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January 2018 Industrial Production

Jan-Mar period expected to see lull in production growth trend

Economic Research Dept.
Kazuma Maeda
Shunsuke Kobayashi

Summary

- The January 2018 indices of industrial production recorded a major decline of -6.6% m/m, while market consensus fell also by -4.0%. Production cuts in transport equipment contributed greatly to overall decline, while in addition, all fifteen industries recorded declines.

- The METI production forecast survey sees February performance up by +9.0% m/m, while March is to see more declines at -2.7%. Meanwhile, the estimated value for February is +4.7% (corrected for production plan bias). If February and March perform as expected by the METI production forecast survey, the Jan-Mar period will achieve growth of +0.2% q/q. However, if the estimated value for February records +4.7% with March coming in at -2.7%, the Jan-Mar period will suffer a decline of -2.5%. Considering the major production cuts in January, production may suffer a decline in the overall Jan-Mar period, meaning that the lull mentioned in the subtitle of this report will have made its appearance.

- Production is expected to experience moderate growth in April and beyond. As for capital goods, the growth trend seen up till now may weaken, but favorable performance is expected to be maintained due to the expanding global economy. As for domestic capex, favorable corporate business performance and investment in maintenance and repair is expected to provide a boost to overall performance in 2018. However, caution is required regarding overseas demand due to possible downside risk. If US interest rates undergo a rapid rise in association with the Fed's exit strategy, this could bring downward pressure on the US economy, while at the same time encouraging capital outflows from the emerging nations.

Industrial Production (m/m %; SA basis) **Chart 1**

	2017 Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2018 Jan
Industrial Production	4.0	-3.6	2.2	-0.8	2.0	-1.0	0.5	0.5	2.9	**-6.6**
Market consensus (Bloomberg)										-4.0
DIR estimate										-3.8
Shipments	2.7	-2.9	2.5	-0.7	1.8	-2.5	-0.4	2.3	2.9	**-5.6**
Inventories	1.5	0.0	-2.0	-1.1	-0.6	0.0	3.2	-0.8	-0.3	**-0.6**
Inventory ratio	2.9	-1.9	-1.9	2.6	-4.1	1.6	3.5	-2.7	-0.5	**3.0**

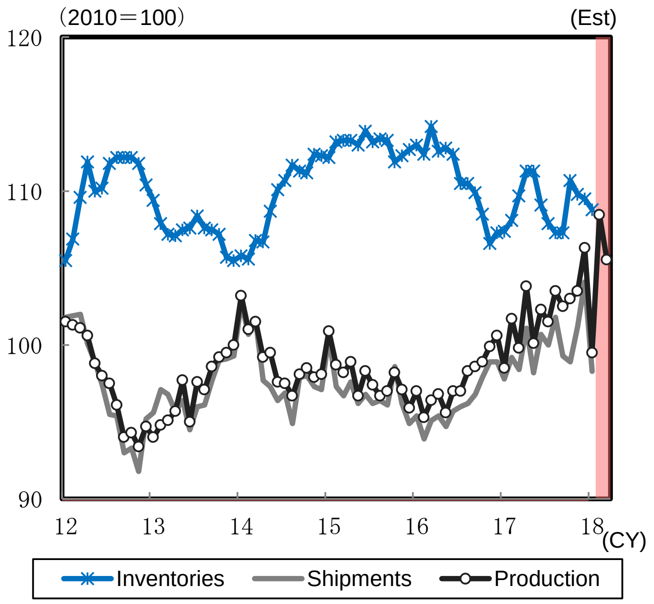
Source: Ministry of Economy, Trade, and Industry; Bloomberg; compiled by DIR.

Production declines fall below market consensus

The January 2018 indices of industrial production recorded a major decline of -6.6% m/m, while market consensus fell also by -4.0%. A major contributor to the decline was the fall-off in production experienced by the transport equipment industry. All industries suffered declines in their production indices. Both production and shipments registered declines, while inventory has declined for three consecutive months. The level of inventory, while accompanied by fluctuations, continues to mark time. The METI production forecast survey sees February performance up by +9.0% m/m, while March is to see more declines at -2.7%. Meanwhile, the estimated value for February is +4.7% (corrected for production plan bias).

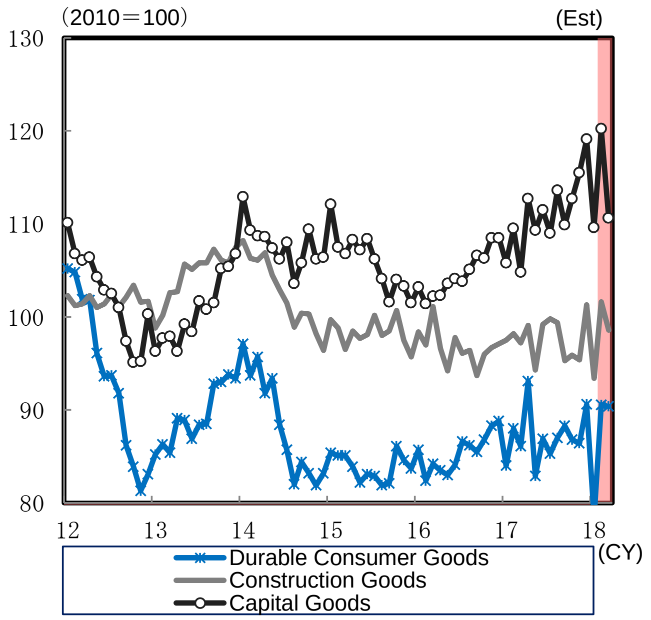
METI has revised its production assessment downwards from “production is picking up” to “production is picking up slowly”. If February and March perform as expected by the METI production forecast survey, the Jan-Mar period will achieve growth of +0.2% q/q. However, if the estimated value for February records +4.7% with March coming in at -2.7%, the Jan-Mar period will suffer a decline of -2.5%. Although production increases are expected in February, considering the major decline in January, production may suffer a decline in the overall Jan-Mar period in comparison to the previous quarter. However, despite the expected lull in production during the Jan-Mar period, our outlook has not essentially changed, and we see production continuing favorable performance due to the expanding global economy.

Production, Shipment, and Inventories **Chart 2**



Source: Ministry of Economy, Trade, and Industry (METI), compiled by DIR.
Note: Values for most recent 2-months of production index from METI production forecast survey.

Production Index and Breakdown by Types of Goods **Chart 3**



Source: Ministry of Economy, Trade, and Industry (METI), compiled by DIR.
Note: Values for most recent 2-months of production index from METI production forecast survey.

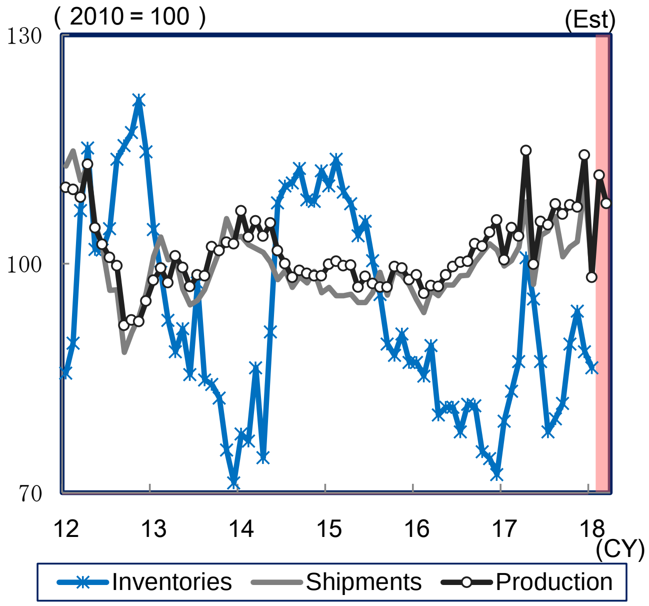
All fifteen industries register decline

As for production index performance by industry in January, contribution to overall decline was especially notable for transport equipment (-14.1% m/m) and general-purpose, production and business oriented machinery (-7.8%). Looking at the extent of contribution to the decline, we see transport equipment at -2.9%pt, and general-purpose, production and business oriented machinery contributing -1.2%pt. Together these two industries made a negative contribution to overall results of -6.6% in January, or approximately 60% of overall decline. All fifteen industries recorded declines. A decline in production by all fifteen industries at once has not occurred since January 2009 during the recession which followed after the global financial crisis of 2008.

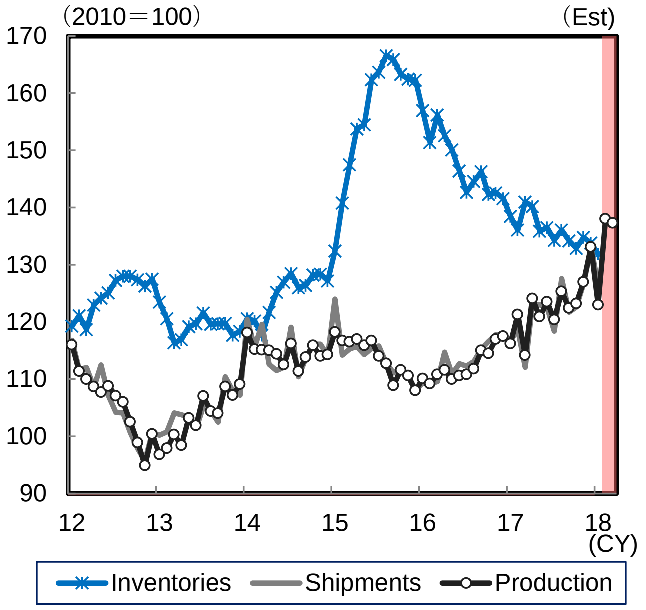
As for transport equipment, a reactionary decline was experienced in response to the major growth in its production index in December 2017 resulting in a major decline. The METI forecast survey sees February production up by +13.6% m/m, while March is to be down again by -3.3%. Though major growth in production is seen in February, it is at the same time important to remain cautious as growing signs of a slowdown are seen in new car sales in both the domestic and overseas markets.

General-purpose, production and business oriented machinery experienced a decline in production for the first time in four months at -7.8% m/m. Machinery such as shovel type excavators contributed to the decline, while semiconductor and flat panel display manufacturing equipment was strong as usual. Meanwhile, according to the METI production forecast survey, a major increase in production is seen in February of +12.2% with a decline of -0.5% in March. However, production in this industry has a tendency to fall below the initial outlook. Hence these figures should be taken with a grain of salt.

Production, Shipments, and Inventory (Left: Transport Equipment, Right: General-Purpose, Production and Business Oriented Machinery) Chart 4

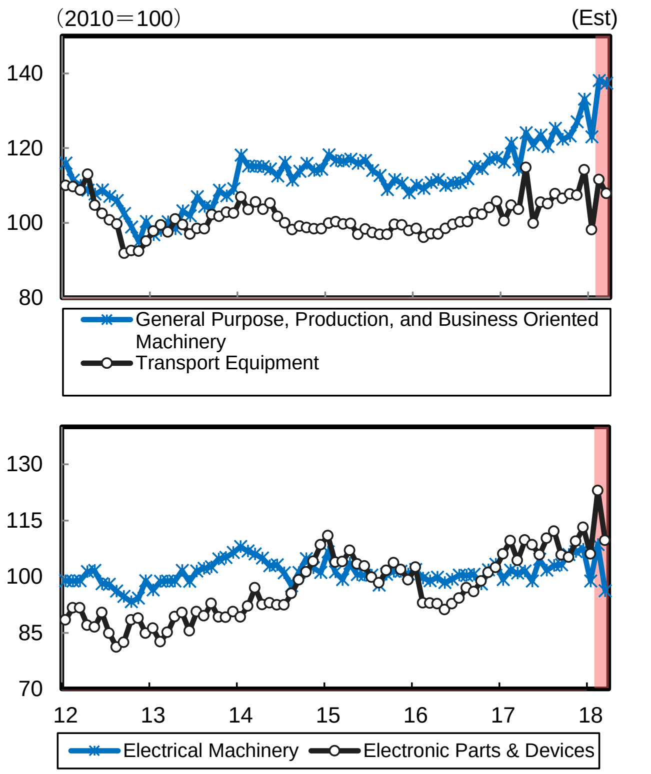


Source: Ministry of Economy, Trade, and Industry, compiled by DIR.
Note: Values for most recent 2-months of production index from METI production forecast survey.



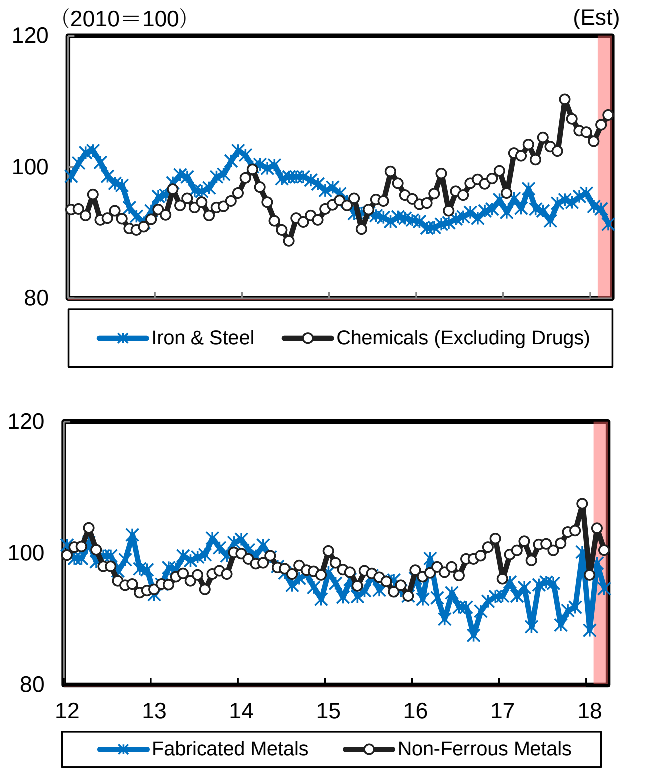
Source: Ministry of Economy, Trade, and Industry, compiled by DIR.
Note: Values for most recent 2-months of production index from METI production forecast survey.

Production Indices (Assembly) **Chart 5**



Source: Ministry of Economy, Trade and Industry; compiled by DIR.
Note: Figures for most recent two months of the production index are from the METI production forecast survey.

Production Indices (Materials) **Chart 6**



Source: Ministry of Economy, Trade and Industry; compiled by DIR.
Note: Figures for most recent two months of the production index are from the METI production forecast survey.

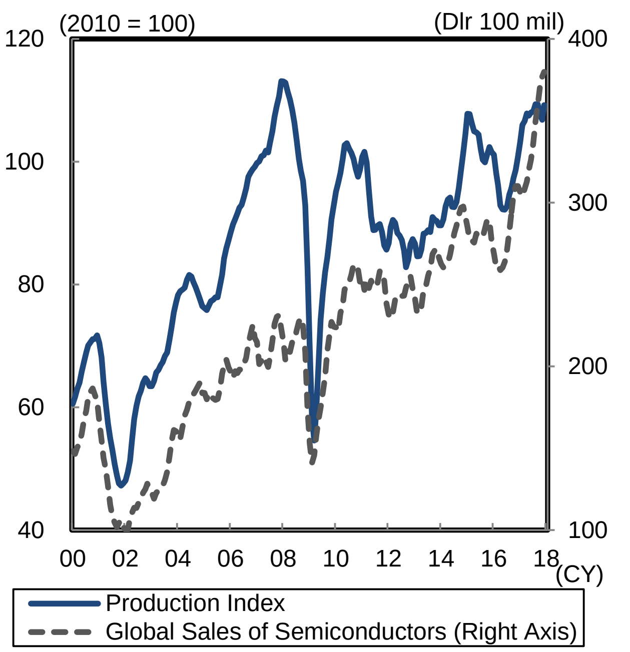
Electronic parts and devices require caution with semiconductor demand in a downswing

The effects of the new model iPhone production cuts require caution, with electronic parts and devices having suffered a decline of -6.3% m/m in January. The METI forecast survey sees electronic parts and devices achieving growth in February and then falling back in March, with +16.0% expected in February, and -10.8% seen in March. The industry's February outlook received a major downward revision of -7.1%.

The linkage between production trends in the electronic parts & devices industry and global sales of semiconductors is readily observable in statistics. The semiconductor market is expected to continue expanding in 2018 due to demand associated with the internet of things (IoT) and on-board electronics in motor vehicles. According to the outlook issued by World Semiconductor Trade Statistics (WSTS) in the autumn of 2017, the global semiconductor market grew by +20.6% y/y in 2017 and is expected to grow by +7.0% in 2018.

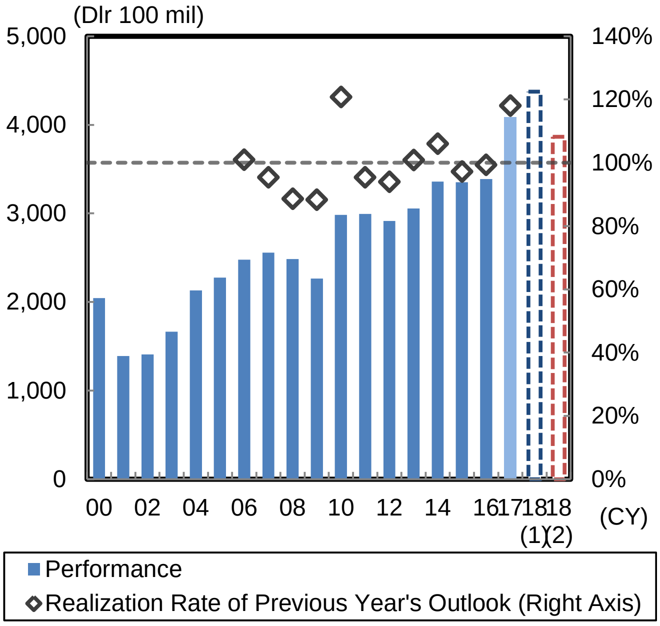
These statistics are referenced by semiconductor manufacturers, along with macroeconomic data and trends in major electronic parts & devices, in putting together their own outlooks. This outlook has been published annually since 2005, and since then has had a realization rate (predicted values from autumn of previous year / actual value) in the range of 88.4% in 2009 and 120.8% in 2010. Considering recent semiconductor demand and favorability of the global economy, it is possible that predicted values are on the optimistic side. Hence we urge caution regarding the possibility of a downtrend in actual values. If predicted values on the market for the year 2018 achieve a realization rate of 88.4%, that would mean that the growth rate of the semiconductor market would be around -5.5 y/y.

Production of Electronic Parts & Devices Chart 7



Source: METI, Haver Analytics; compiled by DIR.

Changes in Global Semiconductor Sales Chart 8



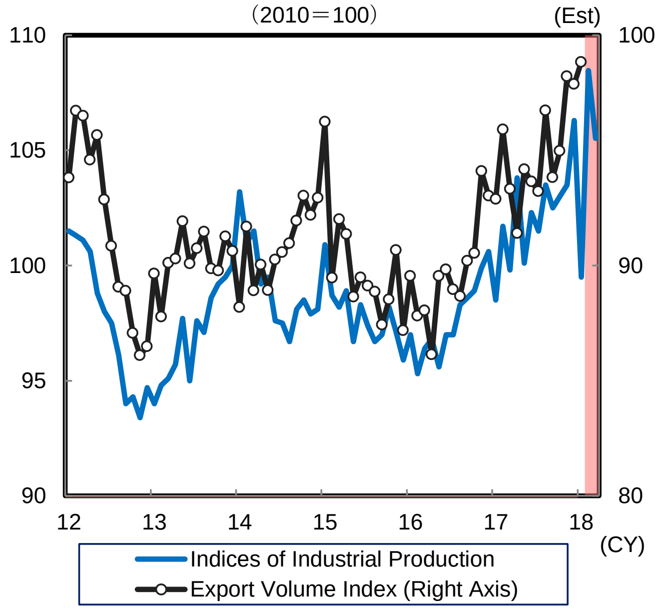
Source: WSTS; compiled by DIR.
Note: Actual values for 2017 are from 2017 autumn outlook. 18(1) is the outlook for 2018 produced in autumn of 2017. 18(2) = 18(1) x 88.4% (2009 realization rate).

Moderate growth in production seen in future

Production is expected to experience moderate growth in April and beyond. As for capital goods, the growth trend seen up till now may weaken, but favorable performance is expected to be maintained due to the expanding global economy. As for domestic capex, favorable corporate business performance and investment in maintenance and repair is expected to provide a boost to overall performance in 2018.

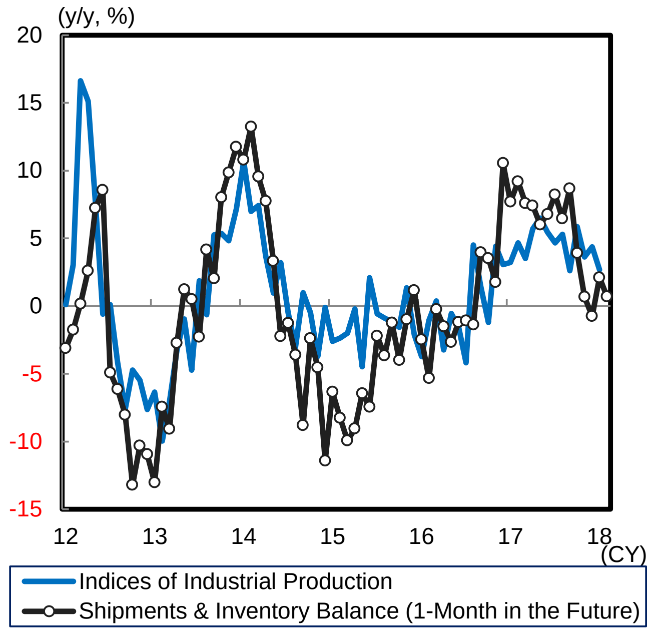
However, caution is required regarding overseas demand due to possible downside risk. As for the US, the Fed raised interest rates three times in 2017, and could raise interest any number of times in 2018. If US interest rates undergo a rapid rise in association with the Fed’s exit strategy, this could bring downward pressure on the US economy, while at the same time encouraging capital outflows from the emerging nations. Meanwhile, the ECB has begun further reducing its asset purchases since January 2018. Hence we advise caution regarding the possibility that this could bring downward pressure on the EU economy. While our main scenario sees a continuation of moderate growth for the global economy, if uncertainty regarding the future grows, it could lead to a slowdown in exports and risks bringing downward pressure on the Japanese economy.

Industrial Production & Export Volume
Chart 9



Source: Ministry of Economy, Trade, and Industry, compiled by DIR.
Note: Values for most recent 2-months of production index from METI production forecast survey.

Shipments, Inventory Balance & Production
Chart 10



Source: Ministry of Economy, Trade, and Industry, compiled by DIR.