

Macro: Underlying trend of industrial production in line with leading indicators

Industrial Production Index (IPI) recorded a strong increase in February on both monthly and annual bases. The monthly increase was 3.2%, driven by a 1.9 pp contribution from the 50.6% increase in the production of other transport equipment, one of the sectors with the highest volatility. The high annual increase was also attributable to the leap-year effect (3.8 pp) and the low base due to the earthquake in February last year. Therefore, although the monthly and annual increase in the underlying trend of industrial production was lower than the headline, it was in line with leading indicators such as PMI and Business Tendency Survey, and displayed a wide sectoral spread. March PMI and BTS data as well as provisional data on imports of intermediate goods suggest that this upward trend will continue, albeit at a slower pace. However, the high base from other transport vehicles may cause the monthly increase in IPI to take a negative value in March.

In seasonally and calendar-adjusted (s.a.) terms, IPI rose strongly by 3.2% mom (Chart 2). While the annual rate of increase was 15.3%, it was lower at 11.5% in calendar adjusted terms due to the leap year effect (Chart 1). The most important factor behind the high annual rate of increase in February was the base effect. IPI contracted by 6.5% mom and 8.8% yoy in February 2023 due to the earthquake (Charts 1 and 2). As of February, IPI increased by 3.4% qoq in the first quarter (Charts 3 and 4).

Chart 1. Industrial Production Index (IPI) (yoy)

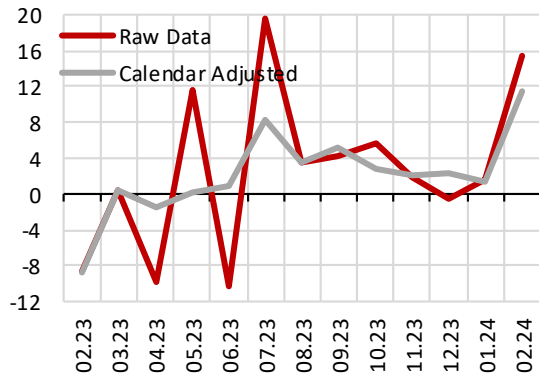


Chart 2. IPI (seasonally and calendar adjusted)

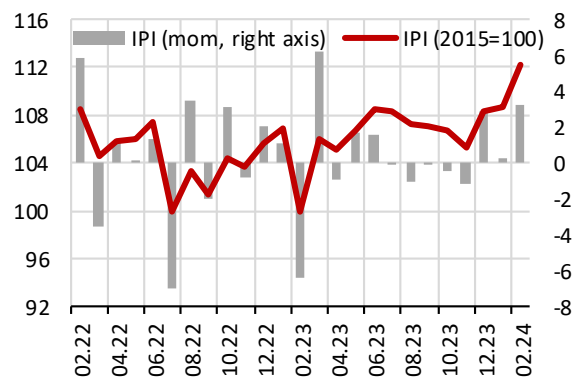
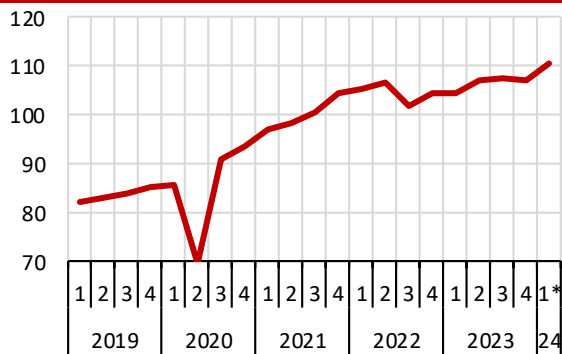
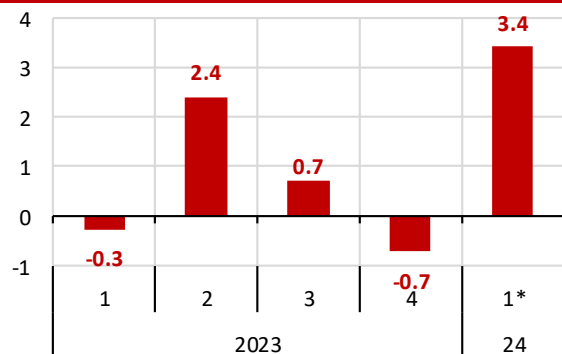


Chart 3. IPI (seasonally and calendar adjusted. 2021=100)



\* January-February average  
Source: Turkstat

Chart 4. IPI (seasonally and calendar adjusted. qoq)

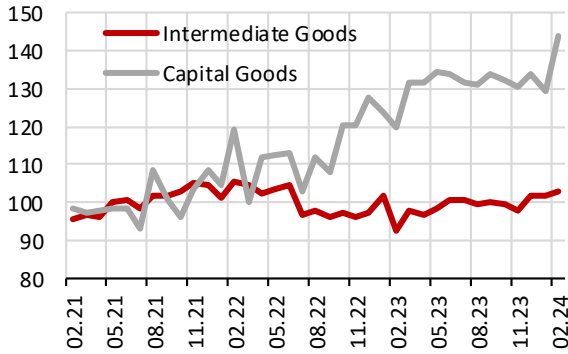


\* January-February average  
Source: Turkstat

Last month, we stated that we did not interpret the decline in January as a negative development in industrial production and that the Business Tendency Survey (BTS) and ISO Turkey Manufacturing Purchasing Managers' Index (PMI) signalled that IPI would increase on a monthly basis in February ([Macro: Industrial production remained flat in January](#)). Therefore, the monthly increase in IPI in February is not surprising, but the magnitude of the increase is considerably stronger than what the leading indicators suggested. As always, for a more consistent outlook between leading indicators and industrial production, it is useful to focus on the underlying trend.

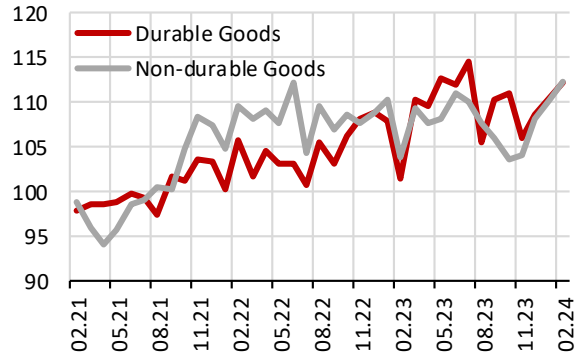
Firstly, the monthly increase in the IPI is entirely driven by the manufacturing industry. The manufacturing industry posted a monthly increase of 3.8% (s.a.), contributing 3.4 points to the monthly change in the IPI (s.a.). A breakdown of the manufacturing industry by main industrial groupings revealed that capital goods rose by 11.3% mom (Chart 5). Although there was an increase in other groups as well, the 2.3-point contribution of capital goods to the manufacturing industry indicates that the monthly increase in sectors other than capital goods was much more moderate (Charts 5 and 6). Therefore, we need to analyse the source of this sharp rise in capital goods and whether it belongs to the underlying trend.

**Chart 5. IPI (seasonally and calendar adjusted. 2021=100)**



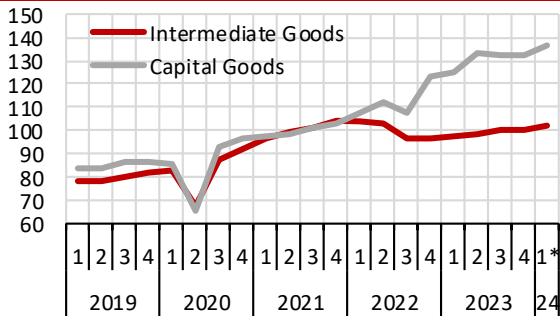
Source: Turkstat

**Chart 6. IPI (seasonally and calendar adjusted. 2021=100)**



Source: Turkstat

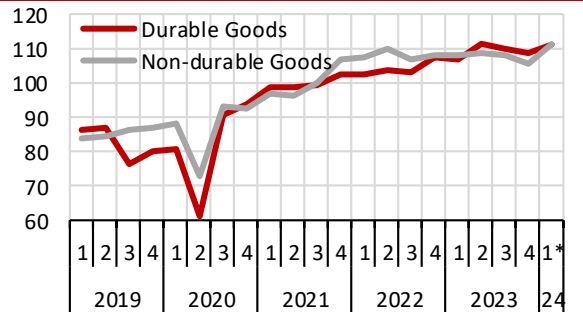
**Chart 7. IPI (seasonally and calendar adjusted. 2021=100)**



\* January-February average

Source: Turkstat

**Chart 8. IPI (seasonally and calendar adjusted. 2021=100)**



\* January-February average

Source: Turkstat

The monthly increase of 11.3% (m.a.) in **capital goods** was mainly driven by the 50.6% rise in "**manufacture of other transport equipment**", one of the sectors with the highest monthly volatility. While the contribution of this increase to the monthly change in manufacturing industry (s.a.) was 2.1 points, we calculate its contribution to the monthly change in IPI (s.a.) as 1.9 points and to the monthly change in capital goods (s.a.) as approximately 9 points. Therefore, excluding this sector, the production of capital goods is still rising strongly but more modestly by around 2.8% (s.a.) on a monthly basis. This increase was mainly driven by **vehicle** production, which rose by 5.5% thanks also to the base effect stemming from the factory closures in January. On the other hand, production of **machinery and equipment**, one of the core capital goods sectors, declined in February as well after January (down 1.4%).

**Intermediate goods** production continued its upward trend for the third month in a row, rising by 1.1% mom (s.a.) in February, reaching its highest level since June 2022 (cumulative increase of 5.2% in the last 3 months). Among construction-related sectors, the 3.7% increase in **other non-metallic mineral products** stood out this month. The average monthly increase in this sector reached 3.4% in the last 3

months. Ready-mixed concrete production, one of the important sub-sectors, increased by 25% cumulatively in the last 3 months and followed a stronger course. We think that both the milder weather conditions compared to a normal winter season and the construction activity in the earthquake zone played a role in this development. On the other hand, production in **basic metal** sector contracted by 3.5% mom due to iron and steel sector, ending 5 months of upward trend. On the other hand, the positive outlook in **wood and cork**, **paper products** and **chemical products** manufacturing is maintained (Tables 1 and 2).

Production of **durable goods** (s.a.) increased by 1.5% in February, following the 2.6% and 1.6% increases in December and January, respectively. Thus, the cumulative production increase in the last 3 months reached 5.8%. The rise in furniture production (1.9%) was the main driver of the increase in February, while the production of household appliances, which increased by 1.4% last month, declined slightly. Considering the wage increases, financial tightening and the weak course of external demand, this strong trend in durable goods production may be considered surprising.

The stronger course in **non-durable goods** compared to durable goods continued in February and the food sector was the main driver of the increase as in previous months. Food production (s.a.) increased by 3.4% mom in February, while the cumulative increase in the last 4 months reached 14.3%. The increase continued to spread across most of the sub-sectors, with sugar production playing an important role in this development, rising by 35.8% in February and by 97.1% cumulatively in the last 4 months. We have emphasized the strong outlook in the food sector in our recent PMI reports (Macro: [Stable outlook for the manufacturing industry](#)). Weakness in the **clothing**, **textile** and **leather** sectors is maintained as expected. However, some recovery is observed in textiles excluding weaving.

In sum, although there has been a strong monthly increase in the manufacturing industry, the rate of increase in the underlying trend is lower than the headline and more in line with leading indicators. March PMI and BTS data as well as provisional data on imports of intermediate goods suggest that this upward trend will continue at a slower pace. However, the high base from other transport vehicles may cause the monthly increase in PPI to take a negative value in March.

Table 1. Industrial Production Index (Annual Percentage Change)

	Nov.23	Dec.23	Jan.24	Feb.24	2023-Q2	2023-Q3	2023-Q4	2024-Q1*
<b>IPI</b>	<b>1.8</b>	<b>-0.6</b>	<b>1.7</b>	<b>15.3</b>	<b>-3.4</b>	<b>8.5</b>	<b>2.2</b>	<b>8.1</b>
<b>Mining and quarrying</b>	<b>5.2</b>	<b>-1.8</b>	<b>6.0</b>	<b>15.7</b>	<b>-14.3</b>	<b>8.8</b>	<b>5.1</b>	<b>10.4</b>
Mining of coal and lignite	-25.4	-29.7	5.2	19.1	-42.7	-27.2	-27.5	11.0
Extraction of crude petrol. and n. gas	25.5	-13.6	-16.1	-4.3	11.8	12.9	10.3	-10.8
Mining of metal ores	20.3	21.2	20.1	17.5	-2.7	33.9	26.5	18.9
Other mining and quarrying	-5.1	-10.9	-7.6	18.6	-23.4	-6.0	-6.2	3.7
<b>Manufacturing</b>	<b>1.9</b>	<b>-0.3</b>	<b>1.1</b>	<b>16.0</b>	<b>-2.5</b>	<b>8.4</b>	<b>2.4</b>	<b>8.2</b>
Food products	9.6	10.9	11.1	17.3	-7.2	1.3	9.9	14.0
Beverages	-2.1	-12.5	18.3	24.1	-12.5	7.5	-6.3	21.2
Tobacco products	6.4	6.6	16.6	35.9	15.1	25.2	8.0	26.0
Textiles	-6.2	-7.8	-4.7	15.3	-15.7	-2.5	-5.4	4.4
Wearing apparel	-13.1	-14.0	-13.4	-8.9	0.7	-4.2	-13.1	-11.2
Leather and related products	-19.5	-19.9	-20.6	-10.6	4.5	1.2	-15.5	-15.8
Wood and cork products	6.0	3.1	-2.5	12.0	-4.5	8.0	7.3	4.1
Paper and paper products	-2.3	0.4	2.7	13.8	-14.2	3.3	-0.7	8.0
Recorded media	-22.1	-17.1	-9.5	0.8	-15.6	-16.6	-17.3	-4.5
Coke and refined petroleum products	4.0	10.8	6.4	25.8	-15.0	-1.3	7.8	15.0
Chemicals and chemical products	-3.7	0.0	0.7	16.4	-11.0	-4.8	-1.2	8.0
Basic pharmaceutical products	0.6	5.3	-3.5	8.6	-14.3	22.9	3.8	2.6
Rubber and plastic products	-1.2	-0.7	-2.0	8.7	-3.3	8.4	0.4	3.2
Other non-metallic mineral products	-2.8	-4.1	-7.3	19.8	-8.6	3.6	-0.8	4.7
Base metals	12.1	7.2	7.4	22.4	-10.9	4.1	8.3	14.2
Fabricated metal products	2.9	5.4	1.2	13.4	8.9	17.9	5.9	7.1
Computer, electronic and optical products	-20.0	21.6	-11.5	-16.0	14.6	47.6	8.8	-14.0
Electrical equipment	-0.6	10.3	4.1	14.0	3.0	12.5	5.5	9.1
Machinery and equipment	2.9	1.9	-5.4	0.4	4.5	12.9	4.0	-2.5
Motor vehicles	8.4	-1.0	6.9	23.6	11.7	15.2	8.6	15.1
Other transport equipment	41.3	-20.5	32.0	126.3	43.7	88.4	-1.3	78.5
Furniture	-11.4	-14.7	-4.1	8.3	1.4	1.4	-11.2	2.0
Other manufacturing	5.9	0.4	6.0	14.8	5.0	5.8	6.0	10.2
Repair and installation of mach. and equip.	30.9	14.5	9.4	27.2	16.7	35.1	23.1	18.4
<b>Electricity, gas, steam</b>	<b>3.3</b>	<b>3.5</b>	<b>8.4</b>	<b>9.1</b>	<b>-4.9</b>	<b>5.3</b>	<b>2.9</b>	<b>8.7</b>
<b>IPI</b>	<b>1.8</b>	<b>-0.6</b>	<b>1.7</b>	<b>15.3</b>	<b>-3.4</b>	<b>8.5</b>	<b>2.2</b>	<b>8.1</b>
Intermediate Goods	2.2	2.0	0.0	15.5	-7.8	6.6	3.3	7.2
Durable Consumer Goods	-4.6	-4.8	5.1	16.6	3.9	10.5	-1.3	10.8
Non-durable Consumer Goods	-0.1	-0.6	0.5	7.9	-6.6	0.4	0.4	4.0
Energy	3.1	1.1	7.1	12.5	-8.7	1.7	2.3	9.6
Capital Goods	7.3	-0.1	4.8	25.3	14.7	26.5	6.0	15.0
Low Technology	-1.5	-2.5	0.3	10.6	-8.0	-0.3	-0.9	5.1
Medium-Low Technology	6.1	3.9	0.9	17.7	-3.3	10.3	6.1	8.8
Medium-High Technology	4.7	-3.6	3.8	15.1	3.8	14.5	2.4	9.3
High Technology	-4.9	11.8	-2.1	45.4	16.5	42.5	8.7	23.3

\* As of February  
Source: TURKSTAT

Table 2. Industrial Production Index (Seasonally and Calendar Adjusted)

	Monthly % Change				Quarterly % Change			
	Nov.23	Dec.23	Jan.24	Feb.24	2023-Q2	2023-Q3	2023-Q4	2024-Q1*
<b>IPI</b>	<b>-1.2</b>	<b>2.9</b>	<b>0.3</b>	<b>3.2</b>	<b>2.4</b>	<b>0.7</b>	<b>-0.7</b>	<b>3.4</b>
<b>Mining and quarrying</b>	<b>-4.9</b>	<b>-1.5</b>	<b>4.2</b>	<b>-3.2</b>	<b>-1.6</b>	<b>9.5</b>	<b>1.5</b>	<b>-0.3</b>
Mining of coal and lignite	-5.0	10.3	11.0	-11.7	-9.1	5.2	6.7	9.6
Extraction of crude petrol. and n. gas	4.4	-28.1	5.8	-0.7	2.3	6.0	-1.9	-15.1
Mining of metal ores	-6.1	2.3	-1.9	-5.1	4.1	14.5	2.2	-5.0
Other mining and quarrying	-7.8	2.3	5.9	4.3	-8.1	5.2	-0.3	6.9
<b>Manufacturing</b>	<b>-1.1</b>	<b>3.4</b>	<b>-0.3</b>	<b>3.8</b>	<b>2.7</b>	<b>0.0</b>	<b>-0.6</b>	<b>3.5</b>
Food products	1.4	3.4	5.4	3.4	0.7	2.9	1.6	10.1
Beverages	3.1	-2.0	11.2	2.5	1.6	0.9	3.3	12.2
Tobacco products	-2.5	1.1	-3.3	7.2	15.5	4.1	-2.9	0.1
Textiles	-1.8	3.2	0.1	1.0	5.1	-2.7	-3.5	2.1
Wearing apparel	2.2	3.9	-0.4	-1.6	0.1	-10.2	-5.8	2.0
Leather and related products	-5.8	8.7	-5.3	-1.6	-3.9	-6.7	-5.1	-2.7
Wood and cork products	-3.0	4.2	1.6	1.6	-2.6	-0.2	-0.5	4.2
Paper and paper products	-0.1	0.3	2.1	2.9	0.4	4.8	-3.5	3.8
Recorded media	-9.4	6.2	-1.2	4.1	4.6	-7.9	-6.0	1.5
Coke and refined petroleum products	-2.9	0.3	-1.9	0.7	1.9	4.7	8.1	-2.4
Chemicals and chemical products	0.4	1.0	2.2	0.6	1.2	-2.2	2.9	3.3
Basic pharmaceutical products	2.6	8.3	-11.1	5.4	-0.7	14.7	-9.3	-3.0
Rubber and plastic products	0.8	4.1	1.6	-0.2	-0.5	-0.7	-2.1	4.4
Other non-metallic mineral products	-4.5	3.2	3.1	3.7	-1.9	1.7	-0.9	5.5
Base metals	0.0	2.9	3.7	-3.5	2.8	0.2	3.8	3.8
Fabricated metal products	-2.8	6.7	-2.7	1.7	6.5	-2.1	-3.4	1.4
Computer, electronic and optical products	-12.1	25.9	-21.5	1.6	-3.3	8.9	-3.9	-12.0
Electrical equipment	-0.5	8.2	-3.7	2.8	1.1	-0.2	1.5	2.6
Machinery and equipment	-0.1	5.6	-7.6	-1.4	0.5	0.4	-0.2	-4.9
Motor vehicles	-2.1	-3.4	3.6	5.5	5.9	-1.8	1.8	3.3
Other transport equipment	4.6	-3.6	-0.8	50.6	27.4	2.0	-7.1	23.1
Furniture	-1.2	2.7	3.3	1.9	3.3	-7.3	-3.5	5.7
Other manufacturing	-2.9	4.5	-2.4	-2.2	3.3	-2.3	4.6	-1.6
Repair and installation of mach. and equip.	-1.4	-3.3	-2.9	8.3	4.4	7.8	3.7	-1.6
<b>Electricity, gas, steam</b>	<b>-0.6</b>	<b>0.1</b>	<b>4.6</b>	<b>0.3</b>	<b>1.5</b>	<b>4.2</b>	<b>-2.8</b>	<b>4.7</b>
<b>IPI</b>	<b>-1.2</b>	<b>2.9</b>	<b>0.3</b>	<b>3.2</b>	<b>2.4</b>	<b>0.7</b>	<b>-0.7</b>	<b>3.4</b>
Intermediate Goods	-1.7	3.9	0.1	1.1	1.3	1.5	-0.3	2.7
Durable Consumer Goods	-4.5	2.6	1.6	1.5	4.6	-1.2	-1.4	2.6
Non-durable Consumer Goods	0.3	3.9	2.0	1.9	1.1	-1.0	-2.4	5.7
Energy	-1.2	-1.0	4.0	-0.8	1.1	4.4	0.3	2.4
Capital Goods	-1.1	2.4	-3.2	11.3	6.7	-0.8	-0.2	3.5
Low Technology	-0.5	3.3	2.4	1.8	1.8	-1.6	-1.7	5.4
Medium-Low Technology	-1.8	2.8	0.1	1.5	2.0	1.1	0.7	2.2
Medium-High Technology	-1.1	2.1	1.0	0.6	4.2	0.4	-0.5	2.4
High Technology	-0.7	13.0	-21.7	46.4	6.6	1.7	-1.7	4.2

\* January-February average

Source: TURKSTAT

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