

A WEAK COMPOSITION IN INDUSTRIAL PRODUCTION

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- **Industrial production (IP) decreased 0.6% MoM-sa (-2.7% YoY) in April.** This result was below market consensus of -0.2% MoM-sa (-1.7% YoY). April's figure reflected a drop in both manufacturing (-0.6% MoM-sa) and in mining (-1.1% MoM-sa).
- **Across major economic categories, mostly negative signals.** Capital goods (-11.5% MoM-sa) and durable goods (-6.9% MoM-sa) were the negative highlights, following a strong figure in March. On the other hand, intermediate goods (+0.4% MoM-sa) and nondurable goods (+1.1% MoM-sa) contributed positively.
- **In the breakdown, 9 of 25 industrial activities expanded at the margin, with the diffusion index reaching 36% (from 64% in March).** In terms of contribution, oil and biofuel coke (+0.48 p.p.) contributed the most, while food products (-0.49 p.p.), machines and equipments (-0.38 p.p.) and vehicles (-0.29 p.p.) contributed the least.
- **All in all, a month of negative print for IP in April.** The breakdown shows a negative impact from manufacturing following a positive figure in March, with mining also contracting once again. The diffusion index fell considerably from March's level. In quarterly terms, April's result implies a +0.0% QoQ-sa carryover to 2Q23. For manufacturing, we calculate a +0.2% QoQ-sa carryover to 2Q23.
- **We believe contractionary effects of shaky financial conditions started to materialize in 3Q22, mainly affecting 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.

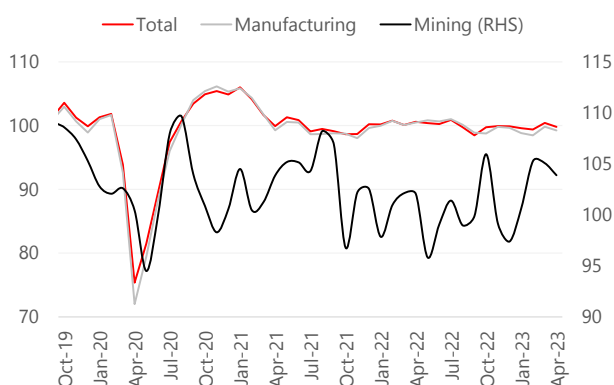


Figure 1 – Monthly Industrial Survey

Industrial Production Breakdown										
	Weights	% MoM			% YoY			% QoQ		
		Feb-23	Mar-23	Apr-23	Feb-23	Mar-23	Apr-23	Oct-22	Jan-23	Apr-23
Total Industry	100%	-0,2	1,0	-0,6	-2,4	0,9	-2,7	-1,2	0,5	0,1
Mining	15%	4,6	-0,2	-1,1	5,1	3,3	1,4	2,9	-2,5	5,7
Manufacturing	85%	-0,4	1,4	-0,6	-3,7	0,5	-3,5	-1,6	0,2	-0,2
Capital Goods	6%	0,3	8,6	-11,5	-12,4	-0,5	-14,2	-2,3	-3,7	-1,9
Intermediate Goods	61%	0,5	0,9	0,4	-2,8	-1,1	-2,6	-0,8	1,2	0,5
Consumer goods	32%	-0,4	-1,2	1,1	0,5	5,7	-0,7	-2,2	0,5	-0,1
Durable	4%	-1,7	2,2	-6,9	2,1	11,1	-3,5	-2,3	-3,7	-1,9
Non-Durable	27%	-0,2	-0,5	1,1	0,2	4,7	-0,2	-0,8	1,2	0,5
Construction Supplies	-	0,1	1,6	-0,7	-4,7	-0,9	-4,7	-2,3	-3,1	2,6

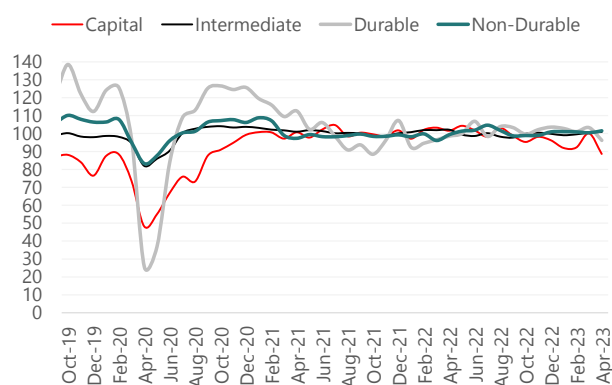
Sources: IBGE, Santander.

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



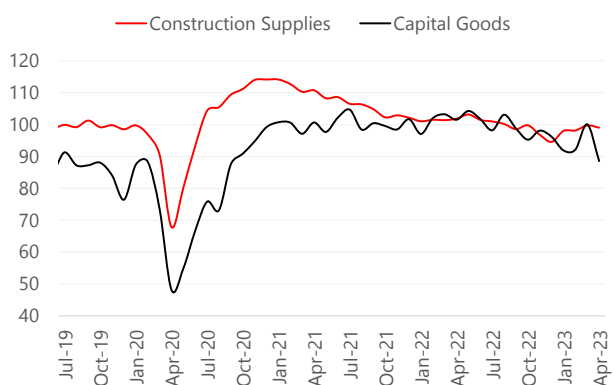
Sources: IBGE, Santander.

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



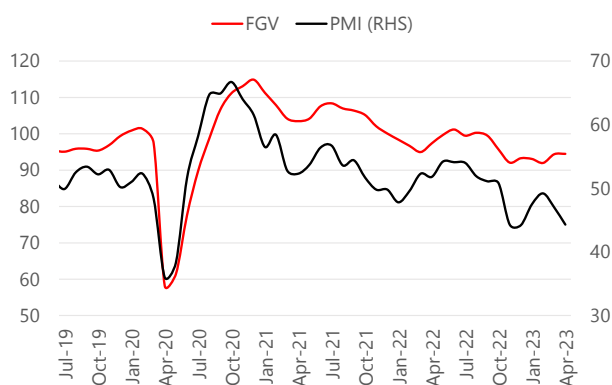
Sources: IBGE, Santander.

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		
		Feb-23	Mar-23	Apr-23	Feb-23	Mar-23	Apr-23	Nov-22	Feb-23	Apr-23
Mining	14.6%	4.6	-0.2	-1.1	5.1	3.3	1.4	2.9	-2.5	5.7
Food products	15.1%	-1.2	-0.1	-3.2	-3.8	0.7	2.0	4.5	9.2	-2.9
Oil and biofuel coke	13.5%	0.6	2.0	3.6	1.6	11.2	3.2	-7.1	-1.4	1.9
Vehicles	6.2%	0.0	0.0	-4.6	-6.1	-0.1	-9.7	1.9	-6.6	-6.7
Metallurgy	4.9%	0.8	0.3	-0.4	-4.8	-5.4	-5.5	-1.6	-3.1	-2.2
Chemical products	7.4%	-1.9	0.5	0.2	-8.0	-9.5	-12.2	-3.5	-2.9	-2.7
Machines and equipments	3.8%	-0.7	6.7	-9.9	-9.0	-1.3	-14.3	-3.9	-4.3	-0.6
Metallic products except machines and equipments	3.0%	-1.4	-1.0	-3.3	-4.9	-1.3	-8.7	-1.6	1.8	-3.5
Non-metallic minerals	2.7%	0.5	1.2	-1.2	-11.3	-7.3	-9.6	-4.1	-4.3	0.9
Rubber and plastic products	3.4%	0.4	0.4	-0.1	1.5	4.4	1.2	-1.9	0.9	1.5
Beverages	3.0%	3.4	0.5	-3.6	8.2	2.0	-7.2	-5.9	2.8	2.8
Cellulose,paper and paper-based products	3.7%	-0.1	-0.9	0.3	1.5	-1.4	-2.4	-3.3	-1.0	-1.4
Machines, equipments and electric material	2.3%	-3.6	1.0	-2.9	-12.6	-3.8	-12.2	-3.4	-3.4	-5.8
Computer equipments, electronics and optical products	2.0%	1.3	7.8	-9.4	-11.8	0.3	-15.7	-6.4	-1.5	2.3
Pharmaceuticals	2.4%	-4.0	3.2	-0.3	6.7	15.7	18.1	1.5	11.4	-6.0
Manufacture of clothing and accessories	2.0%	0.7	-4.6	1.1	-10.9	-7.3	-9.9	-10.4	6.6	2.0
Leather, travel items and footwears	1.4%	0.9	2.8	1.2	-1.9	-1.4	-2.1	-9.5	1.2	5.3
Textile products	1.3%	1.7	0.7	1.2	-2.6	1.4	-2.2	-6.7	2.9	6.0
Other transport equipments, except motor vehicles	1.1%	0.5	3.9	-5.2	-2.2	22.3	19.2	4.4	3.7	4.1
Repair of machines and equipments	1.6%	-1.8	0.6	-0.1	-4.8	-3.1	-2.8	-5.9	0.6	-0.3
Furniture	1.2%	0.3	-4.5	0.3	-0.7	4.2	-2.6	-5.2	9.7	0.6
Wood products	1.1%	3.2	-2.6	-1.5	-17.1	-15.5	-15.9	-14.8	5.8	2.7
Printing and playback of recordings	0.6%	10.4	0.5	6.5	6.9	17.5	13.3	-2.8	3.5	5.9
Miscellaneous	1.2%	4.1	0.0	0.3	-8.3	-1.8	-2.4	-5.7	-3.4	5.7
Tobacco products	0.4%	7.3	-5.2	-4.7	18.1	-1.9	-3.9	5.8	-1.4	4.4

Sources: IBGE, Santander.

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

		By Activity (% MoM sa)												
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23
14.6%	Mining	-0.08	-6.09	3.38	2.34	-2.40	0.93	6.06	-6.41	-1.77	3.36	4.59	-0.21	-1.13
15.1%	Food products	-7.54	-4.33	-0.79	2.54	-1.46	-2.62	7.42	7.09	4.46	-2.91	-1.18	-0.15	-3.24
13.5%	Oil and biofuel coke	11.09	5.45	-0.47	4.96	-5.45	-4.37	-1.61	1.00	-0.67	-1.50	0.58	2.02	3.58
6.2%	Vehicles	-0.34	-1.28	5.14	-7.08	13.67	0.33	-9.62	7.09	-3.91	-5.87	0.02	-0.01	-4.64
4.9%	Metallurgy	-0.73	0.01	-2.68	2.21	0.69	-7.44	5.24	4.35	-7.01	-0.97	0.84	0.29	-0.39
7.4%	Chemical products	0.74	-2.71	2.46	-4.60	1.18	-0.44	-4.00	1.33	-0.76	-1.53	-1.90	0.55	0.23
3.8%	Machines and equipments	0.13	0.95	-0.62	-4.40	4.40	-2.94	-3.57	0.08	-3.07	0.27	-0.70	6.72	-9.87
3.0%	Metallic products except machines and equipments	2.58	2.53	-1.03	-4.87	-0.66	2.06	-1.30	-1.96	6.65	-3.65	-1.44	-1.05	-3.26
2.7%	Non-metallic minerals	-0.22	-0.71	-1.53	-1.21	2.30	-3.35	-2.20	-1.36	-4.34	2.36	0.52	1.16	-1.22
3.4%	Rubber and plastic products	2.26	1.20	-0.06	-0.51	0.96	-0.84	-3.01	1.60	-0.17	1.39	0.36	0.41	-0.06
3.0%	Beverages	5.23	-0.62	-2.50	-1.08	1.87	-4.85	-6.37	7.45	-1.68	1.21	3.44	0.51	-3.63
3.7%	Cellulose,paper and paper-based products	1.45	-3.48	5.97	2.08	-1.88	-1.85	-1.58	0.53	0.11	-1.35	-0.06	-0.89	0.33
2.3%	Machines, equipments and electric material	2.95	7.03	-2.79	-5.09	1.26	-0.80	-2.54	0.03	0.87	-3.35	-3.62	0.96	-2.86
2.0%	Computer equipments, electronics and optical products	2.49	2.40	-4.45	-4.22	-1.59	-2.43	-0.85	-3.08	1.90	-2.16	1.29	7.82	-9.37
2.4%	Pharmaceuticals	-2.76	1.46	3.17	5.08	5.27	-6.30	0.99	7.19	17.55	-12.90	-4.00	3.15	-0.33
2.0%	Manufacture of clothing and accessories	-0.80	-1.18	3.31	-6.93	4.31	-3.76	-9.53	-3.03	11.83	0.73	0.69	-4.64	1.09
1.4%	Leather, travel items and footwears	0.24	9.25	-0.94	-9.72	3.61	-1.24	-10.34	-1.35	5.40	0.44	0.89	2.79	1.23
1.3%	Textile products	2.33	2.46	0.14	-1.25	-5.53	-1.63	0.94	-4.98	3.18	3.50	1.71	0.72	1.19
1.1%	Other transport equipments, except motor vehicles	-6.22	8.80	3.20	-3.08	3.36	3.72	-0.09	-1.37	2.54	2.95	0.48	3.94	-5.23
1.6%	Repair of machines and equipments	-1.90	5.22	0.39	-4.57	1.79	-2.77	-4.47	0.43	2.16	0.55	-1.81	0.65	-0.05
1.2%	Furniture	2.94	1.60	-0.87	-5.40	-0.24	-0.69	-7.38	7.51	5.83	1.98	0.34	-4.46	0.31
1.1%	Wood products	-3.45	2.58	-5.02	-4.87	0.61	-10.17	-10.90	11.21	-0.54	3.06	3.17	-2.65	-1.48
0.6%	Printing and playback of recordings	14.63	8.49	-12.06	3.65	1.77	-9.45	4.59	5.08	2.83	-10.62	10.37	0.51	6.52
1.2%	Miscellaneous	-2.34	4.15	-2.62	-3.23	5.73	-5.85	-8.34	10.30	-14.25	10.80	4.06	-0.01	0.29
0.4%	Tobacco products	-4.59	-2.21	-1.98	-3.72	1.93	9.13	-4.99	0.99	-7.53	7.65	7.34	-5.19	-4.66

Sources: IBGE, Santander.



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

		By Activity (Contribution p.p. sa)												
		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23
14.6%	Mining	-0.01	-0.69	0.49	0.34	-0.35	0.14	0.88	-0.93	-0.26	0.49	0.67	-0.03	-0.16
15.1%	Food products	-1.14	-0.65	-0.12	0.38	-0.22	-0.40	1.12	1.07	0.67	-0.44	-0.18	-0.02	-0.49
13.5%	Oil and biofuel coke	1.50	0.74	-0.06	0.67	-0.74	-0.59	-0.22	0.13	-0.09	-0.20	0.08	0.27	0.48
6.2%	Vehicles	-0.02	-0.08	0.32	-0.44	0.85	0.02	-0.60	0.44	-0.24	-0.36	0.00	0.00	-0.29
4.9%	Metallurgy	-0.04	0.00	-0.13	0.11	0.03	-0.37	0.26	0.21	-0.35	-0.05	0.04	0.01	-0.02
7.4%	Chemical products	0.06	-0.20	0.18	-0.34	0.09	-0.03	-0.30	0.10	-0.06	-0.11	-0.14	0.04	0.02
3.8%	Machines and equipments	0.00	0.04	-0.02	-0.17	0.17	-0.11	-0.14	0.00	-0.12	0.01	-0.03	0.26	-0.38
3.0%	Metallic products except machines and equipments	0.08	0.08	-0.03	-0.15	-0.02	0.06	-0.04	-0.06	0.20	-0.11	-0.04	-0.03	-0.10
2.7%	Non-metallic minerals	-0.01	-0.02	-0.04	-0.03	0.06	-0.09	-0.06	-0.04	-0.12	0.06	0.01	0.03	-0.03
3.4%	Rubber and plastic products	0.08	0.04	0.00	-0.02	0.03	-0.03	-0.10	0.06	-0.01	0.05	0.01	0.01	0.00
3.0%	Beverages	0.16	-0.02	-0.07	-0.03	0.06	-0.15	-0.19	0.22	-0.05	0.04	0.10	0.02	-0.11
3.7%	Cellulose,paper and paper-based products	0.05	-0.13	0.22	0.08	-0.07	-0.07	-0.06	0.02	0.00	-0.05	0.00	-0.03	0.01
2.3%	Machines, equipments and electric material	0.07	0.16	-0.06	-0.12	0.03	-0.02	-0.06	0.00	0.02	-0.08	-0.08	0.02	-0.06
2.0%	Computer equipments, electronics and optical products	0.05	0.05	-0.09	-0.09	-0.03	-0.05	-0.02	-0.06	0.04	-0.04	0.03	0.16	-0.19
2.4%	Pharmaceuticals	-0.07	0.04	0.08	0.12	0.13	-0.15	0.02	0.17	0.42	-0.31	-0.10	0.08	-0.01
2.0%	Manufacture of clothing and accessories	-0.02	-0.02	0.07	-0.14	0.09	-0.08	-0.19	-0.06	0.24	0.01	0.01	-0.09	0.02
1.4%	Leather, travel items and footwears	0.00	0.13	-0.01	-0.14	0.05	-0.02	-0.15	-0.02	0.08	0.01	0.01	0.04	0.02
1.3%	Textile products	0.03	0.03	0.00	-0.02	-0.07	-0.02	0.01	-0.06	0.04	0.04	0.02	0.01	0.02
1.1%	Other transport equipments, except motor vehicles	-0.07	0.10	0.04	-0.04	0.04	0.04	0.00	-0.02	0.03	0.03	0.01	0.04	-0.06
1.6%	Repair of machines and equipments	-0.03	0.08	0.01	-0.07	0.03	-0.04	-0.07	0.01	0.03	0.01	-0.03	0.01	0.00
1.2%	Furniture	0.03	0.02	-0.01	-0.06	0.00	-0.01	-0.08	0.09	0.07	0.02	0.00	-0.05	0.00
1.1%	Wood products	-0.04	0.03	-0.05	-0.05	0.01	-0.11	-0.11	0.12	-0.01	0.03	0.03	-0.03	-0.02
0.6%	Printing and playback of recordings	0.09	0.05	-0.07	0.02	0.01	-0.06	0.03	0.03	0.02	-0.06	0.06	0.00	0.04
1.2%	Miscellaneous	-0.03	0.05	-0.03	-0.04	0.07	-0.07	-0.10	0.13	-0.17	0.13	0.05	0.00	0.00
0.4%	Tobacco products	-0.02	-0.01	-0.01	-0.02	0.01	0.04	-0.02	0.00	-0.03	0.03	0.03	-0.02	-0.02

Sources: IBGE, Santander.



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