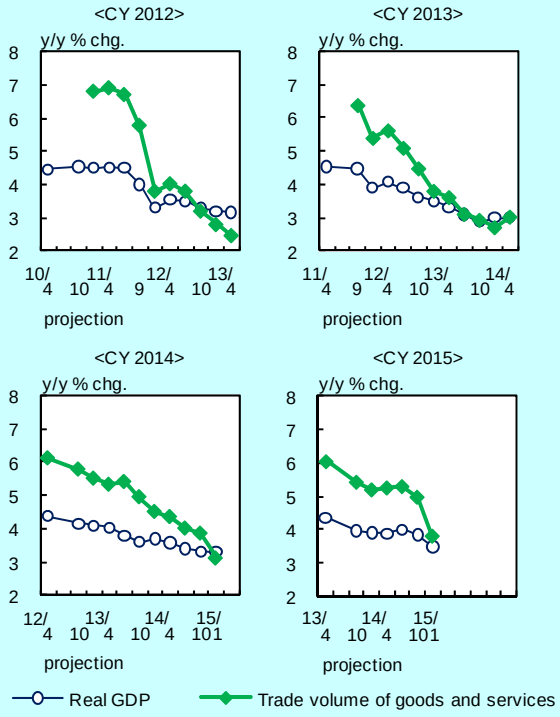
[Chart 7] Income Elasticity of the Global Trade Volume



Notes: 1. *** indicates statistical significance at the 1% level.
2. For details on the estimation, see footnote 3.
Sources: CPB, "World Trade Monitor"; IMF, etc.

Three main factors have been identified as contributing to the sluggish growth of global trade: (1) stagnant demand for durable consumer goods and capital goods and a slower pace of GVC expansion resulting from the aftereffects of the financial crisis; (2) in-house production resulting from improvements in the technological capacities of emerging economies; and (3) increases in transportation costs due to higher oil prices[4]. On this point, recent IMF projections continue to be revised downward in the world economic growth rate and the global trade volume, but the revisions are larger for trade volume, which indicates that sluggish global trade volume growth is continuing longer than expected (Chart 8).

[Chart 8] Revision of the IMF Projections



Source: IMF, "World Economic Outlook."

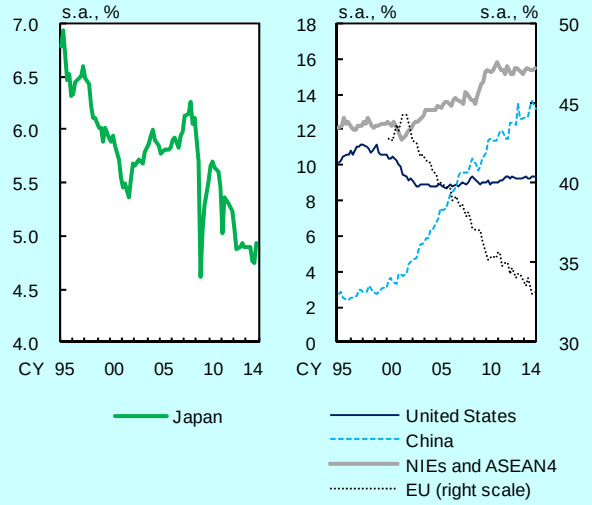
Declining Share for Japan's Exports

Japan's share in global exports in real terms has declined from 6 percent to 5 percent since the Lehman shock[5] (Chart 9). In what follows, we focus on three changes as factors contributing to the decline in Japan's export share: (1) secular decline in competitiveness in IT-related fields, (2) weak global demand for the capital goods in which Japan has comparative advantages, and (3) acceleration of overseas production and increases in local procurement, primarily in the automobile sector.

(1)Declining competitiveness in IT-related fields

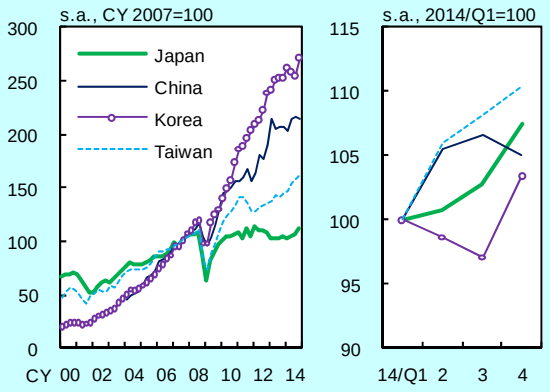
After the Lehman shock until around 2013, there was a large expansion in exports from East Asian countries, while growth slowed for exports from Japan in IT-related fields (Chart 10). From a slightly longer-term perspective, as the countries of East Asia showed technological catch-up in IT-related fields, the non-price competitiveness of Japanese products seems to have gradually eroded. Under such circumstances, the yen appreciated after the Lehman shock, which further decreased the price competitiveness of Japanese products. These changes in competitiveness are considered to have noticeably resulted in sluggish growth in IT-related exports.

[Chart 9] Shares in Global Real Exports by Country and Region



Sources: CEIC; CPB, "World Trade Monitor"; Datastream; Eurostat; World Bank.

[Chart 10] Real Exports of IT-Related Goods from East Asian Countries

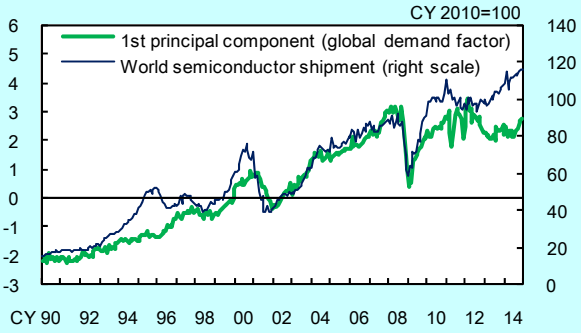


Sources: CEIC; Ministry of Finance, "Trade Statistics"; Bank of Japan, "Corporate Goods Price Index."

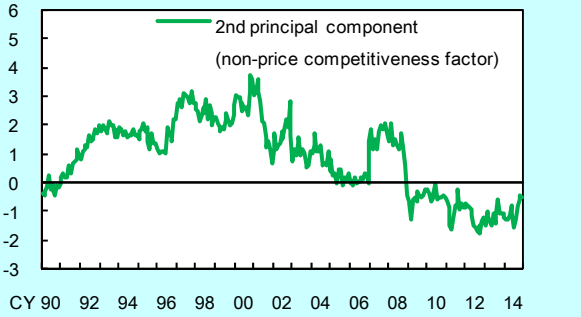
It should be noted, however, that Japanese major companies in IT-related fields have recently made progress on structural reform, and seem to have been able to halt further declines in non-price competitiveness. The price competitiveness of Japanese companies is also improving thanks to the depreciation of the yen that began at the end of 2012[6]. Indeed, since the middle of 2014, Japan's IT-related exports have been growing faster than those of competing countries in East Asia, under strong expansion in the global demand for smartphones and other devices, combined with advantageous environment in pricing for Japanese companies (Chart 10). We performed a principal component analysis of IT-related exports and found that if the first three principal components are interpreted as global demand, non-price competitiveness, and price competitiveness factors, respectively, there has indeed been a halt to the decline in non-price competitiveness as well as an improvement in price competitiveness thanks to the weaker yen[7] (Chart 11).

[Chart 11] Principal Component Analysis for IT-Related Exports

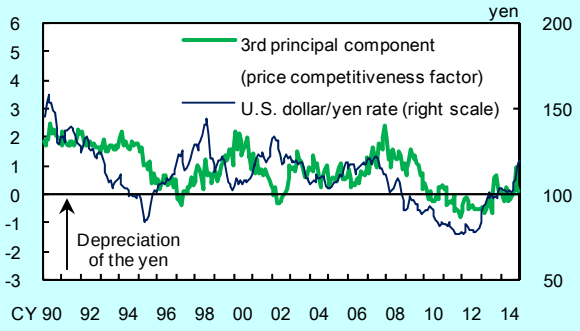
1st Principal Component [63.6%]



2nd Principal Component [22.1%]



3rd Principal Component [9.3%]



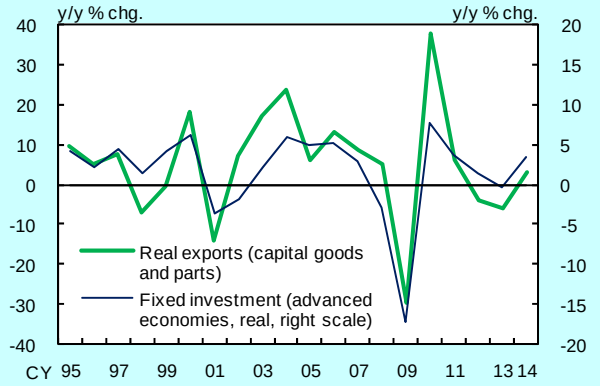
Note: For details on the analysis, see footnote 7. Figures in [ ] are the contributions to the total variation in the analysis.
Sources: WSTS; Ministry of Finance, "Trade Statistics"; Bank of Japan, "Foreign Exchange Rates," "Corporate Goods Price Index."

(2) Weak global fixed investment demand

The weakness of the global fixed investment demand also appears to have contributed to sluggish growth in Japan's exports, although Japan appears to have maintained its comparative advantage in capital goods even after the Lehman shock (Chart 12). An examination of global fixed investment from a slightly longer term perspective shows a large increase in global fixed investment demand during the middle of the 2000s driven by the credit bubble. After the

Lehman shock, however, companies were markedly more cautious about investments due to the aftereffects of the collapse of the credit bubble in the advanced economies of Europe and the United States. Emerging economies like China temporarily increased their fixed investment growth rates by a stimulus measure after the crisis, but in recent years, this has produced the problem of excessive capacity and resulted in corrective pressure on investments. For Japan, which has an advantage in capital goods and they account for a large share of Japan's exports, the low growth rate for global fixed investment demand compared to the average for the economy as a whole is considered to have exerted more downward pressure on its exports than those for other countries.

[Chart 12] Global Fixed Investment and Exports of Capital Goods and Parts



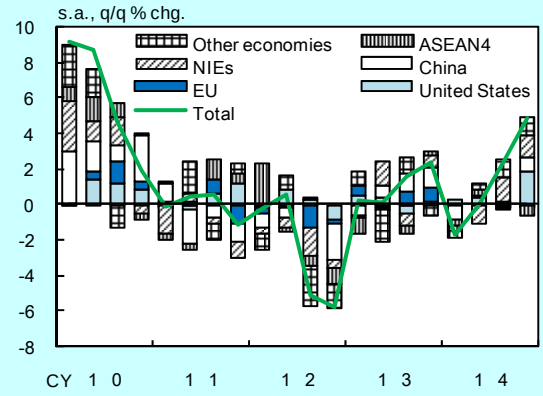
Note: Figures for fixed investment of advanced economies are calculated using their GDP growth rate and the ratio of investment to their GDP from the "World Economic Outlook." The figure for 2014 is the IMF projection.
Sources: IMF; Ministry of Finance, "Trade Statistics"; Bank of Japan, "Corporate Goods Price Index."

More recently, however, recovery in the United States has spilled over into fixed investment and begun to have a positive impact on Japan's exports of capital goods[8] (Chart 13).

(3)Acceleration of overseas production accompanied by increases in local procurement

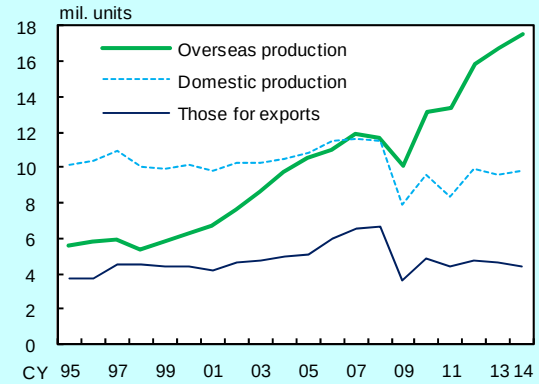
The acceleration of overseas production by Japanese companies has also been a supply-side factor exerting structural downward pressure on exports. With the appreciation of the yen after the Lehman shock, automobile manufacturers and other companies announced plans to expand their overseas investment and transfer production from Japan to other countries with the intention of capturing local demand and improving cost competitiveness. With a certain amount of lag after the formulation of the investment plans, a large number of local production sites began opening up in other countries from around 2013, and this was conceivably a factor exerting downward pressure on Japan's exports primarily in the automobile sector (Chart 14). In addition, the expansion of local production by manufacturers of final products encouraged the manufacturers of parts and components who supplied them to set up local operations, and also led to an increase in procurement from local manufacturers. They resulted in sluggish growth in the exports of parts and components to overseas production sites, which had previously been growing.

[Chart 13] Real Exports of Capital Goods and Parts (by Region)



Sources: Ministry of Finance, "Trade Statistics"; Bank of Japan, "Corporate Goods Price Index."

[Chart 14] Automobile Production by the Japanese Manufacturers

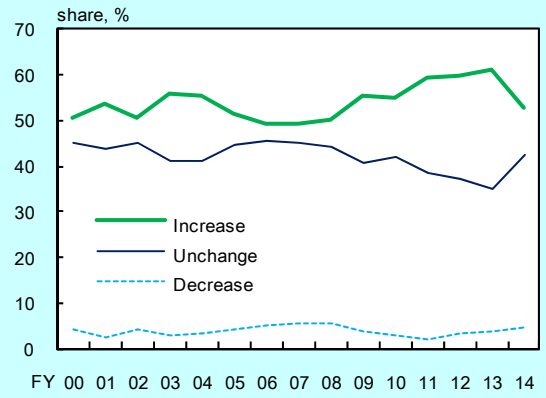


Note: The figure for "overseas production" in 2014 is estimated by using figures of the 9 companies which published their units of overseas production.
Source: Japan Automobile Manufacturers Association (JAMA).

The expansion trend for overseas production is likely to continue in the future. With the expectation that growth rates for overseas economies and profit margins for international operations (primarily in emerging economies) continue to outperform domestic growth and profit margins, Japanese

companies are expected to continue to try to improve corporate value by aggressively capturing foreign demand[9]. Nonetheless, due in part to the depreciation of the yen over the last two years or so, it is possible that the pace of expansion will slow somewhat and there will be some relief from the structural downward pressure on exports. On this point, recent corporate fixed investment plans show a higher weight for domestic investments, including investments in new areas. Moreover, some companies have begun to strengthen domestic production, principally by making use of existing domestic facilities (Chart 15).

[Chart 15] Firms' Forecast of the Overseas Production Ratio (Next 5 Years, Manufacturing)



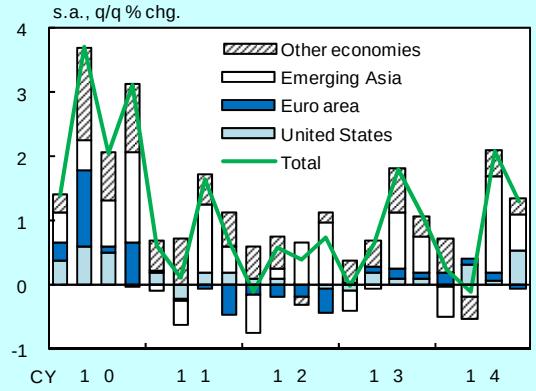
Source: Cabinet Office, "Annual Survey of Corporate Behavior."

Conclusions and Key Points for the Future

We identified both the common global factor and factors unique to Japan including structural ones behind the lack of momentum for Japan's exports since the Lehman shock, specifically, (1) sluggish trading activities around the world, (2) a secular decline in competitiveness in IT-related fields, (3) weak global demand for capital goods where Japan has comparative advantages, and (4) an acceleration of overseas production and expansion of local procurement, primarily in the automobile sector. These factors have interacted with each other and depressed exports.

It should be noted, however, that overseas economies, mainly advanced economies, have been recovering, albeit with a lackluster performance still seen in part. This is producing a moderate increase in global trading activities driven by the recovery for the U.S. economy and firm global IT demand (Chart 16). Moreover, as discussed above, the depreciation of the yen that began at the end of 2012 has improved price competitiveness in various fields including IT-related sectors, and the global demand for capital goods has begun to grow at a modest pace, led by the United States. In other words, we could see changes, or at least the signs of changes, in many of the factors that have exerted downward pressure on Japan's export share. Under these circumstances, Japan's exports have recently begun to pick up.

[Chart 16] Real Imports of the World Economy



Source: CPB, "World Trade Monitor."

From a somewhat longer-term perspective, one of the most important factors determining whether Japan's exports will continue to increase is global trading activities. There are expectations of a moderate increase in the growth rate for the world economy, and therefore the volume of global trade is likely to increase moderately at about the same pace as world economic growth (Chart 2). Nonetheless, the downside risks of the world economy and global trade, including the outcome of the Greek debt problem in Europe, and the impact of lower oil prices on the energy sector in each country, continue to warrant attention. Besides, it is also important whether the changes or signs of changes in factors unique to Japan will become clearer and contribute to increasing Japan’s share. On this point, attention should be paid to how Japanese companies' efforts to strengthen their competitiveness lead to capturing global demand, and what shares of that demand will be produced in Japan by review of their domestic and overseas production systems.

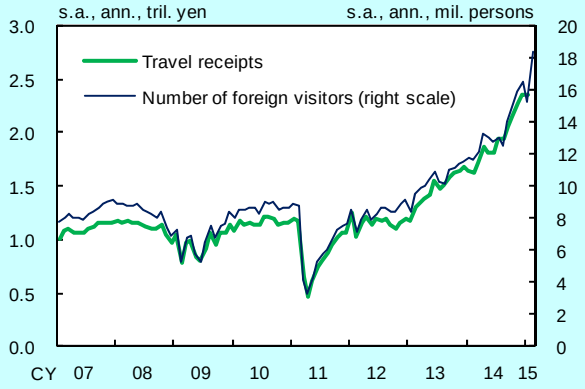
BOX: Expanding Service Exports: With a Focus on Travel Services

The analysis in this paper focuses on real exports of goods (products) to examine the changes in the environment surrounding Japan's exports. This box provides an overview of recent trends in service exports.

Among service exports, growth for travel services has been particularly strong in recent years. The travel receipts[i], which express nominal exports of travel services, have enjoyed an uptrend in recent years due to an increase in the number of foreign visitors, and particularly since 2013 the pace of growth has accelerated on the back of the depreciation of the yen and easing of visa requirements[ii] (BOX Chart 1).

For the depreciation of the yen considered one of the primary factors strengthening upward momentum of travel receipts, we performed a rolling estimate of its effect in which the sample period is fixed at 10 years and the estimation period is shifted forwards[iii]. The estimation confirms that the impact of the depreciation of the yen on the increase in the number of foreign visitors (exchange rate elasticity) has been clearly increasing from the middle of 2013 (BOX Chart 2 (1)). This result can be understood as the following; with easing of visa requirements and entry of LCCs (low cost carriers), there has been an expansion in the latent tourism demand facing Japan's economy that has made it easier for the depreciation of the yen to exert upward pressure. This is in contrast to the exports of goods where the acceleration of overseas production described in this paper has reduced exchange rate elasticity compared to previous levels (BOX Chart 2 (2))[iv].

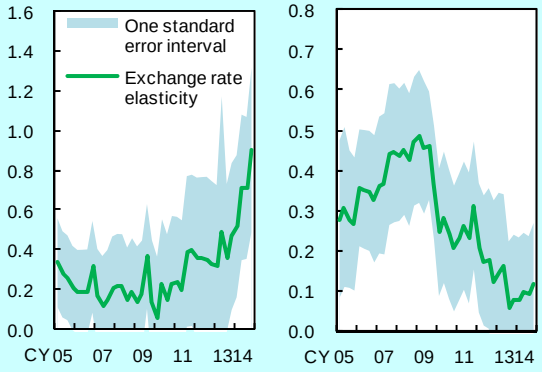
[BOX Chart 1] Travel Receipts and Number of Foreign Visitors



Sources: Ministry of Finance and Bank of Japan, "Balance of Payments"; Japan National Tourism Organization (JNTO).

[BOX Chart 2] Rolling Estimation of the Exchange Rate Elasticity

(1) Foreign Visitors (2) Real Exports of Goods



Notes: 1. Figures are estimates of the rolling regression with the 10 year (40 quarter) samples. Horizontal axis indicates the end period of the sample.
2. For details on the estimation equations, see BOX footnote iii.

Sources: IMF; Ministry of Finance and Bank of Japan, "Balance of Payments"; Japan National Tourism Organization (JNTO), etc.

[i] Travel receipts cover the goods and services obtained by non-residents (travelers) visiting Japan. Specifically those include spending on accommodation, food, recreation, local transport, and souvenirs.

[ii] For a discussion of the factors behind the recent increase in the number of foreign visitors and features in their consumption behavior in Japan, see Mera, Kurachi, and Ozaki [2013].

[iii] The details of the estimation equation used to estimate the exchange rate elasticity of the number of foreign visitors and real exports of goods are shown below.

$dlog(\text{number of foreign visitors}_t) = \beta \times dlog(\text{overseas real GDP}_t) - \sum \gamma_i \times dlog(\text{real effective exchange rate}_{t-i})$ + dummy (2003/Q2, 2009/Q1, Q2, 2011/Q2),

where i = 0-6, Almon-lag (2nd order, no endpoint constraint).

$dlog(\text{real exports}_t) = \alpha + \sum \beta_j \times dlog(\text{global real imports <excluding Japan>}_{t-j}) - \sum \gamma_k \times dlog(\text{real effective exchange rate}_{t-k})$ + dummy (2009/Q1, Q2, 2011/Q2),

where j = 0-1, Almon-lag (1st order, no endpoint constraint); k = 0-6, Almon-lag (2nd order, no endpoint constraint).

[iv] Some literatures pointed out that one reason why the recent depreciation of the yen has not had a clear positive effect on real exports is that export prices in local currencies have not been lowered to the level that the depreciation of the yen indicates, in other words, the

exchange rate pass-through to export prices has declined (Shimizu and Sato [2015], etc.). Some have also noted a growing emphasis among companies on profit margin rather than volumes, and pointed to this as a reason why the weaker yen has not been passed into prices. The behavior of companies stabilizing sales prices by not passing on changes in the exchange rate to local currency-denominated sales prices is generally referred to as "pricing-to-market" (PTM), and has been identified in Japan from the 2000s onwards. However, another literature has argued that there exists a correlation between the import prices for Japanese goods in the United States, which is Japan's major export destination, and exchange rate movements (Bank of Japan [2014a]). Taking account of these findings with the fact that the share of yen-denominated exports, not influenced by short-term exchange rate movements, increases, it is not necessarily clear whether the degree of decline in local currency-denominated export prices in this period is significantly lower than that in the previous period (around 2005-2007) where the yen was on a depreciation trend.

* Currently at the Kobe branch.

[1] The error-correction model widely used in prior research is employed as the export function. The details of the estimation equation are shown below. Note that the estimates at each period are the forecasts based on the actual data up to the previous period.

$\mathrm{dlog}(\text{real exports}_t) = -0.037^{***} + 4.62^{***} \times \mathrm{dlog}(\text{overseas real GDP}_t) - 0.24^{***} \times \mathrm{dlog}(\text{real effective exchange rate}_t) - 0.20^{***} \times (\log(\text{real exports}_{t-1}) - (0.97^{**} + 0.91^{***} \times \log(\text{overseas real GDP}_{t-1}) - 0.13^{*} \times \log(\text{real effective exchange rate}_{t-1}))) + \varepsilon_t$.

Sample period: 1988/Q1 - 2014/Q4, Adjusted R^2: 0.44.

***, **, * indicate statistical significance at the 1%, 5% and 10% levels.

[2] The "Great trade collapse" refers to a simultaneous global contraction in trading activities that occurred between 2008/Q4 and 2009/Q1. Factors identified as contributing include: (1) a decline in final demand for durable consumer goods, etc. and the spillover effects through GVC; (2) the contraction in trade financing and other financial shocks; and (3) rapid inventory adjustments. For details, see Kato and Naganuma [2013], and Bems, Johnson, and Yi [2013].

[3] We estimate the following function using global real exports as the dependent variable and world real GDP as the explanatory variable. The parameter on the world real GDP (β), is interpreted as income elasticity.

$\log(\text{global real exports}_t) = \alpha + \beta \times \log(\text{world real GDP}_t)$.

Next, the Bai-Perron test is applied to the residual to detect the points in time at which there is a change in the relationship between world economy and global trade. For the test, a maximum of 3 variation points is allowed with a significance level of 1%. As prior research using similar techniques to verify changes in income elasticity, the reader is referred to Constantinescu, Mattoo, and Ruta [2015]. They use a priori variation points to estimate the function and then employ the Wald testing to verify whether there have been changes in income elasticity at each phase.

[4] For details on the sluggish performance of the global trade after the "Great trade collapse", see Ferrantino and Taglioni [2014], and Constantinescu, Mattoo, and Ruta [2015].

[5] We use real exports data from the CPB Netherlands Bureau for Economic Policy Analysis (CPB) to calculate export share. The data are calculated with the base year of 2005 using published figures from national authorities and international institutions and estimates by the CPB (CPB [2013]).

National exports are generally measured in U.S. dollars when calculating export share. Therefore, in nominal terms and all else being equal, the share of exports from Japan, where a considerable volume is denominated in the yen, is directly affected by the exchange rate movements, either declining when the yen depreciates, or increasing when the yen appreciates. On this point, the share in real terms has the advantage of fixing the exchange rates at levels in the base year and eliminating those influences. However, the level of real values is influenced by the base year of the deflator and the method employed to adjust for quality, so these differences must be noted when making across-the-board comparisons of real values for different countries.

[6] For the anecdotes by firms on improvements to price competitiveness resulting from the depreciation of the yen, see Bank of Japan [2014b].

[7] The principal component analysis covers six items within real IT-related exports: computers and units, telecommunication machinery, ICs, visual apparatus, audio apparatus, and medical and optical instruments. The sample period is January 1988 to December 2014. As for interpretations of individual components, the first principal component is interpreted as a global demand factor because of its co-movement with the global semiconductor shipments. The third component tracks the U.S. dollar/yen rate with a delay of 1-2 years and is consistent with the observation that a certain amount of time is required before exchange rate trends impact product prices and lead to exports. It is therefore interpreted as a price competitiveness factor. Finally, the second component is interpreted as a non-price competitiveness factor because there are factors other than global demand and price competitiveness. However, the interpretations of the principal components are subject to a considerable margin of error.

The statistical discontinuity in figures resulting from changes in commodity classification of the "Trade Statistics" in January 2007 is adjusted in calculating each of the principal components.

[8] As noted above, the improvement in price competitiveness also has a positive impact on orders for machine tools, ships, and other capital goods, and is therefore considered to increase exports over a slightly longer term.

[9] On this point, Ichise, Kondo, and Nakahama [2015] empirically demonstrate a positive impact on consolidated corporate income and corporate value from the expansion of overseas production.

[Reference]

Bank of Japan [2014a] *Outlook for Economic Activity and Prices*, April 2014.

Bank of Japan [2014b] *Regional Economic Report*, April 2014 (in Japanese only).

Bems, R., R. C. Johnson, and K. Yi [2013] "The Great Trade Collapse," *Annual Review of Economics*, **5**, 375-400.

Constantinescu, C., A. Mattoo, and M. Ruta [2015] "The Global Trade Slowdown: Cyclical or Structural?," *World Bank Policy Research Working Paper*, 7158.

CPB [2013] "CPB World Trade Monitor, technical description," *CPB Background Document*.

Ferrantino, M. J., and D. Taglioni [2014] "Global Value Chains in the Current Trade Slowdown," *World Bank Economic Premise*, Number 138.

Ichise, Y., T. Kondo, and M. Nakahama [2015] "Improvement of Japanese Corporate Profitability in the Global Economy

and Its Domestic Impacts," *Bank of Japan Review Series*, 15-J-2 (in Japanese only).

Kato, R., and S. Naganuma [2013] "Globalization and Adaptability of Japan's Economy," *Bank of Japan Working Paper Series*, 13-J-13 (in Japanese only).

Mera, Y., Y. Kurachi, and N. Ozaki [2013] "Recent Increase in Foreign Visitors and Impact on Japan's Economy," *Bank of Japan Review Series*, 13-E-4.

Shimizu, J., and K. Sato [2015] "Abenomics, Yen Depreciation, Trade Deficit and Export Competitiveness," *RIETI Discussion Papers Series*, 15-E-020.

[Acknowledgement]

We want to thank Ayana Shibasaki for her assistance.

Bank of Japan Review is published by the Bank of Japan to explain recent economic and financial topics for a wide range of readers. This report, 2015-E-5, is a translation of the original Japanese version, 2015-J-6, published in March 2015. The views expressed in the Review are those of the authors and do not necessarily represent those of the Bank of Japan. If you have comments or questions, please contact Economic Assessment and Projection Group, Economic Research Division, Research and Statistics Department (Tel: +81-3-3279-1111). Bank of Japan Review and Bank of Japan Working Paper can be obtained through the Bank of Japan's Web site (http://www.boj.or.jp/en).