

DATA ANALYSIS – ECONOMIC ACTIVITY
Solid Growth in 4Q20

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- December industrial production data confirmed expectations of a sequential gain. The headline index pointed to growth of 0.9% MoM-sa (8.3% YoY), versus consensus of -0.4% and close to our call (0.5%). This result highlights a full recovery from the impact of the crisis, with industrial production ending 2020 3.4% above February's reading (pre-crisis mark).
- Total industry ended the with quarterly growth of 5.1% (22.2% in 3Q20), reinforcing the likelihood of solid economic growth in 4Q20. In the breakdown, December's positive result stems mainly from capital goods (up 2.4%) and durable goods (up 2.4%), but it is worth saying that intermediate goods posted the first increase (1.6%) after flattening in the last few months.
- Preliminary soft data for January indicated a deceleration in the recent upward trend of industrial confidence, mainly due to a less optimistic outlook for the coming months, but still with high capacity utilization and inventory perception at levels historically below the desirable. In our view, these figures are a tailwind for production.

Figure 1 - Industrial Production Breakdown

	% MoM			%YoY			%QoQ		
	Oct-20	Nov-20	Dec-20	Oct-20	Nov-20	Dec-20	Oct-20	Nov-20	Dec-20
Total Industry	1.0	1.1	0.9	0.3	2.6	8.3	14.9	9.1	5.1
Mining	-2.9	-4.6	3.7	-6.2	-9.1	-3.9	4.1	-5.0	-7.7
Manufacturing	1.6	1.8	1.5	1.1	4.2	10.2	16.7	11.2	7.1
Capital Goods	7.2	7.4	2.4	2.2	13.0	35.4	30.8	26.7	22.0
Intermediate Goods	-0.1	-0.2	1.6	3.3	3.5	8.2	11.7	5.9	1.8
Consumer goods	0.7	1.9	0.4	-4.3	-0.5	4.1	18.4	11.0	6.1
Durable	3.0	5.8	2.4	-8.1	2.7	14.1	65.4	31.0	17.5
Non-Durable	-0.3	1.2	-0.5	-3.2	-1.4	1.9	9.7	6.5	3.2
Construction Supplies	2.0	1.8	1.8	10.3	11.5	20.5	17.3	10.7	7.1

Sources: IBGE, Santander.

Industrial production data confirmed our expectations of a sequential increase, with the headline index pointing to growth of 0.9% MoM-sa (8.3% YoY), the eighth consecutive gain after April's sharp drop. December's result stems both from the manufacturing industry (1.5%) and mining industry (3.7%), but with the latter posting a sharp increase over a depressed basis after sequential declines in the last few months.

Regarding recovery's evolution, industrial production ended 2020 3.4% above February's reading (pre-crisis mark), and in quarterly terms, total industry ended 4Q20 up 5.1% QoQ-sa (22.2% in 3Q20), reinforcing the likelihood of solid economic growth in the remaining quarter of the year in the wake of solid demand for goods.

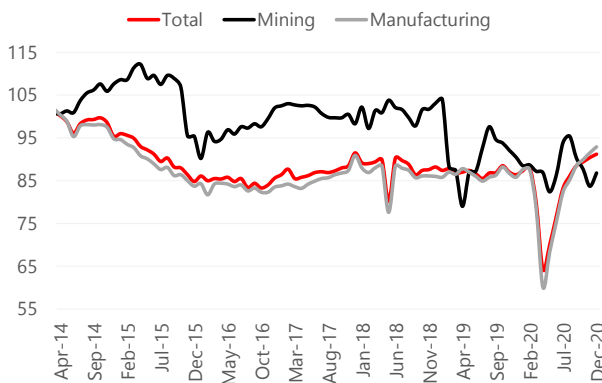
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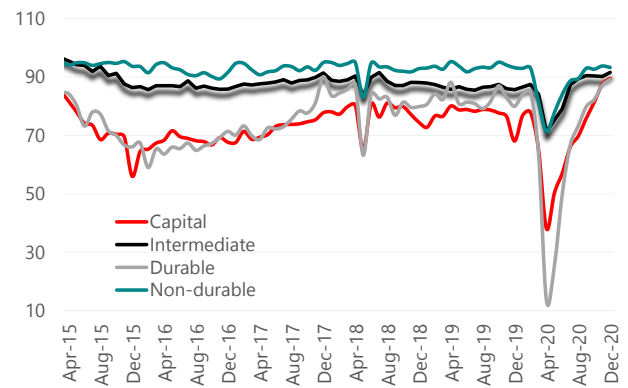


Figure 2 - Industrial Production (sa, 2012=100)



Sources: IBGE, Santander.

Figure 3 - Economic Categories (sa, 2012=100)

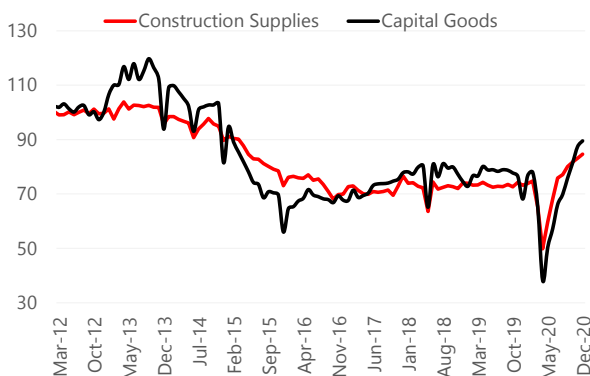


Sources: IBGE, Santander.

Among categories, December's monthly gain was widespread: with the exception of non-durable goods, all the categories registered sequential increases. We highlight capital goods (up 2.4%) and durable goods (up 2.4%), but it is worth saying that intermediate goods pointed to growth (1.6%) after flattening in the last few months, which is favorable for future production since it may suggest a help in inputs supply guarantee ahead. Construction supplies, related to investments as capital goods, grew 1.8%. In our view, the behavior of these metrics suggest a possible rise in investments, especially in an environment with looser financial conditions. Indeed, our monthly investment proxy — built as a weighting of net consumption of capital goods and the building sector — is pointing to growth of 23.3% in December (a figure contaminated by an accounting effect of oil platform imports). Despite this contamination, in our view the data reinforces the upward trend seen since April's tumble, with full recovery from the crisis' impact.

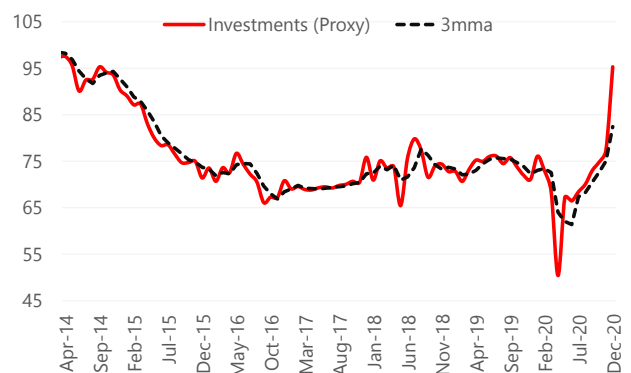
Regarding recovery's evolution, construction supplies, the first to surpass pre-crisis levels, are 13.2%, above February's reading, while capital goods, which were one of the laggards in the recovery, posted another sharp increase, up 14.9% since February. Durable goods, which were seriously hit by the pandemic, are now 5.1% above the pre-crisis reading.

Figure 4 - Related to Investments (sa., 2012=100)



Sources: IBGE, Santander.

Figure 5 - Monthly Investments Proxy (s.a., 2013=100)



Sources: IBGE, Santander.



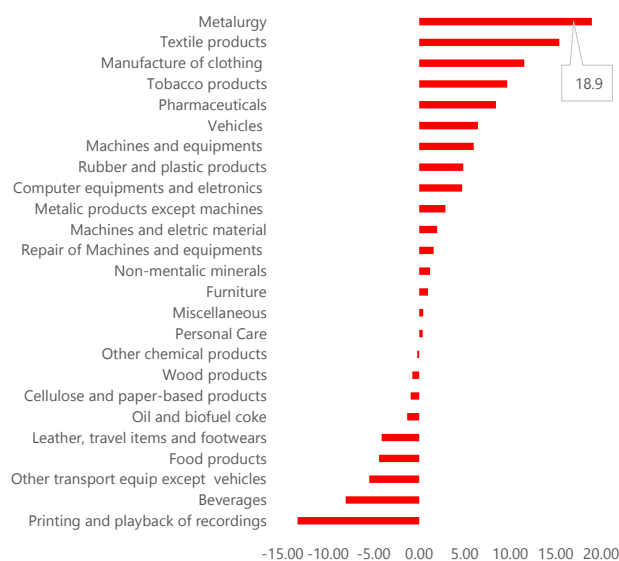
Figure 6 – Recovery Breakdown

Dec-20	MoM %	YoY %	Feb-20 % Chg	2020%
Total Industry	0.9	8.3	3.4	-4.5
Mining	3.7	-3.9	-2.1	-3.4
Manufacturing	1.5	10.2	5.9	-4.6
Capital Goods	2.4	35.4	14.9	-9.8
Intermediate Goods	1.6	8.2	4.7	-1.1
Consumer Goods	0.4	4.1	1.8	-9.0
Durable	2.4	14.1	5.1	-19.8
Non-Durable	-0.5	1.9	0.2	-5.9
Construction Supplies	1.8	20.5	13.2	-0.3

Sources: IBGE, Santander.

According to FGV, January preliminary soft data pointed to a start of a softening in the recent upward trend of industrial confidence, mainly due to a less optimistic outlook for the coming months. The details show expected demand standing well below current demand and expected production sharply declining, almost fully giving back the gains seen until December. Moreover, the survey also indicates that inventory surplus (i.e., the percentage of respondents seeing inventories as excessive minus respondents seeing inventories as insufficient) was up, reaching -5.3 points (vs. -8.1 in the previous month, an all-time low). In our view, despite these figures possibly being a sign of a start of softening in industrial activity ahead, high confidence, high capacity utilization and inventories still below the desirable are to remain an important tailwind for production in the coming months, in our view. In terms of outlook, we still are unconcerned about demand/supply mismatches in the medium term, as we also expect demand to shift from the goods to the services sector, on the heels of the economy's reopening (but depending on a consistently healthy solution to the pandemic) throughout this year. Additionally, some of the solid demand for goods is about to fade with the end of fiscal stimuli.

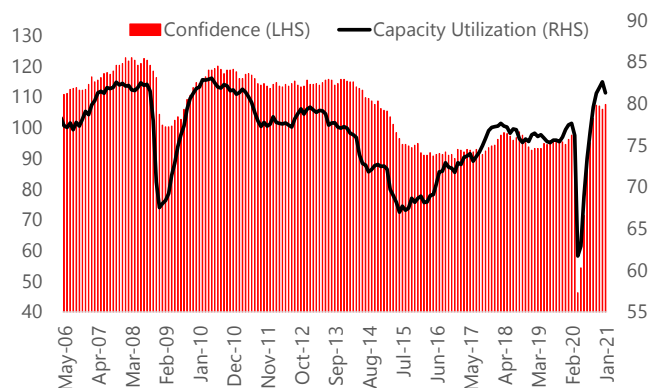
Figure 7 - Industrial Production by Activities (sa, MoM%)



Sources: IBGE, Santander.

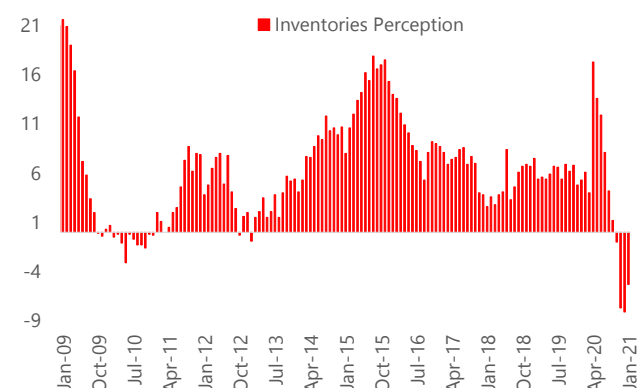


Figure 8 – Confidence x Capacity Utilization (sa)



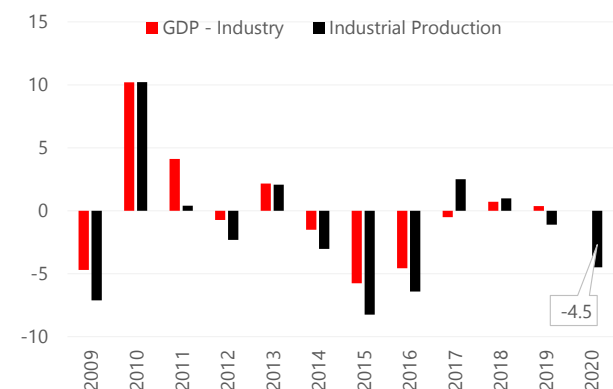
Sources: FGV, Santander.

Figure 9 – Inventories Perception (sa)



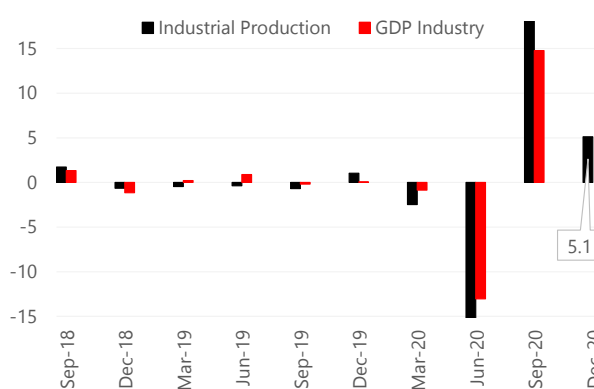
Sources: FGV, Santander.

Figure 10 - GDP vs Industrial Production (Full-Year %)



Sources: IBGE, Santander.

Figure 11 - GDP vs Industrial Production (sa, QoQ%)



Sources: IBGE, Santander.

Figure 12 - “Heatmap” Showing Industrial Production by Activities

	By Activity (% 3MMA sa)											
	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20
Food products	-0.35	0.97	0.69	1.19	0.84	0.84	0.53	0.53	1.44	-0.68	-1.75	-3.80
Oil and biofuel coke	2.81	1.57	0.10	-6.69	-1.73	-2.60	6.06	2.06	3.20	0.98	-0.33	-1.07
Vehicles	-1.96	0.43	-7.30	-33.36	-40.49	-23.62	72.62	35.41	22.48	11.33	10.23	7.63
Metalurgy	1.00	1.61	1.26	-10.24	-8.96	-9.06	9.37	6.83	8.10	3.49	2.75	7.88
Other chemical products	-0.33	1.46	-0.25	-3.25	-4.92	-0.51	4.49	4.50	1.97	-0.99	0.89	0.85
Machines and equipments	-0.13	0.61	0.87	-12.50	-11.23	-5.49	12.98	9.18	9.78	5.64	6.32	4.29
Metalic products except machines and equipments	-0.40	-0.09	-3.06	-11.49	-8.84	-0.17	14.43	9.76	6.29	3.25	3.19	3.13
Non-mentalic minerals	-1.02	-0.37	-3.64	-12.29	-8.53	1.55	15.40	10.40	6.76	3.61	2.40	1.28
Rubber and plastic products	0.62	0.73	-3.43	-11.89	-11.43	-1.42	13.15	11.52	6.66	3.59	2.26	2.96
Beverages	0.03	-0.27	-6.85	-17.62	-6.04	12.09	25.16	7.53	1.41	-0.34	0.87	-2.53
Cellulose,paper and paper-based products	0.13	1.52	1.13	0.06	-2.81	-2.48	-1.24	1.88	2.82	1.26	1.03	-0.56
Machines, equipments and eletric material	0.00	0.04	-2.99	-14.35	-11.43	0.53	19.17	12.73	6.84	3.75	3.17	1.65
Computer equipments, eletronics and optical products	1.58	-1.82	-3.12	-15.70	-8.24	1.27	20.05	11.27	7.08	1.94	1.34	1.12
Pharmaceuticals	-0.85	1.05	-0.89	-0.74	-0.04	4.24	1.96	-2.63	-1.22	0.35	-0.15	0.58
Manufacture of clothing and accessories	1.06	0.16	-13.55	-24.13	-27.99	-10.79	19.00	17.68	18.31	10.70	9.57	9.19
Leather, travel items and footwears	-1.10	-1.57	-9.15	-24.85	-23.55	-5.07	23.64	15.72	16.89	13.04	9.92	2.64
Textile products	0.67	0.84	-6.67	-18.57	-21.44	-4.79	24.51	21.92	13.25	6.08	3.74	6.91
Other transport equipments, except motor vehicles	-3.31	-5.52	-5.10	-28.82	-29.21	-8.10	52.45	24.42	1.34	-2.13	3.67	1.01
Repair of Machines and equipments	-3.11	-1.21	-0.61	-2.91	-3.82	-4.06	-0.79	-0.79	0.65	0.05	1.79	1.02
Furniture	-0.13	0.80	-7.46	-19.69	-15.53	8.18	28.05	15.88	7.35	1.37	-0.44	-0.52
Personal Care	-0.13	1.59	1.63	2.24	-0.77	-0.28	0.56	0.81	0.12	-3.10	-0.82	-1.47
Wood products	0.39	0.53	-4.91	-7.71	-7.83	4.21	10.61	9.03	4.81	2.62	2.46	0.75
Printing and playback of recordings	-6.01	-13.09	-29.05	-8.85	-9.80	11.27	0.00	0.00	-18.01	2.91	17.54	9.27
Miscellaneous	-0.07	-0.24	-4.84	-13.41	-19.50	-10.75	13.54	20.81	10.54	4.09	2.19	2.67
Tobacco products	0.72	3.58	-0.86	-5.54	-2.82	3.18	6.91	3.36	10.07	0.32	-1.01	-4.86

Sources: IBGE, Santander



Figure 13 - "Heatmap" Showing Industrial Production by Economic Category

		By Activity (% MoM sa)												
		Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	
Capital Goods	Computer equipments, electronics and optical products	5.0	-21.2	21.4	-37.3	14.2	12.6	13.1	11.7	-2.9	0.2	9.0	26.2	
	Machines, equipments and eletric material	-1.2	-12.9	7.0	-25.5	-4.6	34.3	-6.3	-3.9	14.3	7.1	7.1	2.6	
	Machines and equipments	17.5	-6.1	-2.2	-38.4	13.7	19.3	12.2	0.1	18.8	1.5	9.3	13.8	
	Vehicles	21.1	-5.8	-5.1	-90.1	331.9	57.4	9.7	5.4	34.1	6.0	18.0	32.7	
	Other transport equipments, except motor vehicles	-13.5	-31.9	23.6	-50.9	20.3	34.5	10.5	-14.9	-0.2	-7.9	4.1	13.5	
	Miscellaneous	-3.4	-1.2	-14.4	-5.8	7.5	9.0	5.5	1.0	-1.1	-4.8	-1.5	19.9	
Intermediate Goods	Mining	-3.4	18.3	-0.8	10.1	-14.1	4.9	2.6	-3.2	-2.4	-2.0	-3.2	5.7	
	Food products	11.0	-0.9	-0.1	19.8	-8.1	-1.2	2.9	-4.7	7.2	-10.6	-4.6	-4.9	
	Textile products	-8.4	5.0	-13.3	-42.4	1.9	42.9	20.9	9.5	11.1	1.1	1.9	17.7	
	Cellulose,paper and paper-based products	6.2	2.4	-1.8	-2.4	-7.1	7.7	1.7	-0.2	5.8	-3.4	1.4	-1.4	
	Oil and biofuel coke	1.5	-2.4	-1.5	-16.7	16.2	-2.2	6.0	2.5	-3.3	4.0	-7.7	-7.7	
	Other chemical products	-0.7	6.0	-2.4	-16.3	-1.8	13.6	11.6	-1.6	0.7	-5.8	10.3	1.8	
	Rubber and plastic products	-3.5	4.7	-7.6	-30.8	10.3	24.2	9.0	4.9	3.9	-0.1	-1.2	11.4	
	Non-mentalic minerals	2.2	-0.9	-8.5	-29.7	20.9	23.6	7.8	3.0	6.9	-1.5	1.4	5.9	
	Metalurgy	8.7	5.8	-7.7	-30.2	9.4	3.3	18.9	3.7	6.9	5.0	1.8	22.4	
	Metalic products except machines and equipments	-4.7	1.9	-4.5	-34.5	19.5	21.7	10.0	4.2	2.8	1.5	4.1	8.1	
	Machines and equipments	9.2	-12.4	8.2	-43.2	9.5	31.8	13.7	7.3	10.2	-1.7	-0.1	28.8	
	Vehicles	-4.0	-4.4	-16.6	-81.6	99.3	64.7	37.0	12.2	13.5	-2.1	8.9	25.8	
	Miscellaneous	-5.2	1.2	-10.7	-28.8	6.4	36.5	9.9	-2.7	15.3	-6.9	8.2	1.7	
	Durable Goods	Computer equipments, electronics and optical products	-12.0	-17.6	10.5	-50.4	38.2	61.8	11.4	-7.8	16.5	-10.1	-8.7	10.6
		Machines, equipments and eletric material	3.7	-2.8	-3.6	-71.1	69.0	104.6	17.3	-2.0	9.2	-11.5	2.2	9.2
Vehicles		-1.7	-14.2	-1.0	-99.9	1390.0	184.3	54.8	20.6	14.4	-8.5	22.3	14.3	
Other transport equipments, except motor vehicles		9.6	-18.9	14.4	-97.3	513.8	538.8	-8.6	-16.4	29.9	-23.4	30.5	0.4	
Furniture		-0.5	4.9	-15.3	-59.0	72.7	62.2	7.3	6.7	-2.7	-5.4	-0.1	12.2	
Miscellaneous		46.6	-25.4	11.1	-64.1	-5.0	18.7	77.0	-2.3	23.3	-6.6	-0.5	0.3	
Non Durable Goods	Food products	-5.5	0.2	4.2	-9.5	-1.7	14.2	-2.4	-3.4	5.0	-6.5	2.0	1.1	
	Beverages	-0.9	1.5	-21.5	-37.3	77.2	27.5	1.6	-2.9	-0.4	-2.7	-1.6	-5.9	
	Textile products	-1.5	-9.3	-19.7	-63.5	64.4	62.7	22.4	3.0	2.4	-3.7	-2.3	13.9	
	Manufacture of clothing and accessories	-11.1	-3.8	-24.4	-54.1	17.7	34.7	24.1	16.9	14.2	4.7	8.4	12.6	
	Leather, travel items and footwears	9.7	-0.7	-29.7	-63.4	58.1	24.3	25.6	16.8	34.7	-0.8	8.0	14.0	
	Printing and playback of recordings	-70.5	14.9	65.9	-38.0	-53.0	164.5	-49.4	-29.3	15.0	36.3	23.5	-54.4	
	Oil and biofuel coke	8.4	-4.1	-9.7	-9.6	6.2	-0.8	3.8	-0.1	12.7	-10.7	8.4	2.1	
	Personal Care	-0.5	2.7	11.3	-4.7	-4.2	14.3	0.7	-13.1	7.6	-7.7	-1.8	3.4	
	Pharmaceuticals	33.8	-10.7	-3.0	2.0	3.7	13.2	-12.8	-4.8	18.4	-8.2	-11.9	30.9	
	Miscellaneous	-2.6	1.8	2.5	-29.3	-1.4	42.1	9.1	-3.3	1.5	-4.1	1.5	8.6	

Sources: IBGE, Santander.

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