

INDUSTRIAL PRODUCTION POSTS THIRD CONTRACTION IN A ROW

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- **Industrial production (IP) dropped 0.2% MoM-sa (-2.4% YoY) in February.** This result was slightly below market consensus of -0.1% MoM-sa (-1.9% YoY) and our forecast of +0.2% MoM-sa (-1.7% YoY). February's figure reflected another decrease in manufacturing (-0.5% MoM-sa, the third in a row) and an increase in mining (+4.6% MoM-sa), still a partial recovery considering November and December's sharp tumbles and January's increase.
- **Across major economic categories, a mixed bag.** Capital goods (+0.1% MoM-sa) and intermediate goods (+0.5% MoM-sa) contributed positively in February. However, consumer goods (-0.3% MoM-sa) contracted in the month, influenced mainly by durable goods (-1.4% MoM-sa), but with a negative contribution also from nondurable goods (-0.1% MoM-sa). Construction supplies (also related to investments as capital goods output) remained stable (0.0% MoM-sa).
- **In the breakdown, 16 of the 25 industrial activities expanded at the margin, with the diffusion index reaching 64% (vs. 56% in December).** In terms of contribution, mining (+0.66 p.p.), oil and biofuel coke (+0.07 p.p.) and printing and playback of recordings (+0.07 p.p.) contributed the most, while food products (-0.16 p.p.), chemical products (-0.13 p.p.) and pharmaceuticals (-0.11 p.p.) contributed the least.
- **All in all, another negative result for IP, with a mixed breakdown in February.** The breakdown shows another positive impact from mining as manufacturing contracted once again, especially due to the drop in durable goods. The diffusion index improved, but most activities posted small contributions. In quarterly terms, February's result implies a -0.5% QoQ-sa carryover to 1Q23. For manufacturing, we calculate a -1.0% QoQ-sa carryover to 1Q23.
- **Contractionary effects of shaky financial conditions started to materialize in 3Q22, mainly impacting goods-related sectors.** In our view, restrictive financial conditions are likely to continue stifling the performance of industrial output and retail sales in the coming quarters.
- **Our tracking for February's IBC-Br broad activity index is at +1.4% MoM-sa, already influenced by a strong farm output.** We are maintaining our 1Q23 GDP growth tracking at +0.5% QoQ-sa, following an expected positive contribution from agriculture. For full-year 2023, we forecast GDP growth at +0.8%, with a significant slowdown in domestic demand and in cyclical supply components, stemming mainly from the expected global recession and the Brazil Central bank's (BCB) tight policy, but we also expect strong growth for non-cyclical farm output, reflecting an all-time high forecast for the grain harvest.

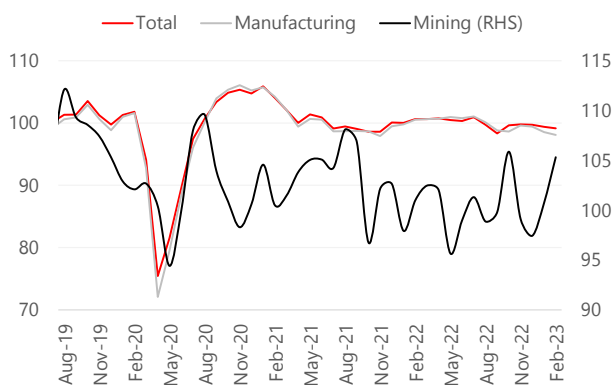


Figure 1 – Monthly Industrial Survey

Industrial Production Breakdown										
	Weights	% MoM			% YoY			% QoQ		
		Dec-22	Jan-23	Feb-23	Dec-22	Jan-23	Feb-23	Sep-22	Dec-22	Feb-23
Total Industry	100%	-0.1	-0.3	-0.2	-0.4	0.3	-2.4	-0.8	0.1	0.2
Mining	15%	-1.7	3.4	4.6	-4.5	2.0	5.1	1.1	0.8	-0.4
Manufacturing	85%	-0.2	-0.9	-0.5	-0.2	-0.1	-3.7	-0.8	-0.8	-0.3
Capital Goods	6%	-1.7	-4.4	0.1	-5.3	-6.6	-12.4	-2.1	-3.2	-3.7
Intermediate Goods	61%	-0.7	-0.8	0.5	-0.2	-1.7	-2.8	-1.6	1.2	0.0
Consumer goods	32%	2.0	0.2	-0.3	0.7	5.8	0.5	1.3	-1.6	2.0
Durable	4%	2.4	-1.2	-1.4	-4.3	13.9	2.1	-2.1	-3.2	-3.7
Non-Durable	27%	2.1	0.1	-0.1	1.5	4.6	0.2	-1.6	1.2	0.0
Construction Supplies	-	-2.4	3.6	0.0	-8.8	-2.9	-4.7	-2.3	-3.0	-1.7

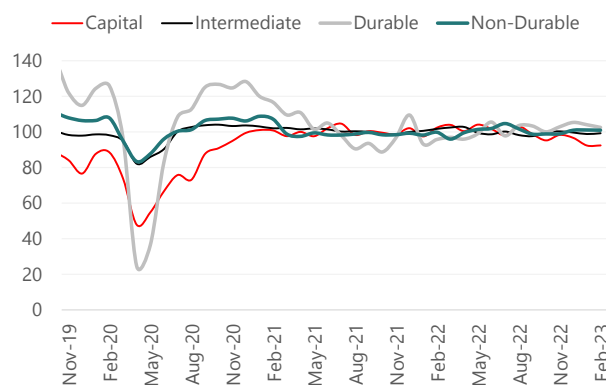
Sources: IBGE, Santander.

Figure 2 – Industrial Production Index (sa, 2022=100)



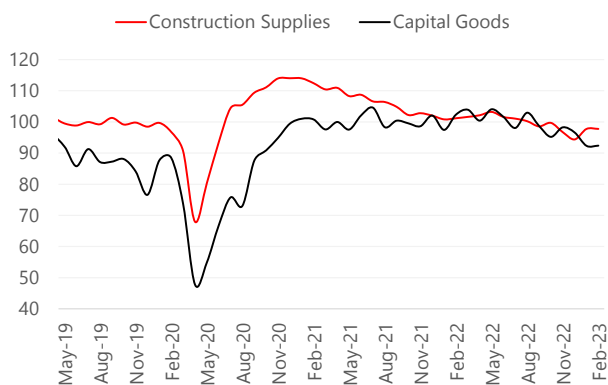
Sources: IBGE, Santander.

Figure 3 – Economic Categories (sa, 2022=100)



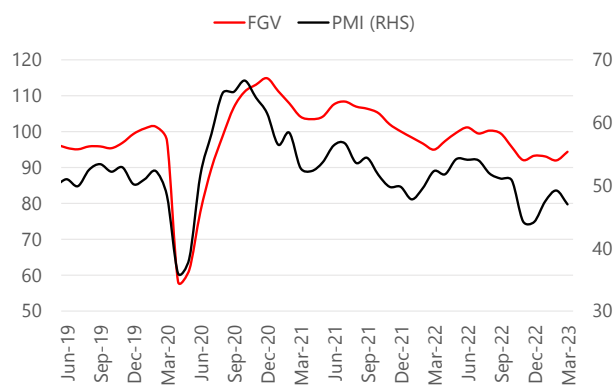
Sources: IBGE, Santander.

Figure 4 – Related to Investment (sa, 2022=100)



Sources: IBGE, Santander.

Figure 5 – Manufacturing Soft Data (sa)*



Sources: Markit, FGV, Santander.

* Neutral level: 100 points for FGV and 50 points for PMI.



Figure 6 - Industrial Production by Activity

	Industrial Activities Breakdown									
	Weights	% MoM			% YoY			% QoQ		
		Dec-22	Jan-23	Feb-23	Dec-22	Jan-23	Feb-23	Sep-22	Dec-22	Feb-23
Mining	14.6%	-1.7	3.4	4.6	-4.5	2.0	5.1	1.1	0.8	-0.4
Food products	15.1%	4.6	-2.8	-1.1	12.0	4.6	-3.8	-1.5	11.4	9.5
Oil and biofuel coke	13.5%	-0.7	-1.5	0.5	-0.4	-2.1	1.6	0.5	-6.1	-1.4
Vehicles	6.2%	-3.8	-5.9	0.1	1.2	2.2	-6.1	5.7	-2.1	-6.3
Metallurgy	4.9%	-7.1	-0.8	0.8	-7.1	-3.4	-4.8	-1.8	0.6	-3.0
Chemical products	7.4%	-0.7	-1.5	-1.8	-3.5	-2.6	-8.0	-3.3	-3.3	-2.8
Machines and equipments	3.8%	-2.9	0.2	-0.5	-8.3	-0.6	-9.0	-2.3	-4.8	-3.9
Metallic products except machines and equipments	3.0%	6.3	-3.2	-1.4	1.8	-1.7	-4.9	-4.1	0.9	1.9
Non-metallic minerals	2.7%	-4.3	2.3	0.5	-14.9	-10.6	-11.3	-2.2	-6.0	-4.3
Rubber and plastic products	3.4%	-0.1	1.6	0.3	-1.2	5.6	1.5	0.1	-2.2	1.1
Beverages	3.0%	-1.5	1.3	3.6	-0.6	4.8	8.2	-3.2	-5.2	3.1
Cellulose,paper and paper-based products	3.7%	0.3	-1.3	-0.2	1.5	-0.5	1.5	3.0	-3.0	-0.8
Machines, equipments and electric material	2.3%	0.9	-3.3	-3.5	-3.9	-5.5	-12.6	-3.8	-2.1	-3.2
Computer equipments, electronics and optical products	2.0%	2.2	-2.8	2.0	-15.0	-12.6	-11.8	-7.8	-4.2	-1.4
Pharmaceuticals	2.4%	17.4	-12.9	-4.5	48.3	34.1	6.7	9.5	9.1	11.0
Manufacture of clothing and accessories	2.0%	11.9	0.8	0.8	-9.6	-8.5	-10.9	-3.4	-8.6	6.9
Leather, travel items and footwears	1.4%	5.3	0.4	0.9	-4.8	-0.1	-1.9	-6.6	-9.6	0.9
Textile products	1.3%	3.5	4.0	1.3	-13.6	-2.6	-2.6	-5.0	-4.9	3.0
Other transport equipments, except motor vehicles	1.1%	2.3	2.3	-0.2	23.3	27.0	-2.2	5.6	3.0	2.6
Repair of machines and equipments	1.6%	2.2	0.6	-1.8	-10.2	-2.4	-4.8	-2.5	-4.8	0.6
Furniture	1.2%	6.2	2.7	0.2	-3.6	9.2	-0.7	-5.9	-1.1	10.6
Wood products	1.1%	-0.4	3.2	3.3	-28.0	-21.5	-17.1	-10.2	-10.9	6.2
Printing and playback of recordings	0.6%	2.9	-9.8	11.2	-2.8	-21.2	6.9	-3.7	-2.3	-1.6
Miscellaneous	1.2%	-14.2	10.8	4.0	-21.4	-6.2	-8.3	-1.2	-8.8	-3.3
Tobacco products	0.4%	-7.7	8.0	7.5	-10.2	3.8	18.1	-1.4	-1.0	-1.5

Sources: IBGE, Santander.

Figure 7 - Heatmap Showing Industrial Production by Activity (% MoM-sa)

	Weights	By Activity (% MoM sa)												
		Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23
14.6%	Mining	3.14	1.46	-0.46	-6.22	3.49	2.34	-2.41	0.96	6.06	-6.39	-1.68	3.37	4.56
15.1%	Food products	6.11	-1.60	-9.45	-4.44	-0.75	2.42	-1.53	-2.64	7.09	7.28	4.56	-2.79	-1.07
13.5%	Oil and biofuel coke	-3.06	-6.00	13.02	4.90	-0.69	4.68	-5.51	-4.45	-1.68	0.94	-0.67	-1.47	0.53
6.2%	Vehicles	3.47	1.35	-2.23	0.10	5.43	-6.27	13.07	0.52	-9.36	7.22	-3.81	-5.86	0.10
4.9%	Metallurgy	3.02	1.65	-0.82	-0.01	-2.67	2.12	0.65	-7.48	5.24	4.48	-7.08	-0.79	0.80
7.4%	Chemical products	2.55	2.82	0.87	-2.72	2.50	-4.59	1.20	-0.44	-4.02	1.32	-0.72	-1.47	-1.81
3.8%	Machines and equipments	6.57	2.71	-1.58	2.23	-0.60	-4.49	4.41	-2.92	-3.49	0.22	-2.92	0.24	-0.51
3.0%	Metallic products except machines and equipments	0.52	-2.49	1.71	3.42	-1.00	-4.80	-0.64	2.15	-1.17	-1.78	6.27	-3.15	-1.38
2.7%	Non-metallic minerals	0.41	0.47	-0.60	-0.70	-1.57	-1.24	2.25	-3.39	-2.26	-1.37	-4.28	2.31	0.53
3.4%	Rubber and plastic products	3.35	-0.69	2.14	1.23	-0.08	-0.54	0.92	-0.85	-3.02	1.66	-0.13	1.55	0.33
3.0%	Beverages	1.43	7.91	3.75	-0.56	-2.29	-1.17	2.22	-5.34	-6.46	7.45	-1.53	1.28	3.60
3.7%	Cellulose,paper and paper-based products	-2.45	1.57	1.68	-3.42	5.99	2.19	-1.96	-1.82	-1.56	0.51	0.31	-1.30	-0.20
2.3%	Machines, equipments and electric material	2.56	-4.41	2.01	7.29	-2.37	-5.06	1.31	-0.70	-2.40	0.01	0.93	-3.30	-3.52
2.0%	Computer equipments, electronics and optical products	-0.83	5.45	-1.38	3.49	-4.42	-4.27	-1.44	-2.59	-0.78	-2.95	2.16	-2.81	1.99
2.4%	Pharmaceuticals	13.28	-4.93	-3.40	2.05	3.20	5.11	5.35	-6.35	0.98	7.15	17.37	-12.92	-4.53
2.0%	Manufacture of clothing and accessories	0.87	-3.53	-0.49	-0.74	3.47	-6.87	4.37	-3.66	-9.33	-2.90	11.95	0.81	0.76
1.4%	Leather, travel items and footwears	1.26	6.16	1.81	8.10	-1.73	-9.57	3.46	-1.35	-10.49	-1.47	5.34	0.37	0.86
1.3%	Textile products	-2.28	-3.14	4.80	2.33	0.59	-1.30	-6.55	-1.51	0.98	-5.58	3.51	4.01	1.30
1.1%	Other transport equipments, except motor vehicles	25.43	-8.58	-9.15	9.97	3.54	-3.14	3.17	3.69	-0.17	-1.59	2.29	2.28	-0.24
1.6%	Repair of machines and equipments	-1.22	2.85	-1.96	5.12	0.36	-4.55	1.77	-2.80	-4.51	0.44	2.17	0.56	-1.81
1.2%	Furniture	5.70	-4.06	4.37	1.58	-0.85	-5.42	-0.32	-0.69	-7.10	7.30	6.21	2.74	0.23
1.1%	Wood products	-3.13	0.05	-3.88	2.70	-5.00	-4.92	0.47	-10.22	-10.92	11.36	-0.43	3.24	3.26
0.6%	Printing and playback of recordings	-16.47	-1.46	15.55	2.06	-11.67	4.64	1.95	-5.47	1.62	-2.66	2.87	-9.78	11.23
1.2%	Miscellaneous	4.92	-0.70	-4.43	5.35	-2.67	-2.95	5.82	-5.74	-8.49	10.57	-14.20	10.77	4.00
0.4%	Tobacco products	-2.88	22.54	-10.85	-2.48	-1.82	-3.64	1.96	9.27	-5.33	0.95	-7.68	7.96	7.54

Sources: IBGE, Santander.



Figure 8 - Heatmap Showing Industrial Production by Activity (contribution)

		By Activity (Contribution p.p, sa)												
		Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23
14.6%	Mining	0.46	0.21	-0.07	-0.91	0.51	0.34	-0.35	0.14	0.88	-0.93	-0.24	0.49	0.66
15.1%	Food products	0.92	-0.24	-1.43	-0.67	-0.11	0.36	-0.23	-0.40	1.07	1.10	0.69	-0.42	-0.16
13.5%	Oil and biofuel coke	-0.41	-0.81	1.76	0.66	-0.09	0.63	-0.75	-0.60	-0.23	0.13	-0.09	-0.20	0.07
6.2%	Vehicles	0.21	0.08	-0.14	0.01	0.34	-0.39	0.81	0.03	-0.58	0.45	-0.24	-0.36	0.01
4.9%	Metallurgy	0.15	0.08	-0.04	0.00	-0.13	0.10	0.03	-0.37	0.26	0.22	-0.35	-0.04	0.04
7.4%	Chemical products	0.19	0.21	0.06	-0.20	0.19	-0.34	0.09	-0.03	-0.30	0.10	-0.05	-0.11	-0.13
3.8%	Machines and equipments	0.25	0.10	-0.06	0.09	-0.02	-0.17	0.17	-0.11	-0.13	0.01	-0.11	0.01	-0.02
3.0%	Metallic products except machines and equipments	0.02	-0.07	0.05	0.10	-0.03	-0.14	-0.02	0.06	-0.04	-0.05	0.19	-0.09	-0.04
2.7%	Non-metallic minerals	0.01	0.01	-0.02	-0.02	-0.04	-0.03	0.06	-0.09	-0.06	-0.04	-0.11	0.06	0.01
3.4%	Rubber and plastic products	0.12	-0.02	0.07	0.04	0.00	-0.02	0.03	-0.03	-0.10	0.06	0.00	0.05	0.01
3.0%	Beverages	0.04	0.24	0.11	-0.02	-0.07	-0.03	0.07	-0.16	-0.19	0.22	-0.05	0.04	0.11
3.7%	Cellulose,paper and paper-based products	-0.09	0.06	0.06	-0.13	0.22	0.08	-0.07	-0.07	-0.06	0.02	0.01	-0.05	-0.01
2.3%	Machines, equipments and electric material	0.06	-0.10	0.05	0.17	-0.05	-0.11	0.03	-0.02	-0.05	0.00	0.02	-0.07	-0.08
2.0%	Computer equipments, electronics and optical products	-0.02	0.11	-0.03	0.07	-0.09	-0.09	-0.03	-0.05	-0.02	-0.06	0.04	-0.06	0.04
2.4%	Pharmaceuticals	0.32	-0.12	-0.08	0.05	0.08	0.12	0.13	-0.15	0.02	0.17	0.42	-0.31	-0.11
2.0%	Manufacture of clothing and accessories	0.02	-0.07	-0.01	-0.01	0.07	-0.14	0.09	-0.07	-0.19	-0.06	0.24	0.02	0.02
1.4%	Leather, travel items and footwears	0.02	0.09	0.03	0.12	-0.02	-0.14	0.05	-0.02	-0.15	-0.02	0.08	0.01	0.01
1.3%	Textile products	-0.03	-0.04	0.06	0.03	0.01	-0.02	-0.08	-0.02	0.01	-0.07	0.04	0.05	0.02
1.1%	Other transport equipments, except motor vehicles	0.29	-0.10	-0.10	0.11	0.04	-0.04	0.04	0.04	0.00	-0.02	0.03	0.03	0.00
1.6%	Repair of machines and equipments	-0.02	0.05	-0.03	0.08	0.01	-0.07	0.03	-0.04	-0.07	0.01	0.03	0.01	-0.03
1.2%	Furniture	0.07	-0.05	0.05	0.02	-0.01	-0.06	0.00	-0.01	-0.08	0.08	0.07	0.03	0.00
1.1%	Wood products	-0.03	0.00	-0.04	0.03	-0.05	-0.05	0.00	-0.11	-0.11	0.12	0.00	0.03	0.03
0.6%	Printing and playback of recordings	-0.10	-0.01	0.09	0.01	-0.07	0.03	0.01	-0.03	0.01	-0.02	0.02	-0.06	0.07
1.2%	Miscellaneous	0.06	-0.01	-0.05	0.07	-0.03	-0.04	0.07	-0.07	-0.10	0.13	-0.17	0.13	0.05
0.4%	Tobacco products	-0.01	0.09	-0.05	-0.01	-0.01	-0.02	0.01	0.04	-0.02	0.00	-0.03	0.03	0.03

Sources: IBGE, Santander.



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