

DATA ANALYSIS – ECONOMIC ACTIVITY

Upward Trend Continues

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- Industrial production data for November has confirmed expectations of a new monthly gain: the headline index pointed to growth of 1.2 % MoM-sa (2.7% YoY), versus consensus of 1.4%. After a favorable start to the sequence of 4Q20 releases, this result led to a carryover of 5.0% for 4Q20, reinforcing the likelihood of a solid sequential gain for economic activity in the remaining quarter of the year.
- November's positive result highlights a full recovery from the crisis's impact, far surpassing February's result: compared to the pre-crisis level, the headline number has risen 2.6%. This recovery is widespread: all the categories have surpassed February's level.
- Preliminary soft data for December point to continued industrial production improvement. According to the FGV, industrial business confidence is at its highest reading since 2010, with high capacity utilization and inventory perception at levels historically below the desirable. We see these figures as a tailwind for future production, and we project monthly growth of 0.6% (8.0% YoY) in December.

Industrial production data has confirmed market expectations of a seventh consecutive monthly gain, following April's sharp drop. The headline index pointed to growth of 1.2% MoM-sa. (2.7% YoY), worse than our forecast (1.8%) and market consensus (1.4%), and following a decrease in mining (-2.4%) and an increase in manufacturing (1.7%). This positive result implies a sequential gain for industrial production, after fully recovering in recent months from the trough wrought by the crisis, on the heels of the emergency aid, but also due to a demand shift toward industrialized goods and to some import substitutions. November's positive result highlights a full recovery from the crisis's impact, far surpassing February's reading: compared to the pre-crisis level, the headline number has risen 2.6% since February.

The mining industry, which has shown some resilience during this crisis, as it was not crucially hurt by lockdown measures, is now running at levels 3.8% below February's, after three consecutive monthly declines. After consistently recovering in the last quarter following 2Q20's tumble, especially from the manufacturing industry, we see this result as supporting our expectation of a sequential gain in the remaining quarter of the year: after a favorable start to the sequence of IP releases, the calculated carryover for 4Q20 is at 5.0%, on the heels of solid demand for goods. This result reinforces the likelihood of a solid sequential gain for economic activity in the remaining quarter of the year.

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

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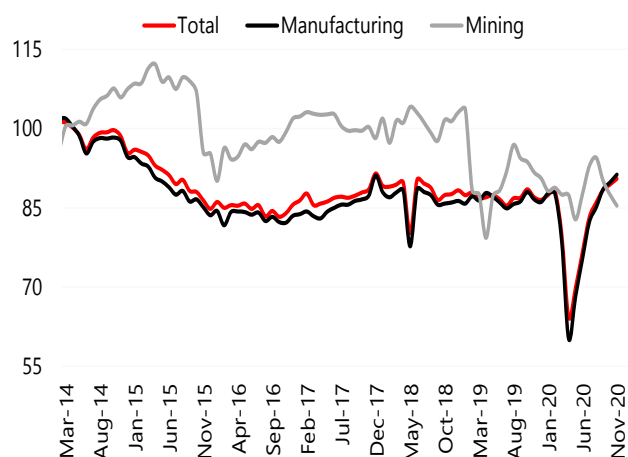


Figure 1 - Industrial Production Breakdown

	% MoM			%YoY			%QoQ		
	Sep-20	Oct-20	Nov-20	Sep-20	Oct-20	Nov-20	Sep-20	Oct-20	Nov-20
Total Industry	2.8	1.1	1.2	3.7	0.3	2.7	22.2	14.8	9.2
Mining	-4.7	-2.9	-2.4	-4.1	-6.0	-7.5	7.6	3.3	-4.4
Manufacturing	4.0	1.5	1.7	4.7	1.0	4.2	25.6	16.7	11.1
Capital Goods	8.6	7.4	7.4	-0.3	2.1	12.8	45.7	30.8	15.5
Intermediate Goods	1.2	-0.4	0.1	5.8	3.2	3.5	18.0	11.3	0.2
Consumer goods	4.7	0.8	2.1	2.0	-4.5	-0.2	31.3	18.5	4.2
Durable	9.3	2.2	6.2	2.1	-8.3	2.7	147.7	65.4	10.9
Non-Durable	3.8	-0.1	1.5	1.9	-3.4	-0.9	16.3	9.9	2.7
Construction Supplies	4.1	1.8	1.4	10.9	10.4	11.5	31.1	17.2	10.5

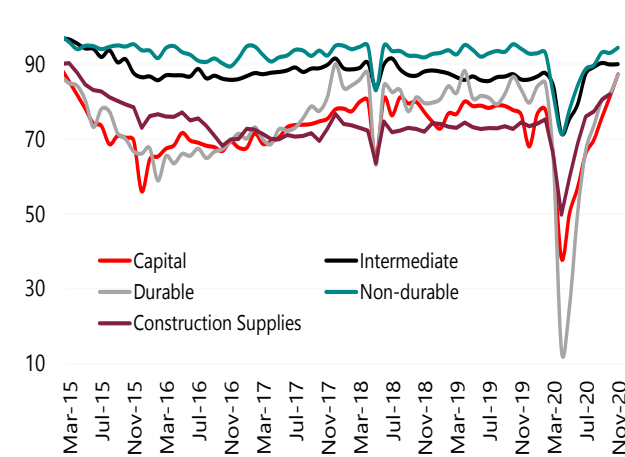
Sources: IBGE and Santander

Figure 2 - Industrial Production (s.a., 2012=100)



Sources: IBGE and Santander.

Figure 3 - Economic Categories (s.a., 2012=100)



Sources: IBGE and Santander

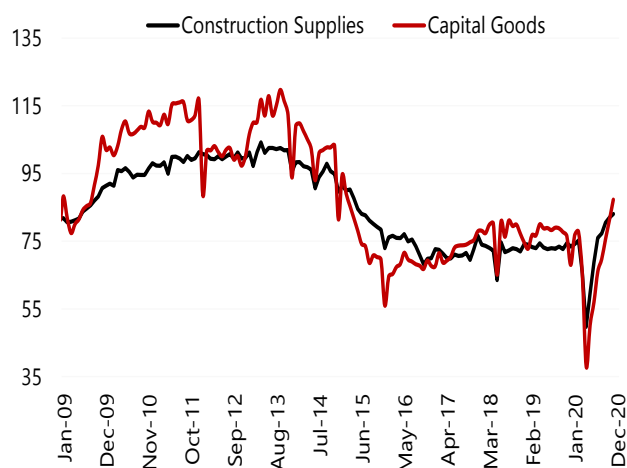
Among categories, all the categories posted monthly increases. We highlight capital goods, up 7.4%, and durable goods, up 6.2%. Construction supplies, related to investments as capital goods, increased 1.4%. In our view, these measures' behavior points to a possible rise in investments, especially in an environment with looser financial conditions. Indeed, our monthly investment proxy- built as a weighting of net consumption of capital goods and building sector – is pointing to growth of 2.8% in November, reinforcing the upward trend seen since April's tumble and virtually returning to the pre-crisis reading.

Regarding the evolution of the recovery, construction supplies and intermediate goods, the first to surpass pre-crisis levels, are 10.4% and 2.7%, respectively, above February's reading. Durable goods, which were seriously hit by the pandemic, have finally recovered from the crisis's impact and are now 2.7% above the pre-crisis reading. Capital goods, which were one of the laggards in the economic recovery, posted another sharp increase, up 12.2% since February.

In the survey details, the positive highlights were vehicles (11.2%), clothing manufacturing (11.4%), and other transports equipment (12.8%); on the other hand, pharmaceuticals posted declines of -9.8%. In general terms, the monthly gains are less widespread than in the previous month, with the diffusion index (percentage of industrial categories with monthly growth) reaching 68% (vs. 56% in October).

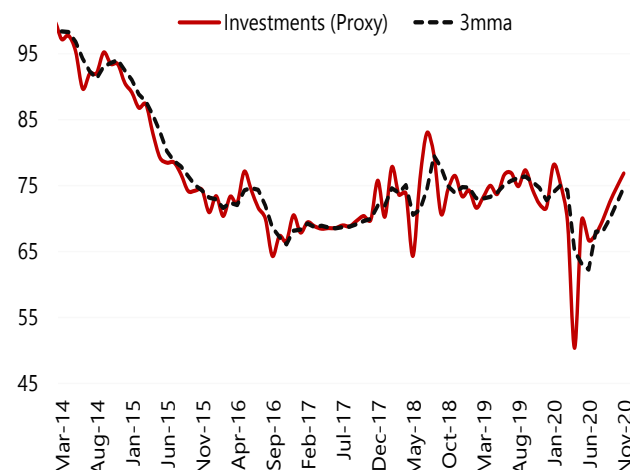


Figure 4 - Related to Investments (s.a., 2012=100)



Sources: IBGE and Santander.

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



Sources: IBGE and Santander

Figure 6 – Recovery Breakdown

Nov-20	Drop %	MoM %	YoY %	Feb-20 % *
Total Industry	-27.5	1.2	2.7	2.6
Manufacturing	-27.5	1.7	4.2	4.1
Capital Goods	-39.8	7.4	12.8	12.2
Intermediate Goods	-16.1	0.1	3.5	2.7
Consumer goods	-34.1	2.1	-0.2	2.0
Durable	-71.5	6.2	2.7	2.7
Non-Durable	-21.7	1.5	-0.9	1.5
Construction Supplies	-25.5	1.4	11.5	10.4

Sources: IBGE and Santander.

* Variation relative to February's reading

Preliminary soft data for December points to continued industrial production improvement. According to FGV, industrial business confidence is at the highest since 2010, and capacity utilization is running close to the historical average (80%), which suggests that any supply constraints are temporary. The survey indicates that inventory perception is running at levels historically below the desirable, as demand has grown strongly than supply in recent months. We see these figures as a tailwind for future production, and we project a monthly growth of 0.6% (8.0% YoY) in December. 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 - "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
Food products		-0.35	0.97	0.69	1.19	0.84	0.84	0.53	0.62	1.31	-0.45	-1.62
Oil and biofuel coke		2.74	1.54	0.13	-6.69	-1.77	-2.64	6.07	2.10	3.27	1.08	-0.23
Vehicles		-1.96	0.43	-7.30	-33.36	-40.49	-23.62	72.62	35.05	22.07	11.12	9.91
Metalurgy		1.00	1.61	1.26	-10.24	-8.96	-9.06	9.37	6.88	8.14	3.49	2.83
Other chemical products		-0.33	1.46	-0.25	-3.25	-4.92	-0.51	4.49	4.50	1.94	-1.06	0.96
Machines and equipments		-0.13	0.61	0.87	-12.50	-11.23	-5.49	12.98	9.18	9.55	5.39	6.10
Metalic products except machines and equipments		-0.40	-0.09	-3.06	-11.49	-8.84	-0.17	14.43	9.77	6.29	3.13	3.03
Non-mentalic minerals		-1.02	-0.37	-3.64	-12.29	-8.53	1.55	15.40	10.36	6.73	3.62	2.37
Rubber and plastic products		0.62	0.73	-3.43	-11.89	-11.43	-1.42	13.15	11.15	6.51	3.38	1.95
Beverages		0.03	-0.27	-6.85	-17.62	-6.04	12.09	25.16	7.01	2.24	-0.16	1.72
Cellulose,paper and paper-based products		0.13	1.52	1.13	0.06	-2.81	-2.48	-1.24	2.02	2.79	1.32	1.03
Machines, equipments and eletric material		0.00	0.04	-2.99	-14.35	-11.43	0.53	19.17	12.63	6.85	3.37	3.02
Computer equipments, eletronics and optical products		1.58	-1.82	-3.12	-15.70	-8.24	1.27	20.05	11.12	6.95	1.70	1.06
Pharmaceuticals		-0.85	1.05	-0.89	-0.74	-0.04	4.24	1.96	-2.70	-1.26	0.31	0.00
Manufacture of clothing and accessories		1.06	0.16	-13.55	-24.13	-27.99	-10.79	19.00	17.51	18.15	10.31	9.76
Leather, travel items and footwears		-1.10	-1.57	-9.15	-24.85	-23.55	-5.07	23.64	15.76	16.60	13.05	10.01
Textile products		0.67	0.84	-6.67	-18.57	-21.44	-4.79	24.51	21.82	13.17	5.97	3.67
Other transport equipments, except motor vehicles		-3.31	-5.52	-5.10	-28.82	-29.21	-8.10	52.45	24.40	1.26	-2.20	3.68
Repair of Machines and equipments		-3.11	-1.21	-0.61	-2.91	-3.82	-4.06	-0.79	-0.84	0.50	-0.05	1.74
Furniture		-0.13	0.80	-7.46	-19.69	-15.53	8.18	28.05	16.35	7.67	1.76	-0.39
Personal Care		-0.13	1.59	1.63	2.24	-0.77	-0.28	0.56	0.80	0.15	-3.10	-0.82
Wood products		0.39	0.53	-4.91	-7.71	-7.83	4.21	10.61	9.04	4.88	2.69	2.49
Printing and playback of recordings		-6.01	-13.09	-29.05	-8.85	-9.80	11.27	0.00	-0.55	-21.34	3.66	22.30
Miscellaneous		-0.07	-0.24	-4.84	-13.41	-19.50	-10.75	13.54	20.66	10.49	4.16	2.38
Tobacco products		0.72	3.58	-0.86	-5.54	-2.82	3.18	6.91	3.05	9.92	0.18	-1.16

Sources: IBGE and Santander.

Figure 8 - "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
Capital Goods	Computer equipments, eletronics and optical products	4.96	-21.22	21.41	-37.31	14.22	12.58	13.10	11.69	-2.85	0.20	8.99
	Machines, equipments and eletric material	-1.24	-12.95	6.99	-25.41	-4.59	34.26	-6.19	-4.17	14.25	6.24	5.57
	Machines and equipments	17.54	-6.06	-2.18	-38.38	13.67	19.28	12.15	0.11	18.83	1.46	9.52
	Vehicles	21.14	-5.85	-5.11	-90.07	331.91	57.39	9.70	5.42	33.42	6.59	17.89
	Other transport equipments, except motor vehicles	-13.54	-31.94	23.55	-50.88	20.30	34.49	10.52	-14.86	-0.20	-7.86	4.05
	Miscellaneous	-3.67	-0.70	-14.55	-5.79	7.40	9.11	6.00	0.81	-1.40	-3.35	-0.95
Intermediate Goods	Mining	-3.41	18.26	-0.80	10.14	-14.13	4.88	2.63	-3.16	-2.44	-1.98	-1.49
	Food products	11.02	-0.94	-0.09	19.77	-8.14	-1.20	2.96	-4.82	7.19	-10.60	-4.63
	Textile products	-8.47	4.98	-13.27	-42.30	1.89	42.75	21.48	8.57	10.96	1.25	1.93
	Cellulose,paper and paper-based products	6.24	2.35	-1.82	-2.44	-7.09	7.74	1.70	-0.20	5.80	-3.44	1.35
	Oil and biofuel coke	1.46	-2.37	-1.48	-16.65	16.17	-2.18	6.05	2.54	-3.25	3.98	-7.65
	Other chemical products	-0.71	6.03	-2.41	-16.30	-1.77	13.58	11.64	-1.61	0.67	-5.74	10.56
	Rubber and plastic products	-3.51	4.65	-7.73	-30.68	10.27	24.25	9.04	4.75	3.86	-0.09	-1.58
	Non-mentalic minerals	2.07	-0.81	-8.50	-29.68	20.86	23.58	7.78	2.97	6.92	-1.53	1.19
	Metalurgy	8.74	5.77	-7.70	-30.20	9.38	3.32	18.88	3.72	6.95	4.97	1.93
	Metalic products except machines and equipments	-4.62	1.85	-4.55	-34.43	19.55	21.62	9.78	4.05	2.92	1.61	3.81
	Machines and equipments	9.20	-12.44	8.25	-43.17	9.50	31.97	13.53	7.38	10.04	1.73	-0.19
	Vehicles	-3.91	-4.37	-16.49	-81.61	99.32	65.08	36.96	10.04	12.94	-2.53	8.54
	Miscellaneous	-5.23	1.33	-10.09	-28.96	6.64	34.81	10.11	-2.89	15.83	-7.28	7.75
Durable Goods	Computer equipments, eletronics and optical products	-12.04	-17.63	10.48	-50.35	38.21	61.76	11.36	-7.76	16.46	-10.18	-8.54
	Machines, equipments and eletric material	3.69	-2.83	-3.57	-71.05	69.02	104.58	17.33	-1.99	9.23	-11.47	2.71
	Vehicles	-1.66	-14.21	-0.98	-99.88	1390.00	184.29	54.77	20.78	14.38	-8.46	22.34
	Other transport equipments, except motor vehicles	9.62	-18.93	14.44	-97.31	513.79	538.76	-8.62	-16.36	29.92	-23.38	30.52
	Furniture	-0.10	5.02	-15.09	-59.17	72.73	62.68	6.67	7.17	-2.66	-5.02	-0.65
	Miscellaneous	46.60	-25.42	11.13	-64.13	-2.81	17.15	75.29	-3.36	24.69	-6.57	-0.39
Non Durable Goods	Food products	-5.53	0.21	4.21	-9.55	-1.74	14.29	-2.52	-3.28	4.93	-6.46	2.41
	Beverages	-0.87	1.47	-21.55	-37.32	77.21	27.49	1.74	-2.99	-0.35	-2.56	0.27
	Textile products	-1.53	-9.30	-19.70	-63.45	64.38	62.71	22.41	3.03	2.64	-3.86	-2.26
	Manufacture of clothing and accessories	-11.05	-3.91	-24.30	-54.13	17.72	34.69	24.05	16.95	14.10	4.69	8.31
	Leather, travel items and footwears	9.67	-0.69	-29.74	-63.35	58.14	24.26	25.64	16.80	34.68	-0.80	8.05
	Printing and playback of recordings	-70.53	14.90	65.87	-38.01	-53.04	164.51	-49.36	-29.26	15.31	35.88	23.70
	Oil and biofuel coke	8.41	-4.13	-9.73	-9.65	6.16	-0.83	3.82	-0.11	12.66	-10.73	8.47
	Personal Care	-0.52	2.74	11.28	-4.70	-4.16	14.33	0.71	-13.15	7.57	-7.69	-1.83
	Pharmaceuticals	33.82	-10.73	-2.95	1.99	3.70	13.19	-12.80	-4.82	18.37	-8.21	-11.18
	Miscellaneous	-2.87	2.14	2.50	-29.14	-1.65	41.40	9.20	-3.08	1.59	-4.23	1.54

Sources: IBGE and Santander.



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