

## Weak Figure (Again) for Industrial Output

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- Industrial production retreated at the end of 3Q21.** The headline index was down 0.4% in September, slightly below market consensus (-0.2%) and marking the seventh decline in eight months. September's figure stems from decreases in both manufacturing (down 0.2%) and mining (down 0.3%) and places industrial output 3.2% below the pre-pandemic mark (February 2020).
- Looking at the breakdown, investment-related categories were the lowlights, with capital goods and construction supplies retreating 1.6% and 2.4%, respectively.** Intermediate goods (which account for nearly 60% of industrial output) showed virtual stability (down 0.1%). Conversely, consumer goods expanded 0.7%, but with durable goods retreating for the ninth month in a row (down 0.2%). Among industrial activities, other transport equipment was the lowlight (-7.6%), and vehicles production disappointed by expanding only slightly, +0.2%. September's drop was not widespread, with our diffusion index increasing to 56% (44% in August).
- In quarterly terms, industrial output ended 3Q21 by retreating 1.7%.** Following two quarterly declines (down 0.7% and 3.0% in 1Q21 and 2Q21, respectively), the third quarter's figure reinforces our view that industry continues to be a short-term drag on activity, still suffering from a shortage of inputs, further affected by the impact of the drought on electricity generation. Our IBC-Br tracking for September was updated to +0.1% MoM-sa (from +0.3%), imparting downside risks to our 3Q21 GDP growth projection, but we still expect a positive figure (+0.3%), mainly driven by the resumption of activity in the services sector.

**Figure 1 – Industrial Production Breakdown\***

	Weights	% MoM			% YoY			% QoQ			Feb-20%	Carry 4Q
		Jul-21	Aug-21	Sep-21	Jul-21	Aug-21	Sep-21	Jul-21	Aug-21	Sep-21	Sep-21	Sep-21
<b>Total Industry</b>	<b>100%</b>	<b>-1.2</b>	<b>-0.7</b>	<b>-0.4</b>	<b>1.2</b>	<b>-0.6</b>	<b>-3.9</b>	<b>-1.4</b>	<b>-1.2</b>	<b>-1.7</b>	<b>-3.2</b>	<b>-0.5</b>
<b>Mining</b>	<b>11%</b>	<b>-1.2</b>	<b>1.8</b>	<b>-0.3</b>	<b>-2.8</b>	<b>-1.4</b>	<b>3.2</b>	<b>4.1</b>	<b>1.1</b>	<b>0.2</b>	<b>2.6</b>	<b>0.4</b>
<b>Manufacturing</b>	<b>89%</b>	<b>-1.2</b>	<b>-0.8</b>	<b>-0.2</b>	<b>1.9</b>	<b>-0.5</b>	<b>-4.8</b>	<b>-2.4</b>	<b>-1.8</b>	<b>-1.9</b>	<b>-2.9</b>	<b>-0.4</b>
Capital Goods	8%	2.1	-1.2	-1.6	36.4	31.7	15.1	2.1	3.9	2.0	15.0	-1.5
Intermediate Goods	60%	-0.7	-0.6	-0.1	0.0	-2.1	-3.7	-2.1	-2.2	-1.8	-0.1	-0.3
Consumer goods	32%	-0.1	-0.4	0.7	-3.5	-4.6	-8.6	-3.8	-0.7	-0.5	-10.8	0.4
Durable	7%	-2.8	-3.4	-0.2	-9.6	-17.5	-22.4	-7.5	-6.4	-6.7	-21.8	-1.3
Non-Durable	25%	0.7	0.5	0.2	-2.0	-1.1	-5.0	-1.2	1.0	1.0	-6.0	0.3
<b>Construction Supplies</b>	<b>-</b>	<b>-1.6</b>	<b>-0.3</b>	<b>-2.4</b>	<b>2.1</b>	<b>1.5</b>	<b>-4.2</b>	<b>-2.0</b>	<b>-2.2</b>	<b>-3.3</b>	<b>14.7</b>	<b>0.0</b>

\*Last column shows the 4Q21 carryover implied by September's figures. Sources: IBGE, Santander.

**Industrial production retreated again, the seventh decline in eight months.** The headline index was down 0.4% in September, slightly below the market consensus (-0.2%), marking a string of four declines since May 2021. September's figure stems from decreases in both manufacturing (-0.2%) and mining (-0.3%), implying a negative carryover of -0.5% for 4Q21 and placing industrial output at notably depressed levels: down 3.2% since the pre-pandemic mark. For the remaining months of 2021, we expect manufacturing to continue to weaken, with mining only partially mitigating this drag.

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

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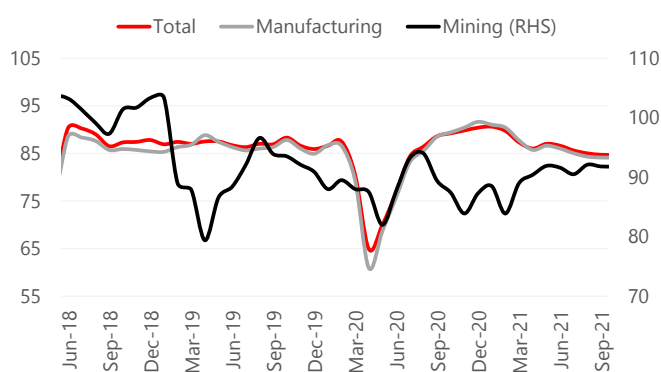
**Among economic categories, investment-related categories were the lowlights, likely reflecting the delayed effects of higher interest rates.** Capital goods and construction supplies retreated 1.6% and 2.4%, respectively, with both remaining nearly 15% above the pre-pandemic mark. Intermediate goods (which account for nearly 60% of industrial output) showed virtual stability (down 0.1%). Conversely, consumer goods expanded 0.7%, but with durable goods retreating for the ninth month in a row (down 0.2%) and widening the gap over the pre-crisis mark (down 21.8%).

**Among industrial activities, the drop was not widespread.** Other transport equipment was the lowlight (-7.6%), with vehicles production disappointing by expanding only slightly, +0.2%. Conversely, both tobacco products and pharmaceuticals products grew above 6%. Food products and oil and biofuel coke (which together account for more than 20% of industrial output) posted mixed signals, down 1.3% and up 1%, respectively. September's drop was not widespread, with our diffusion index (which captures the percentage of industrial activities that show monthly expansion) increasing to 56% (44% in August).

**In quarterly terms, industrial production recorded its third consecutive drop.** This result stems mainly from a decline in manufacturing (down 1.9%), while mining expanded slightly (up 0.2%). In 2Q21, Industrial GDP dropped "only" 0.2%, with solid expansion in both building and mining cushioning manufacturing's retreat; for 3Q21, we expect lower growth rates for these sectors. Following two quarterly declines (down 0.7% and 3.0% in 1Q21 and 2Q21, respectively), the third quarter's figure reinforces our view that industry continues to be a short-term drag on activity, still suffering from the shortage of inputs and further affected by the impact of the drought on electricity generation. According to FGV, the perception of inventories is at historically low levels, which, in typical cycles, has been a tailwind for production growth ahead. This time around, however, given major supply hurdles seen worldwide in the wake of the pandemic, we think that low inventories now could mean that local industry is having a hard time overcoming high costs and widespread input shortages.

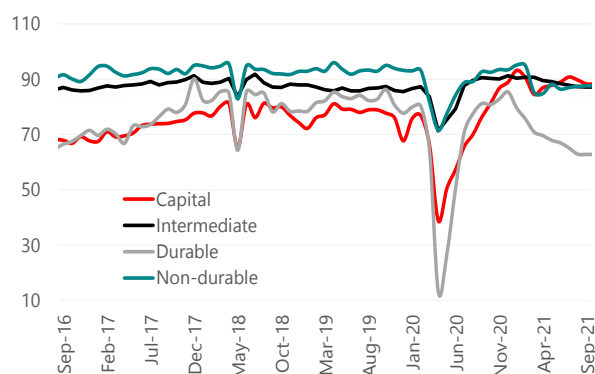
**Our IBC-Br tracking for September was updated to +0.1% MoM-sa (from +0.3%), which implies quarterly growth of 0.2% in 3Q31.** This figure imparts downside risks to our 3Q21 GDP growth projection (+0.3%) but we still expect a positive figure in 3Q21, driven mainly by the services sector.

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



Sources: IBGE, Santander.

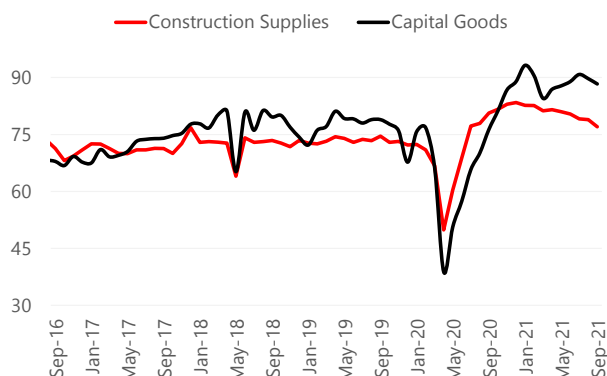
**Figure 2.B. – Economic Categories (sa, 2012=100)**



Sources: IBGE, Santander.

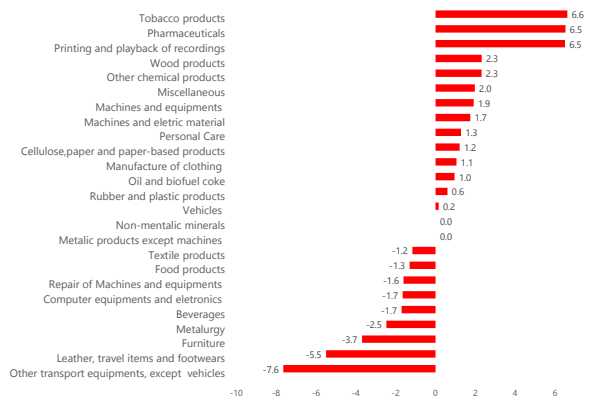


**Figure 3.A – Industrial Production Related to Investment (sa, 2012=100)**



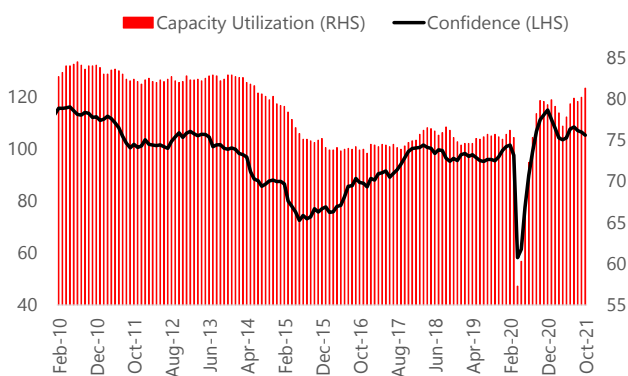
Sources: IBGE, Santander.

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



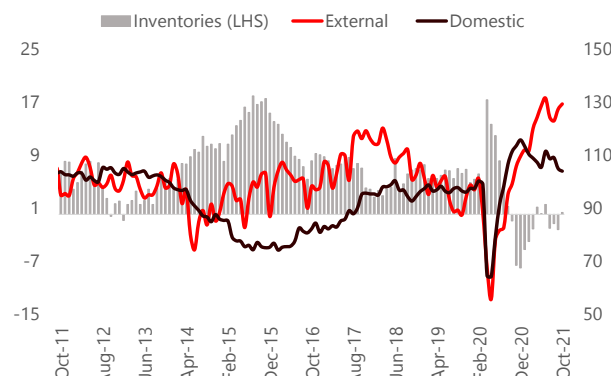
Sources: IBGE, Santander

**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)											
		Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21
13.9%	Food products	-5.38	-3.19	-4.12	2.47	-0.10	0.21	-3.77	2.72	-2.01	-2.27	1.88	-1.30
10.3%	Oil and biofuel coke	-1.00	-0.91	-1.33	-1.34	-0.52	2.63	-9.74	2.95	3.97	2.55	-2.48	0.96
10.1%	Vehicles	3.73	10.10	4.02	-0.60	-7.78	-9.35	1.16	-0.43	-3.46	-1.49	-2.88	0.16
5.4%	Metalurgy	3.04	1.42	19.09	-12.12	1.45	-0.66	0.22	2.53	0.54	-0.96	0.43	-2.47
5.3%	Other chemical products	-4.37	6.20	0.20	0.41	2.65	-3.77	0.52	2.46	-1.00	-1.72	-6.38	2.31
4.9%	Machines and equipments	2.50	3.71	6.15	-2.32	2.80	-1.05	2.33	-1.87	2.85	-3.90	0.32	1.92
3.6%	Metalic products except machines and equipments	2.07	2.03	5.26	-2.56	-4.33	-1.19	-4.22	0.88	-2.87	-0.51	-0.39	0.00
3.6%	Non-mentalic minerals	1.90	0.66	0.98	0.86	-0.54	-2.48	1.99	-0.54	-0.54	-2.08	0.22	0.00
3.5%	Rubber and plastic products	1.86	1.61	3.80	-1.73	-0.10	-3.83	-3.23	-3.12	-1.15	-1.98	-0.95	0.60
3.3%	Beverages	-1.69	2.97	-7.16	-0.60	-1.51	-5.32	4.64	4.02	1.88	-9.74	7.44	-1.71
3.0%	Cellulose,paper and paper-based products	-0.55	0.28	-2.40	5.10	0.63	0.18	-2.68	-0.27	-4.23	1.06	2.09	1.21
2.6%	Machines, equipments and eletric material	-0.12	2.29	0.59	0.70	-1.39	-2.47	-3.74	-0.25	-2.89	-1.55	-1.97	1.74
2.5%	Computer equipments, eletronics and optical products	-0.72	-2.05	4.68	-9.53	1.04	-0.90	-3.90	0.00	2.03	-5.30	-6.85	-1.65
2.3%	Pharmaceuticals	4.11	-9.99	8.54	-0.34	-2.37	-7.62	0.00	7.25	1.05	3.58	-11.25	6.52
2.3%	Manufacture of clothing and accessories	5.35	8.52	9.24	1.27	-4.58	-23.50	-2.04	6.72	-1.50	2.89	-1.63	1.05
1.6%	Leather, travel items and footwears	3.00	5.26	-3.40	1.10	-6.75	-14.70	-5.20	6.93	4.72	-2.32	0.79	-5.50
1.6%	Textile products	2.28	1.88	15.11	-2.51	-9.46	-6.13	-5.56	-2.30	0.26	-0.65	1.84	-1.16
1.5%	Other transport equipments, except motor vehicles	-5.27	13.92	-6.72	-17.03	6.84	34.73	-0.37	-3.12	10.23	-15.29	0.81	-7.65
1.3%	Repair of Machines and equipments	-0.59	1.78	1.31	-6.47	2.30	8.86	-3.72	-3.15	-2.22	1.51	1.94	-1.61
1.3%	Furniture	-1.18	-2.27	0.98	2.54	-0.71	-9.51	-8.67	6.33	-5.95	-0.72	-1.88	-3.69
1.3%	Personal Care	-4.01	-0.49	0.39	3.99	-3.75	0.00	-2.63	1.10	-1.19	2.20	-0.39	1.28
1.0%	Wood products	3.75	0.37	-0.92	-2.33	-1.34	4.65	2.78	-5.40	1.33	-1.31	2.66	2.32
1.0%	Printing and playback of recordings	30.94	28.24	-6.74	0.96	12.17	18.72	-35.30	1.66	5.18	6.22	-2.44	6.50
1.0%	Miscellaneous	4.38	1.32	-0.22	14.08	-8.71	0.10	-3.77	0.22	-3.37	-1.80	-1.37	1.97
0.6%	Tobacco products	-14.56	-3.41	10.24	-13.55	11.36	2.88	-5.50	-1.60	-4.29	-11.74	-4.66	6.62

Sources: IBGE, Santander.



Figure 6 - Heatmap Showing Industrial Production by Economic Category

		By Activity (% MoM sa)												
		Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	
<b>Capital Goods</b>	Computer equipments, electronics and optical products	-1.5	4.2	25.9	-14.4	5.3	-4.5	-5.6	10.6	4.9	-4.1	-7.1	2.5	
	Machines, equipments and electric material	5.3	4.5	-1.6	0.6	-7.1	3.9	-1.0	0.1	-5.3	-6.6	9.3	1.5	
	Machines and equipments	4.0	9.8	-1.9	1.8	1.8	-2.8	0.0	0.8	3.3	-1.4	4.2	0.2	
	Vehicles	4.4	10.9	12.0	-2.8	2.7	-2.9	0.6	3.7	4.4	10.6	-9.4	-10.2	
	Other transport equipments, except motor vehicles	-11.9	9.7	25.3	-23.5	21.1	-1.9	-6.2	22.2	-1.0	-0.6	-20.9	7.4	
	Miscellaneous	-3.6	-1.2	3.7	-1.3	2.2	-0.3	-0.6	-2.5	-7.8	-2.9	-1.6	-3.3	
<b>Intermediate Goods</b>	Mining	-2.3	-2.8	2.5	3.0	-1.3	0.4	3.1	0.6	0.0	-1.7	0.9	0.1	
	Food products	-4.5	-6.6	-2.9	0.0	2.0	0.6	-3.4	0.5	-2.8	-0.2	0.5	-1.1	
	Textile products	2.5	1.6	5.9	-0.9	-5.5	-1.8	-5.6	-1.1	-0.8	-1.7	2.6	-2.0	
	Cellulose,paper and paper-based products	-0.9	-0.1	-1.2	4.2	0.7	-1.3	-1.4	1.0	-3.1	-1.2	1.8	1.3	
	Oil and biofuel coke	-0.7	-0.1	-1.5	-3.5	1.0	4.1	-12.6	-1.4	9.0	4.5	-5.1	0.4	
	Other chemical products	-3.8	6.0	0.0	1.4	2.1	-3.6	-2.9	3.3	-0.8	-1.9	-4.3	0.3	
	Rubber and plastic products	1.0	1.5	4.9	-2.9	-0.1	-2.5	-2.1	-2.4	-0.8	-3.9	-1.1	1.8	
	Non-mentalic minerals	2.2	0.8	0.1	0.9	0.3	-2.0	2.0	-0.9	0.0	-2.0	0.4	-0.7	
	Metalurgy	2.0	1.2	17.1	-10.6	2.6	-0.2	-0.7	4.7	0.1	-1.2	0.4	-3.6	
	Metalic products except machines and equipments	3.6	1.8	3.4	0.3	-4.2	-0.6	-1.7	-1.3	-3.1	-1.5	-0.4	0.1	
	Machines and equipments	1.6	0.5	7.2	-4.7	1.3	3.1	-2.2	4.0	-1.4	-3.7	-2.7	1.1	
	Vehicles	-0.7	6.2	13.5	-13.1	-2.4	-5.0	-3.8	-0.7	4.2	-8.5	-1.3	4.4	
		Miscellaneous	3.0	5.0	-3.9	-0.4	-3.2	0.6	-1.5	-0.9	3.3	-6.5	-1.1	3.8
	<b>Durable Goods</b>	Computer equipments, electronics and optical products	-0.5	-5.8	-4.6	-23.2	3.3	7.7	-2.4	0.5	1.4	-1.1	-12.1	-5.9
Machines, equipments and electric material		-2.4	-2.6	2.1	-4.6	2.7	-2.6	-3.7	-2.6	3.5	-3.9	-0.1	1.8	
Vehicles		5.7	3.7	4.5	-2.3	-6.3	-16.2	-0.7	-9.0	1.6	-14.1	-12.9	15.6	
Other transport equipments, except motor vehicles		-19.3	20.5	-1.2	-38.4	9.3	71.4	-7.8	-7.4	17.0	-16.5	8.8	-1.0	
Furniture		-0.8	-3.7	-0.6	3.0	-1.2	-0.3	-10.6	4.5	-4.5	-1.2	-3.3	-6.4	
		Miscellaneous	2.0	1.6	-5.0	6.4	5.1	13.5	-10.2	-1.0	-0.9	-2.3	-2.7	1.9
<b>Non Durable Goods</b>	Food products	-1.6	-0.1	-2.1	0.2	0.0	-1.9	0.6	2.0	-0.2	-2.7	0.7	-2.8	
	Beverages	-0.8	0.5	-0.9	-1.6	-0.4	-0.8	-12.4	9.9	-3.2	-0.3	-1.1	-0.6	
	Textile products	-2.4	-1.6	8.5	-0.6	-3.9	-8.7	-5.3	2.4	1.7	-1.3	-1.2	-2.2	
	Manufacture of clothing and accessories	2.8	9.0	9.2	0.6	-7.0	-15.1	-8.8	11.4	-2.0	1.5	-1.2	0.0	
	Leather, travel items and footwears	5.2	7.4	-4.4	0.2	-7.4	-13.3	-6.1	5.7	5.4	-1.8	1.1	-5.6	
	Printing and playback of recordings	-41.8	85.8	-14.3	4.8	34.1	19.9	-35.1	-10.5	-10.9	23.5	-3.4	24.1	
	Oil and biofuel coke	-4.4	0.7	-2.4	5.2	-2.6	-6.4	5.1	6.9	-2.8	0.7	0.5	1.6	
	Personal Care	-4.0	-1.2	0.1	2.2	-1.7	0.9	-3.7	2.1	-2.0	1.5	-0.1	1.4	
	Pharmaceuticals	3.0	-14.4	17.2	-4.7	1.4	-8.7	-1.7	8.2	1.9	4.1	-16.1	10.8	
		Miscellaneous	-0.8	0.5	-0.9	-1.6	-0.4	-0.8	-12.4	9.9	-3.2	-0.3	-1.1	-0.6

Sources: IBGE, Santander.



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