

## Mining Dragged Down Industrial Output in October

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- **Industrial production surprised to the downside, retreating 0.6% in October.** This result was below market expectations (+0.8%) and our estimate (+0.2%), and stems mainly from the steep decline in mining (-8.6%), while manufacturing showed virtual stability (-0.1%). Moreover, October's figure places industrial output 4.1% below the pre-pandemic mark (February 2020), marking the fifth decline in a row.
- **Looking at the breakdown, capital goods was the highlight, expanding 2.0%.** Conversely, intermediate goods continued to weaken, retreating 0.9%, the eighth decline in a row, and durable goods disappointed (again) by retreating 1.9%, marking the tenth decline in 2021. Construction supplies marked their sixth decline in a row (-1.4%) but remain well above the pre-crisis mark (+6.3).
- **Among industrial activities, still a widespread decline: the diffusion index reached 26.9%.** Mining (-0.96 p.p.), food products (-0.58 p.p.), and repair of machines and equipment (-0.28 p.p.) posted the worst figures. Conversely, oil and biofuel coke (+0.38 p.p.) made the greatest contribution.
- **October's result implies a -1.3% carryover to 4Q21, marking a weak start to the quarter.** Following three quarterly declines, these figures suggest, in our view, that industry will continue to be a short-term drag on overall activity in the remaining quarter of 2021. **We updated our October IBC-Br tracking to -0.1% MoM-sa (from +0.2%). Regarding GDP, we updated our tracking to +0.1% QoQ-sa (from +0.2).**

Figure 1 – Industrial Production Breakdown\*

	Weights	% MoM			% YoY			% QoQ			Feb-20%	Carry 4Q
		Aug-21	Sep-21	Oct-21	Aug-21	Sep-21	Oct-21	Aug-21	Sep-21	Oct-21	Oct-21	Oct-21
<b>Total Industry</b>	<b>100%</b>	<b>-0.8</b>	<b>-0.6</b>	<b>-0.6</b>	<b>-0.5</b>	<b>-4.1</b>	<b>-7.8</b>	<b>-1.2</b>	<b>-2.0</b>	<b>-2.4</b>	<b>-4.1</b>	<b>-1.3</b>
<b>Mining</b>	<b>11%</b>	<b>-0.2</b>	<b>2.2</b>	<b>-8.6</b>	<b>-1.4</b>	<b>3.1</b>	<b>-4.7</b>	<b>-0.3</b>	<b>-0.8</b>	<b>-2.9</b>	<b>-6.9</b>	<b>-7.3</b>
<b>Manufacturing</b>	<b>89%</b>	<b>-0.8</b>	<b>-0.5</b>	<b>-0.1</b>	<b>-0.4</b>	<b>-4.9</b>	<b>-8.2</b>	<b>-1.9</b>	<b>-2.1</b>	<b>-2.2</b>	<b>-3.2</b>	<b>-0.7</b>
Capital Goods	8%	-1.2	-1.1	2.0	31.6	15.1	8.4	4.2	2.4	0.6	18.2	0.9
Intermediate Goods	60%	-0.6	-0.2	-0.9	-1.9	-3.5	-6.4	-2.2	-1.9	-1.8	-1.1	-1.3
Consumer goods	32%	-0.4	0.1	-0.6	-4.8	-9.3	-14.0	-0.9	-1.0	-1.2	-12.4	-0.7
Durable	7%	-3.7	-0.6	-1.9	-17.9	-23.3	-27.9	-6.8	-7.4	-7.2	-24.4	-3.6
Non-Durable	25%	0.6	-0.2	-1.2	-1.3	-5.7	-10.2	0.8	0.5	-0.5	-7.9	-1.1
<b>Construction Supplies</b>	<b>-</b>	<b>-0.3</b>	<b>-2.7</b>	<b>-1.4</b>	<b>1.5</b>	<b>-4.4</b>	<b>-9.8</b>	<b>-2.4</b>	<b>-3.6</b>	<b>-4.0</b>	<b>6.3</b>	<b>-3.3</b>

\*Last column shows the carryover implied to 4Q21. Sources: IBGE, Santander.

**A weak figure (again) for industrial output.** October's figure disappointed expectations of a first positive figure since May 2021 by retreating 0.6% MoM-sa, considerably below market expectations (+0.8%) and our estimate (+0.2%). Looking at the details, mining was in the spotlight, plummeting 8.6% and reaching the lowest level since May 2020. Conversely, manufacturing, which in recent months has been the major drag on industrial output, showed virtual stability (-0.1%). October's figure marked the fifth decline in a row and the eighth negative print in 2021, placing industrial output 4.1% below the pre-pandemic mark.

**IMPORTANT DISCLOSURES/CERTIFICATIONS ARE IN THE "IMPORTANT DISCLOSURES" SECTION OF THIS REPORT.**

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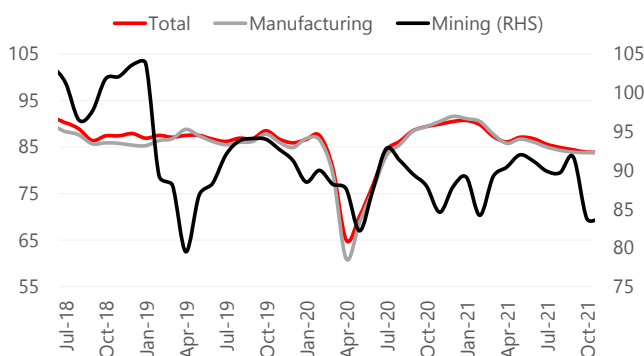


**Among economic categories, capital goods was the highlight.** The segment (highly correlated with investments) expanded 2.0%, breaking a string of two declines and reaching readings 18.2% above the pre-crisis mark, still an effect of historically low interest rates. Conversely, intermediate goods (which accounts for nearly 60% of industrial output) continued to weaken by retreating 0.9%, the eighth decline in a row. Durable goods disappointed (again) by retreating 1.9%, marking the tenth decline in 2021, still reflecting both the widespread shortage of inputs and high costs, mainly for auto factories. This segment remains almost 25% below the pre-pandemic mark.

**A widespread decline among industrial activities.** The diffusion index (which captures the percentage of industrial activities that show monthly expansion) reached 26.9% (+53.9% in September), with mining (-0.96 p.p.), food products (-0.58 p.p.), and repair of machines and equipment (-0.28 p.p.) being the lowlights. Conversely, oil and biofuel coke (+0.38 p.p.) and other chemical products (+0.11 p.p.) contributed positively. Regarding the pandemic's impact, 9 of 26 industrial activities remain above their pre-pandemic readings, with machines and equipment production as the highlight (+12.8%).

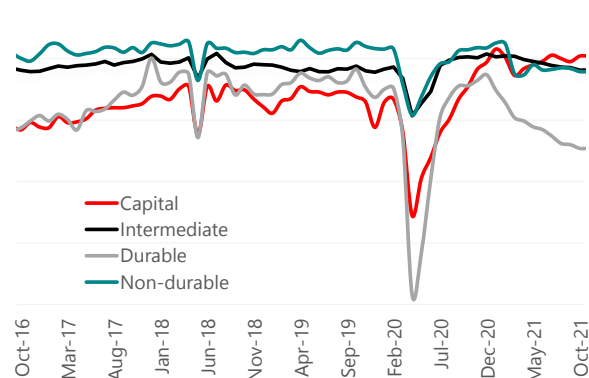
**Looking ahead, October's result implies a -1.3% carryover to 4Q21, marking a weak start to the quarter.** Following three quarterly declines (-0.7%, -2.9%, and -2.0%), these figures suggest, in our view, that industry will continue to be a short-term drag on overall activity in the remaining quarter of 2021. We updated our October IBC-Br tracking to -0.1% MoM-sa (from +0.2%). Regarding GDP, we updated our tracking to +0.1% QoQ-sa (from +0.2%). **For details on Santander's outlook, please refer to our last scenario review<sup>1</sup>.**

Figure 2.A. – Industrial Production Index (sa, 2012=100)



Sources: IBGE, Santander.

Figure 2.B. – Economic Categories (sa, 2012=100)

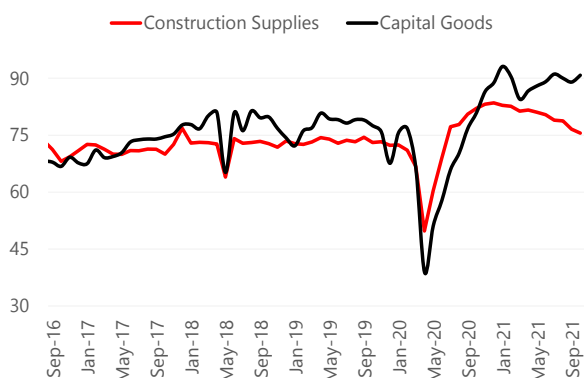


Sources: IBGE, Santander.

<sup>1</sup> Santander Brazil - "Scenario Review – Higher Fiscal (And Inflation) Risks Weigh on the Growth Outlook" – December 02, 2021 – Available on: <https://bit.ly/Std-scenreview-dec21>

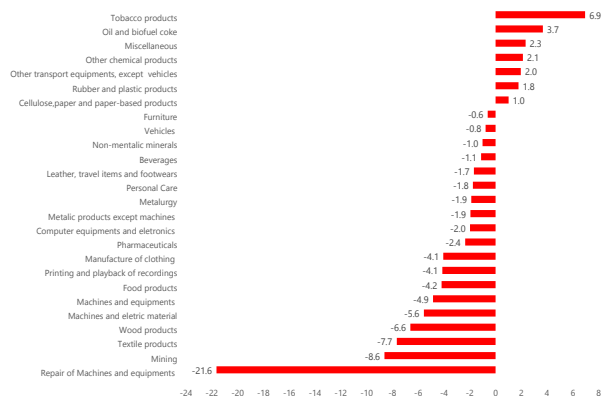


**Figure 3.A. – Industrial Production Related to Investment (sa, 2012=100)**



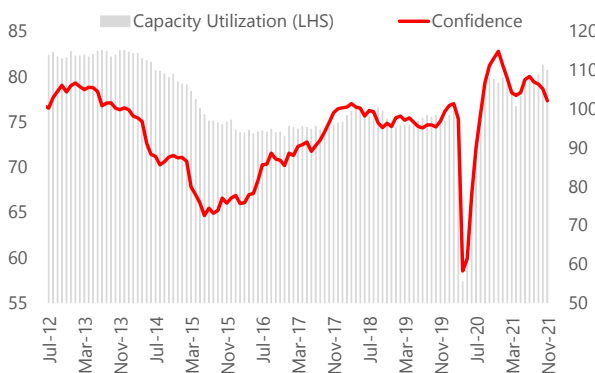
Sources: IBGE, Santander.

**Figure 3.B. – Industrial Production by Activity (sa, MoM %)**



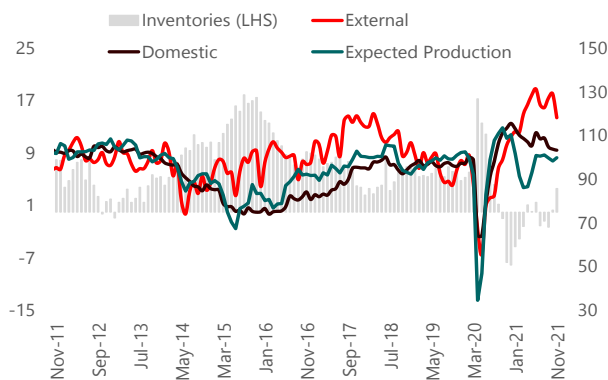
Sources: IBGE, Santander

**Figure 4.A. – Confidence (points, sa) x Capacity Utilization (% , sa)**



Sources: FGV, Santander.

**Figure 4.B. – Inventories Perception (Excessive-Insufficient) and Demand (points, sa)**



Sources: FGV, Santander.

**Figure 5 - Heatmap Showing Industrial Production by Activity**

Weights	By Activity (% MoM sa)	By Activity (% MoM sa)											
		Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21
11.2%	Mining	-3.86	3.90	1.37	-5.50	5.94	1.35	1.77	-0.87	-2.13	-0.22	2.23	-8.62
13.9%	Food products	-3.65	-4.41	2.47	-0.52	0.21	-3.78	2.51	-2.13	-2.39	1.67	-3.18	-4.19
10.3%	Oil and biofuel coke	-0.10	-1.12	-1.24	-0.52	2.63	-9.64	3.18	3.85	2.65	-2.37	0.95	3.66
10.1%	Vehicles	11.00	3.89	0.12	-7.84	-9.55	2.17	-0.71	-3.57	-1.63	-3.01	0.00	-0.78
5.4%	Metalurgy	1.18	18.93	-12.11	1.44	-0.66	0.00	2.65	0.32	-1.07	0.32	-2.70	-1.88
5.3%	Other chemical products	6.22	0.51	0.41	2.55	-3.57	0.41	2.56	-0.90	-1.41	-5.53	2.38	2.12
4.9%	Machines and equipments	3.57	6.01	-2.41	2.69	-1.15	2.22	-2.18	2.75	-3.71	-0.32	1.83	-4.85
3.6%	Metalic products except machines and equipments	1.91	5.26	-2.44	-4.33	-1.07	-4.21	0.75	-2.99	-0.77	-0.26	0.00	-1.95
3.6%	Non-mentalic minerals	0.55	0.98	0.76	-0.43	-2.69	2.10	-0.76	-0.55	-2.08	0.45	-0.56	-1.01
3.5%	Rubber and plastic products	1.29	3.50	-1.03	0.31	-4.03	-3.23	-3.11	-1.26	-1.74	-0.95	0.96	1.78
3.3%	Beverages	3.06	-7.42	-0.50	-1.51	-5.32	4.64	4.13	1.88	-9.82	7.44	-1.51	-1.12
3.0%	Cellulose,paper and paper-based products	0.56	-2.40	4.64	0.81	0.09	-2.33	-0.09	-1.38	0.37	0.00	1.39	1.01
2.6%	Machines, equipments and eletric material	2.51	-0.12	0.93	-1.50	-2.59	-3.74	-0.38	-2.64	-2.45	-1.85	1.89	-5.56
2.5%	Computer equipments, electronics and optical products	-1.81	4.67	-9.74	1.17	-1.03	-3.77	-0.13	1.89	-5.31	-6.86	-1.50	-1.98
2.3%	Pharmaceuticals	-10.19	8.54	-0.22	-2.48	-7.62	0.00	7.25	0.93	3.58	-11.26	6.53	-2.36
2.3%	Manufacture of clothing and accessories	7.89	8.83	1.39	-4.46	-23.68	-1.88	6.71	-1.80	2.59	-1.93	0.76	-4.06
1.6%	Leather, travel items and footwears	5.12	-3.60	1.10	-6.63	-14.90	-4.65	6.46	4.58	-2.58	0.66	-6.04	-1.68
1.6%	Textile products	1.17	15.55	-2.89	-9.34	-6.23	-5.31	-3.06	0.26	-1.18	3.05	-0.77	-7.66
1.5%	Other transport equipments, except motor vehicles	13.69	-6.53	-17.03	6.58	34.81	-0.18	-3.12	10.23	-15.29	0.81	-7.44	1.96
1.3%	Repair of Machines and equipments	1.33	1.31	-6.60	2.30	8.86	-3.86	-3.16	-2.22	1.52	1.79	-1.76	-21.64
1.3%	Furniture	-2.16	1.10	2.55	-0.47	-9.62	-8.54	6.03	-5.69	-0.86	-2.03	-3.25	-0.61
1.3%	Personal Care	-0.87	0.19	3.89	-3.75	-0.10	-2.73	1.40	-1.38	1.90	-0.39	0.89	-1.76
1.0%	Wood products	0.18	-0.92	-2.23	-1.52	4.55	2.68	-5.50	1.24	-1.60	2.68	2.89	-6.61
1.0%	Printing and playback of recordings	29.65	-6.95	0.96	12.41	18.68	-35.60	1.94	5.18	6.48	-2.19	8.46	-4.13
1.0%	Miscellaneous	2.35	0.22	14.50	-8.48	0.21	-3.22	-0.97	-2.38	-4.88	-0.70	1.06	2.33
0.6%	Tobacco products	-3.53	9.45	-13.27	12.06	2.55	-6.06	-1.27	-4.20	-11.69	-4.41	1.88	6.94

Sources: IBGE, Santander.

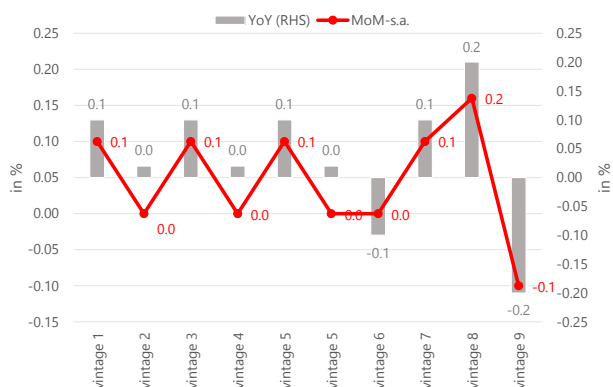


Figure 6 - Heatmap Showing Industrial Production by Economic Category

		By Activity (% MoM sa)											
		Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21
<b>Capital Goods</b>	Computer equipments, electronics and optical products	3.1	25.6	-14.4	5.2	-4.7	-5.9	10.9	4.6	-4.3	-7.3	3.0	-6.9
	Machines, equipments and electric material	5.6	-1.4	0.4	-6.8	4.4	-1.0	0.4	-5.6	-5.3	9.0	1.7	2.5
	Machines and equipments	9.7	-2.0	1.9	0.7	-2.0	0.4	0.6	3.0	-1.5	4.0	0.3	-2.2
	Vehicles	10.6	12.0	-2.7	2.7	-2.9	0.8	3.7	3.9	10.7	-11.4	-7.5	1.6
	Other transport equipments, except motor vehicles	10.7	26.4	-23.8	21.5	-1.6	-5.6	21.8	-1.4	-1.1	-21.9	6.3	-14.5
	Miscellaneous	-0.6	3.8	-1.6	1.5	-0.6	-1.0	-3.3	-5.6	-4.2	-0.3	0.9	2.3
<b>Intermediate Goods</b>	Mining	-2.8	1.9	2.8	-1.2	0.2	3.0	0.4	-0.2	-2.2	-0.2	1.3	-5.3
	Food products	-8.4	-4.5	2.2	3.0	1.7	-3.3	-0.3	-3.3	0.0	0.9	-0.8	-16.2
	Textile products	1.2	7.3	-0.6	-5.4	-0.4	-3.7	-1.8	-1.4	-8.9	3.8	-2.8	-5.4
	Cellulose,paper and paper-based products	-0.5	-1.3	4.0	1.1	-0.6	-2.0	1.1	-1.9	-0.3	-0.5	1.9	1.6
	Oil and biofuel coke	-0.5	1.1	-5.0	1.5	2.0	-9.9	-2.6	10.3	3.4	-4.2	0.8	6.8
	Other chemical products	7.0	0.2	1.2	2.5	-3.5	-3.2	3.8	-0.7	-1.4	-4.3	0.9	4.1
	Rubber and plastic products	1.5	5.0	-3.0	-0.1	-2.4	-2.1	-2.4	-0.8	-3.9	-1.3	2.3	1.2
	Non-mentalic minerals	0.2	1.8	-0.2	-0.4	-1.0	1.7	-1.7	2.1	-2.9	-0.4	-0.1	-4.0
	Metalurgy	0.7	17.2	-10.6	2.7	-0.2	-1.5	5.7	-0.3	-1.3	0.2	-3.3	-4.0
	Metalic products except machines and equipments	1.7	3.4	0.3	-4.3	-0.4	-1.6	-1.4	-3.4	-1.7	-0.3	-0.7	-1.8
	Machines and equipments	-0.2	6.6	-3.8	0.9	2.6	-1.7	3.7	-1.8	-3.4	-2.6	0.8	-2.7
	Vehicles	3.7	13.3	-12.2	-2.6	-3.9	-3.0	-0.3	2.4	-9.8	-0.7	4.8	-12.7
	Miscellaneous	4.9	-3.9	-0.3	-3.4	0.6	-1.4	-0.9	3.6	-7.0	-1.1	3.2	-1.8
	<b>Durable Goods</b>	Computer equipments, electronics and optical products	-5.5	-4.4	-22.6	3.0	7.4	-2.1	0.5	1.5	-1.4	-12.4	-6.7
Machines, equipments and electric material		-2.4	2.1	-4.6	2.7	-2.6	-3.7	-2.7	3.5	-4.0	0.0	1.8	-22.2
Vehicles		5.4	4.8	-2.5	-6.2	-16.2	-0.5	-9.1	1.5	-14.1	-14.1	15.1	-3.2
Other transport equipments, except motor vehicles		18.0	-1.4	-38.2	9.3	71.2	-8.2	-7.4	18.4	-17.7	7.9	-2.9	-5.7
Furniture		-3.5	-0.7	3.1	-1.1	-0.3	-10.6	4.6	-4.5	-1.2	-3.1	-3.7	-6.6
Miscellaneous		1.5	-5.5	5.6	5.0	13.1	-11.2	0.5	-1.6	-3.1	-3.7	-1.6	-19.0
<b>Non Durable Goods</b>	Food products	0.0	-2.2	0.2	0.0	-2.0	0.6	1.9	-0.1	-2.9	0.8	-4.9	3.4
	Beverages	0.4	-1.0	-2.2	-0.3	-0.5	-11.5	8.7	-3.3	-0.9	-2.0	1.8	-3.5
	Textile products	-2.3	6.0	-0.1	-3.7	-7.8	-5.3	1.6	1.2	-1.7	-1.5	2.8	-11.4
	Manufacture of clothing and accessories	8.2	8.0	1.1	-7.2	-15.4	-8.0	11.5	-2.6	0.9	-1.9	-0.3	-4.8
	Leather, travel items and footwears	10.6	-6.5	3.9	-10.3	-16.8	-7.2	7.0	6.2	-1.9	1.8	-4.9	-1.5
	Printing and playback of recordings	66.3	-13.9	4.9	34.2	19.0	-34.4	-10.4	-11.1	22.3	-5.3	17.7	-31.0
	Oil and biofuel coke	-1.3	-2.8	5.1	-2.8	-6.3	5.5	6.1	-3.0	0.5	0.1	0.2	-6.2
	Personal Care	-1.4	0.0	2.3	-2.0	1.1	-3.9	2.3	-1.9	1.2	-0.2	1.0	-1.1
	Pharmaceuticals	-15.3	17.3	-4.6	1.3	-8.7	-1.7	8.2	1.8	4.1	-16.3	10.8	-6.4
	Miscellaneous	0.4	-1.0	-2.2	-0.3	-0.5	-11.5	8.7	-3.3	-0.9	-2.0	-1.8	-3.5

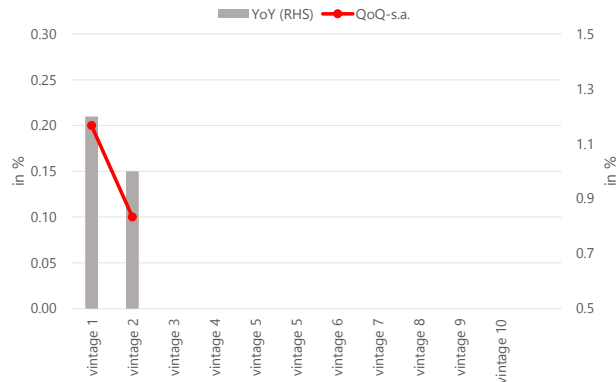
Sources: IBGE, Santander.

Figure 7.A. – IBC-Br Tracking (October)



Sources: BCB, Santander.

Figure 7.B. – 4Q21 GDP Tracking



Sources: IBGE, Santander.



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