

INDUSTRIAL OUTPUT MARKED A QUARTERLY RETREAT IN 3Q22

Lucas Maynard*
lucas.maynard.da.silva@santander.com.br
+5511 3553 8487

- Industrial production (IP) shrank 0.7% MoM-sa (+0.4% YoY) in September.** This result was in line with the market consensus of -0.7% MoM-sa (+0.5% YoY) and our forecast of -0.8% MoM-sa (+0.4% YoY). September's figure stemmed mainly from a sharp decline in manufacturing (-1.3% MoM-sa), while mining partially rebounded (+1.8% MoM-sa) from the previous drop.
- Weak figures across major economic categories.** Intermediate goods (-1.1% MoM-sa) and non-durable goods (-1.4% MoM-sa) were the lowlights, with capital goods (-0.5% MoM-sa) and durable goods (-0.2% MoM-sa) also retreating at the margin.
- Across industrial activities, widespread drop.** Indeed, only 5 out of 26 industrial activities expanded at the margin, with the diffusion index decelerating to 19% (vs. 65% previously). In terms of contribution, mining (+0.20 p.p.) and machines and equipment (+0.11 p.p.) contributed the most, while metallurgy (-0.41 p.p.), food products (-0.41 p.p.), oil and biofuel coke (-0.27 p.p.) and beverages (-0.15 p.p.) contributed the least.
- In quarterly terms, industrial output ended 3Q22 by shrinking 0.3% QoQ-sa and marked the first negative figure since 3Q21.** This result implies a -0.7% QoQ-sa carryover to 4Q22. The surveys for October continued to point to weak prints: FGV's industrial confidence fell to 95.7 points (from 99.5), while manufacturing PMI fell to 50.8 points (from 51.1).
- Our tracking for September IBC-Br stands at 0% MoM-sa (+3.8% YoY).** We are awaiting the releases of tertiary sector data, for which our tracking point to an +0.5% MoM-sa growth (-0.3% YoY) of broad retail sales and an -0.1% MoM-sa (+7.5% YoY) retreat for services' real revenue. We are maintaining our 3Q22 GDP growth tracking at +0.8% QoQ-sa (+4.1% YoY), imparting slight upside risks to our current 2022 GDP forecast (+2.8%). We forecast GDP growth at +0.7% in 2023.

Figure 1 – Monthly Industrial Survey

	Industrial Production Breakdown										
	Weights	% MoM			% YoY			% QoQ			Feb-20 %
		Jul-22	Aug-22	Sep-22	Jul-22	Aug-22	Sep-22	Mar-22	Jun-22	Sep-22	Sep-22
Total Industry	100%	0.5	-0.7	-0.7	-0.4	2.8	0.4	0.5	0.8	-0.3	-2.4
Mining	11%	2.1	-3.1	1.8	-3.5	-7.3	-5.7	0.5	-0.5	0.2	-1.8
Manufacturing	89%	0.3	-0.3	-1.3	0.1	4.1	1.2	0.6	1.2	-0.2	-2.4
Capital Goods	8%	-3.2	5.8	-0.5	-6.3	4.0	4.6	-1.8	2.3	1.4	15.7
Intermediate Goods	60%	2.0	-1.7	-1.1	0.3	2.1	-0.3	0.8	1.0	-0.3	0.3
Consumer goods	32%	0.9	-1.1	-0.8	0.2	4.0	0.7	0.4	0.8	0.1	-11.2
Durable	7%	-6.8	6.2	-0.2	0.1	13.6	10.5	-1.7	6.4	2.4	-16.1
Non-Durable	25%	1.9	-1.9	-1.4	0.2	1.9	-1.4	1.3	0.3	-0.4	-8.6
Construction Supplies	-	0.3	-2.0	-0.8	-5.8	-4.3	-5.3	-0.6	0.7	-2.0	2.1

Sources: IBGE, Santander.

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

U.S. investors' inquiries should be directed to Santander Investment at (212) 350-0707.

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Industrial output confirmed expectations of a weak print in September. The headline index shrank 0.7% MoM-sa (+0.4% YoY), in line with the market consensus of -0.7% MoM-sa (+0.5% YoY) and our forecast of -0.8% MoM-sa (+0.4% YoY), stemming mainly from a sharp tumble in manufacturing (-1.3% MoM-sa), while mining partially rebounded (+1.8% MoM-sa) from the previous drop. September's result marked the third decline in four months, placing industrial production 2.4% below the pre-pandemic benchmark (February 2020).

Weak figures across major economic categories. Intermediate goods continued to weaken and marked a new sharp tumble (-1.1% MoM-sa), the fourth decline in five months and shrinking by 0.3% QoQ-sa in the quarter. Capital goods posted a slight retreat (-0.5% MoM-sa), the third decline in five months but ending 3Q22 with a +1.4% QoQ-sa growth. The segment remains almost 16% above the pre-pandemic benchmark, benefited by historically low interest rates in the recent years, high commodities prices, and the positive cycle for the construction sector. Durable goods stayed virtually flat (-0.2% MoM-sa) in September and marked a 2.4% QoQ-sa growth in the quarter, albeit it remains idled almost 16% in comparison with the pre-pandemic benchmark. Non-durable goods continued to disappoint (-1.4% MoM-sa), ending the quarter with a slight 0.4% QoQ-sa retreat and standing almost 9% below February 2020's level. Lastly, construction supplies (also related to investments like capital goods production) retreated 0.8% MoM-sa and marked a 2.0% QoQ-sa decline. We see these sectorial figures pointing to a tepid dynamic of investments in 3Q22, after a steep positive rebound seen in the previous quarter.

As per the diffusion index, widespread decline. The diffusion index reached 19% (vs. 65% previously), with only 5 out of 26 industrial activities surveyed posting growth at the margin. The major contributions came from mining (+0.20 p.p.) and machines and equipment (+0.11 p.p.), while metallurgy (-0.41 p.p.), food products (-0.41 p.p.), oil and biofuel coke (-0.27 p.p.) and beverages (-0.15 p.p.) contributed the least. In comparison with the pre-pandemic benchmark, 18 industrial activities remain idled, with furniture (down 31%), manufacture of clothing accessories (down 20%) and repair of machines and equipment (down 16.7%) as the lowlights. Conversely, machines equipment (up 22.4%) and other chemical products (up 7.2%) are the highlights.

In quarterly terms, industrial output ended 3Q22 shrinking 0.3% QoQ-sa and marked the first negative figure since 3Q21. In the short term, September's figure led a negative carryover (-0.7% QoQ-sa) to 4Q22 (-1.0% QoQ-sa for manufacturing). The surveys for October continued to point to weak prints: FGV's industrial confidence fell to 95.7 points (from 99.5), while manufacturing PMI fell to 50.8 points (from 51.1).

Our tracking for September IBC-Br stands at 0% MoM-sa (+3.8% YoY). We are awaiting the releases of tertiary sector data, for which our tracking point to an +0.5% MoM-sa growth (-0.3% YoY) of broad retail sales and an -0.1% MoM-sa (+7.5% YoY) retreat for services' real revenue. We are maintaining our 3Q22 GDP growth tracking at +0.8% QoQ-sa (+4.1% YoY), imparting slight upside risks to our current 2022 GDP forecast (+2.8%). We forecast GDP growth at +0.7% in 2023.

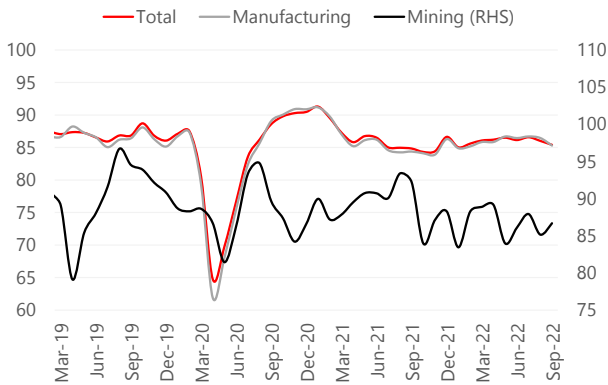
For details on Santander's economic outlook, please refer to our last reports¹.

¹ Santander Brazil Economic Activity: "Chartbook: A Better Outlook for 2023" – October 21, 2022 – Available on: <https://bit.ly/Std-chart-econact-oct22>

Santander Brazil Economic Activity: "Financial Conditions Continue to Worsen in October" – October 19, 2022 – Available on: <https://bit.ly/Std-FCI-oct22>

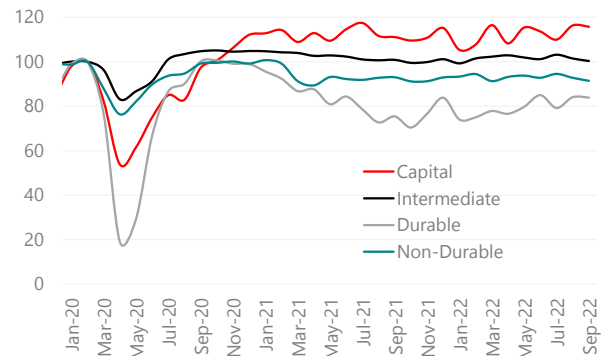


Figure 2.A – Industrial Production Index (sa, 2012=100)



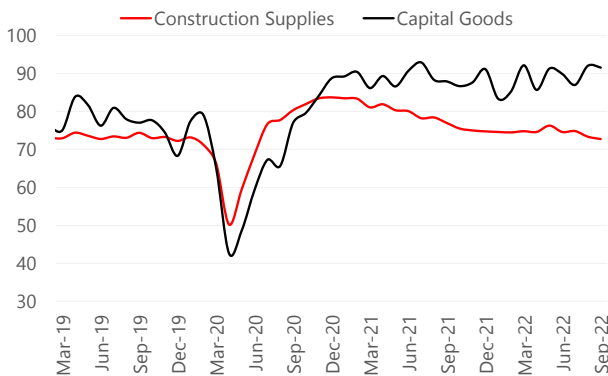
Sources: IBGE, Santander.

Figure 2.B – Economic Categories (sa, Feb/20=100)



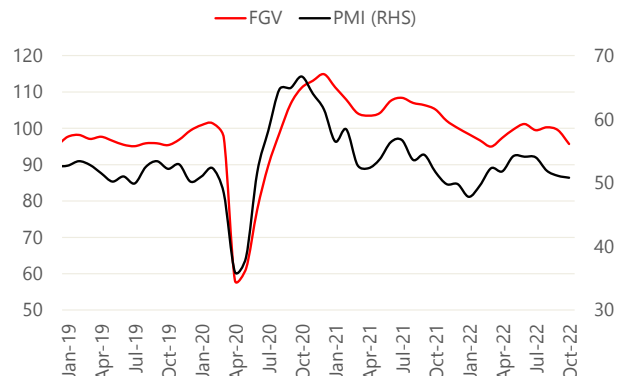
Sources: IBGE, Santander.

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



Sources: IBGE, Santander.

Figure 3.B – Manufacturing Soft Data (sa)*



Sources: Markit, FGV, Santander.

* Neutral level: 100 points for FGV and 50 points for PMI.

Figure 4 - Heatmap Showing Industrial Production by Activity

		By Activity (% MoM sa)											
		Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22
11.2%	Mining	-8.95	3.79	1.31	-5.48	5.75	0.73	0.30	-5.82	2.53	2.12	-3.15	1.79
13.9%	Food products	-6.55	6.33	3.40	1.07	3.02	-2.68	-4.43	1.06	0.46	5.14	-3.29	-2.94
10.3%	Oil and biofuel coke	3.40	-1.08	0.23	2.78	-2.13	-0.61	4.77	0.25	-1.29	1.83	-4.43	-2.60
10.1%	Vehicles	-3.76	7.91	12.31	-15.91	4.70	6.87	-4.26	3.86	6.06	-6.76	11.82	-0.12
5.4%	Metallurgy	-3.76	-2.48	1.75	-4.51	-4.42	1.02	-1.27	0.82	-2.40	1.67	0.72	-7.57
5.3%	Other chemical products	2.54	1.35	0.06	-2.61	0.26	7.65	3.74	-5.90	0.68	-7.72	9.64	-0.15
4.9%	Machines and equipments	-3.55	0.93	-0.06	-2.47	-0.54	5.64	-3.30	8.19	-3.85	-10.51	12.82	2.23
3.6%	Metallic products except machines and equipments	-4.79	1.32	-0.88	-4.07	4.07	-3.91	2.55	1.78	-0.83	-4.19	1.34	-0.71
3.6%	Non-metallic minerals	-3.36	1.92	1.85	-3.69	0.40	0.90	0.05	-0.42	-0.75	-0.68	1.39	-1.66
3.5%	Rubber and plastic products	-1.21	-1.87	-0.19	-4.93	4.26	-0.40	2.56	0.97	-0.29	0.11	0.23	-1.35
3.3%	Beverages	-3.23	-2.32	3.18	-6.71	6.07	6.68	3.61	-0.74	-0.84	-0.79	1.87	-4.63
3.0%	Cellulose,paper and paper-based products	1.15	-0.26	2.52	-1.25	-4.13	3.34	1.95	-1.85	5.06	1.83	-0.46	-1.14
2.6%	Machines, equipments and electric material	-12.32	5.94	-1.90	-3.66	2.77	-4.87	1.28	6.14	1.34	-1.70	-0.89	-1.21
2.5%	Computer equipments, electronics and optical products	-6.48	7.83	14.16	-11.23	1.02	8.31	-2.98	3.91	-2.19	-6.24	5.44	1.33
2.3%	Pharmaceuticals	-7.04	7.64	-7.82	-2.90	12.41	-8.33	4.98	3.27	-16.42	11.50	9.75	-1.59
2.3%	Manufacture of clothing and accessories	-10.13	8.89	-0.55	-0.78	-0.64	-3.90	2.37	-0.04	5.83	-4.91	1.46	-3.58
1.6%	Leather, travel items and footwear	-5.36	3.68	5.40	-6.01	-1.48	9.82	0.83	9.52	0.12	-5.36	0.62	-1.67
1.6%	Textile products	-6.41	1.69	-0.48	-1.67	-1.64	-2.59	5.27	1.85	0.16	-1.77	-5.15	-2.67
1.5%	Other transport equipments, except motor vehicles	-0.93	7.34	3.13	-8.99	14.06	2.57	-7.50	7.65	-5.78	5.20	7.76	2.73
1.3%	Repair of machines and equipments	-0.83	3.96	6.26	-6.28	-0.60	-0.39	6.62	6.42	0.25	-19.33	3.29	-0.37
1.3%	Furniture	-4.54	2.07	-0.16	-0.07	2.28	-4.53	3.67	1.24	-1.65	-5.42	-1.09	-1.66
1.3%	Personal Care	-4.37	-3.17	1.52	-1.26	0.28	0.35	1.24	0.58	3.14	-1.25	-0.07	-3.54
1.0%	Wood products	-10.77	8.85	1.68	-3.25	-2.07	-1.68	-3.39	4.22	-6.13	-5.95	1.41	-8.84
1.0%	Printing and playback of recordings	-17.39	-6.59	17.59	6.75	-15.11	-3.92	12.26	0.64	-8.27	1.58	-3.76	-3.30
1.0%	Miscellaneous	-4.56	2.39	4.01	-2.64	5.74	-3.17	-5.25	7.04	-4.13	1.62	7.30	-6.06
0.6%	Tobacco products	13.55	6.10	5.58	0.16	0.99	15.99	-10.80	-3.82	-2.36	-3.63	3.51	6.93

Sources: IBGE, Santander.

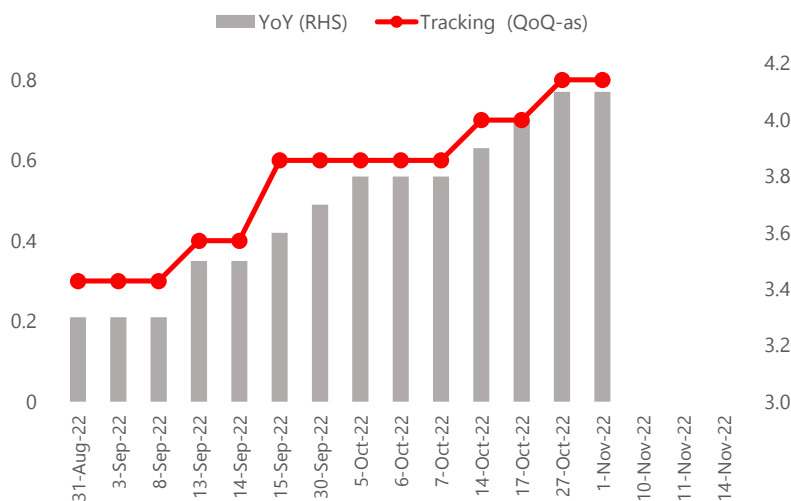


Figure 5 - Heatmap Showing Industrial Production by Economic Category

		By Activity (% MoM sa)											
		Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22
Capital Goods	Computer equipments, electronics and optical products	-7.0	2.6	12.3	-1.2	-14.4	21.7	-3.3	-1.5	-4.4	-4.3	-1.8	-1.8
	Machines, equipments and electric material	1.4	0.0	-4.5	0.4	-1.8	-3.2	-0.1	11.5	-0.4	0.0	-2.5	-1.4
	Machines and equipments	-1.1	-2.6	-1.1	-0.7	-5.0	11.6	-6.5	8.8	-3.4	-5.5	6.1	3.6
	Vehicles	7.3	-5.8	13.3	-24.5	14.1	14.7	-11.4	9.9	-3.3	3.6	5.6	-7.4
	Other transport equipments, except motor vehicles	-1.1	1.4	14.7	-6.8	23.5	3.8	2.8	2.7	-3.2	5.6	-4.5	2.8
	Miscellaneous	3.0	5.1	2.4	-3.5	7.1	-6.1	-4.2	2.6	-6.8	12.0	-1.5	-3.7
Intermediate Goods	Mining	-8.5	6.6	0.4	-6.5	6.6	0.0	1.0	-4.6	0.7	1.3	-3.6	2.5
	Food products	-17.3	19.7	7.3	-0.4	1.5	-4.8	-9.6	5.8	1.0	3.8	0.2	-5.5
	Textile products	-4.9	0.3	-2.1	-1.5	0.7	-0.3	4.5	1.3	-0.2	1.1	-6.3	-3.8
	Cellulose,paper and paper-based products	1.3	-0.3	2.6	-1.5	-5.0	4.1	2.5	-0.6	4.6	2.0	-0.6	-1.6
	Oil and biofuel coke	5.8	0.5	-0.8	2.1	-0.3	0.6	1.9	0.1	2.2	-1.3	-3.9	0.6
	Other chemical products	5.3	0.2	-0.3	-1.5	-0.5	7.5	2.4	-4.8	-0.9	-5.2	7.5	0.4
	Rubber and plastic products	2.0	-5.5	-1.1	-1.4	2.0	-1.5	3.2	0.7	-0.1	0.3	-1.1	-1.2
	Non-mentalic minerals	-1.7	0.2	2.1	-3.1	0.8	-0.2	-0.2	0.5	-1.5	0.2	0.0	-0.8
	Metalurgy	-3.1	-2.7	1.8	-4.0	4.9	1.2	-1.6	1.7	-2.5	2.5	0.1	-3.5
	Metalic products except machines and equipments	-1.4	-1.7	-1.0	-0.7	-1.5	-2.7	3.0	3.6	-1.6	-1.5	-3.4	0.6
	Machines and equipments	-0.7	0.2	2.2	-0.9	4.0	3.7	-5.0	4.0	-2.9	-11.8	14.9	-0.6
	Vehicles	-4.4	3.3	3.1	-0.2	3.7	1.2	-3.8	6.9	0.9	2.3	5.2	10.9
	Miscellaneous	-2.2	-2.1	4.7	-2.0	1.7	-1.9	-1.1	1.5	-1.4	-1.2	-2.0	-1.2
	Durable Goods	Computer equipments, electronics and optical products	2.2	-0.2	15.9	-11.7	3.7	5.9	-4.6	15.1	-7.3	-6.5	6.7
Machines, equipments and electric material		-19.2	8.3	-3.9	-4.3	2.9	-12.3	10.8	3.5	0.1	-1.2	-5.0	-0.1
Vehicles		-4.9	16.5	27.1	-19.6	-0.1	12.4	-10.9	-0.1	17.7	-11.0	6.1	-1.0
Other transport equipments, except motor vehicles		-0.9	5.2	-3.5	-9.6	11.8	11.9	-13.5	20.2	-6.2	-6.5	14.0	2.5
Furniture		3.6	-8.7	1.2	-7.6	4.4	-3.0	6.4	-2.4	-3.3	-5.2	-6.7	4.0
Miscellaneous		-20.5	20.8	0.3	5.4	-5.7	1.7	-4.0	9.8	-4.3	-4.8	13.6	-7.0
Non Durable Goods		Food products	1.6	-1.5	4.1	0.2	2.1	0.1	-0.2	-1.5	0.9	1.0	-2.4
	Beverages	-4.0	0.8	6.7	-6.4	5.8	1.1	3.3	1.3	-0.2	-2.6	-1.9	-1.0
	Textile products	-8.2	-1.0	0.7	1.0	0.1	-1.8	-3.0	2.6	0.7	-12.0	-2.8	-0.9
	Manufacture of clothing and accessories	-3.7	-0.9	-0.5	3.3	-3.0	-1.3	2.2	0.1	3.4	1.3	-5.0	-2.9
	Leather, travel items and footwear	1.1	0.5	4.6	-2.5	-1.0	-1.4	4.8	7.9	1.8	-3.0	-0.5	0.5
	Printing and playback of recordings	-14.5	-3.5	20.1	22.7	-37.0	-6.2	15.1	6.8	0.3	1.3	-6.3	-0.1
	Oil and biofuel coke	-7.9	4.0	3.9	5.8	-7.2	-5.7	7.7	0.1	-2.8	-0.1	-3.4	-4.7
	Personal Care	-3.2	-6.8	2.1	1.1	-0.2	-1.0	1.5	0.9	4.1	-0.3	-2.7	-3.1
	Pharmaceuticals	-4.8	6.8	-8.9	-3.6	15.0	-12.1	6.2	6.2	-16.3	12.3	6.7	2.0
	Miscellaneous	-4.0	0.8	6.7	-6.4	5.8	1.1	3.3	1.3	-0.2	-2.6	-1.9	-1.0

Sources: IBGE, Santander.

Figure 6 – 3Q22 GDP Growth Tracking (% MoM sa and YoY-nsa)²



Sources: IBGE, Santander

² Santander Brazil Special Report: “Nowcasting Brazilian GDP with LASSO” – May 16, 2022 – Available on: <https://bit.ly/Std-special-051622>

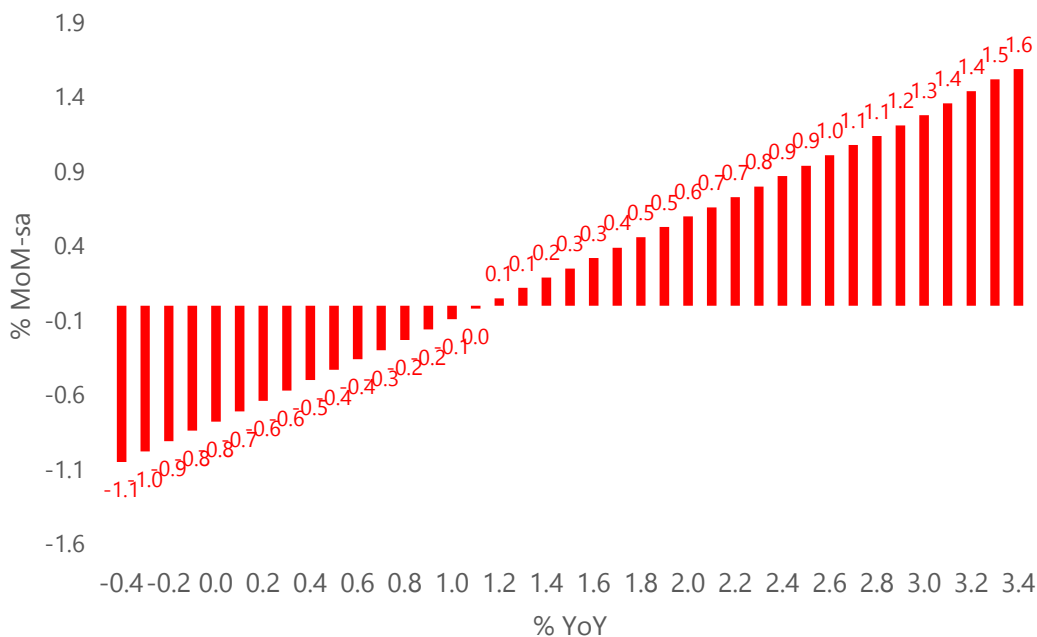


Figure 7 – Santander GDP Tracking³

3Q22 GDP Growth							Breakdown (%)		
Date	Release	Reference	Tracking (%)		Projection (%)		Farm Output	Industry	Services
			QoQ-sa	YoY	QoQ-sa	YoY	QoQ-sa	QoQ-sa	QoQ-sa
31-Aug-22	Labor Market	Jul-22	0.3	3.3	0.3	3.3	2.3	0.3	0.3
03-Sep-22	Industry	Jul-22	0.3	3.3	0.3	3.3	2.3	0.3	0.3
08-Sep-22	LSPA	Aug-22	0.3	3.3	0.3	3.3	2.3	0.3	0.3
13-Sep-22	Retail Sales	Jul-22	0.4	3.5	0.3	3.3	2.3	0.3	0.3
14-Sep-22	Services	Jul-22	0.4	3.5	0.3	3.3	2.3	0.3	0.3
15-Sep-22	IBC-Br	Jul-22	0.6	3.6	0.3	3.3	2.3	0.3	0.3
30-Sep-22	Labor Market	Aug-22	0.6	3.7	0.3	3.3	2.3	0.3	0.3
05-Oct-22	Industry	Aug-22	0.6	3.8	0.3	3.3	2.3	0.4	0.4
06-Oct-22	LSPA	Sep-22	0.6	3.8	0.3	3.3	2.3	0.4	0.4
07-Oct-22	Retail Sales	Aug-22	0.6	3.8	0.3	3.3	2.3	0.5	0.4
14-Oct-22	Services	Aug-22	0.7	3.9	0.6	3.8	2.3	0.5	0.6
17-Oct-22	IBC-Br	Aug-22	0.7	4.0	0.6	3.8	2.3	0.4	0.6
27-Oct-22	Labor Market	Sep-22	0.8	4.1	0.6	3.8	2.3	0.3	0.7
01-Nov-22	Industry	Sep-22	0.8	4.1	0.6	3.8	2.3	0.3	0.7

Sources: IBGE, Santander.

Figure 8 – Grid of Deseasonalization



Sources: IBGE, Santander

³ Santander Brazil Special Report: “Nowcasting Supply Sectors: Updating GDP Tracking” – October 28, 2022 – Available on: <https://bit.ly/Std-special-102822>



CONTACTS / IMPORTANT DISCLOSURES

Brazil Macro Research

Ana Paula Vescovi*	Chief Economist	anavescovi@santander.com.br	5511-3553-8567
Mauricio Oreng*	Head of Macro Research	mauricio.oreng@santander.com.br	5511-3553-5404
Jankiel Santos*	Economist – External Sector	jankiel.santos@santander.com.br	5511-3012-5726
Ítalo Franca*	Economist – Fiscal Policy	italo.franca@santander.com.br	5511-3553-5235
Daniel Karp Vasquez*	Economist – Inflation	daniel.karp@santander.com.br	5511-3553-9828
Tomas Urani*	Economist – Global Economics	tomas.urani@santander.com.br	5511-3553-9520
Lucas Maynard*	Economist – Economic Activity	lucas.maynard.da.silva@santander.com.br	5511-3553-7495
Felipe Kotinda*	Economist – Commodities	felipe.kotinda@santander.com.br	5511-3553-8071
Gabriel Couto*	Economist – Special Projects	gabriel.couto@santander.com.br	5511-3553-8487
Fabiana Moreira*	Economist – Credit	fabiana.de.oliveira@santander.com.br	5511-3553-6120
Gilmar Lima*	Economist – Modeling	gilmar.lima@santander.com.br	5511-3553-6327

Global Macro Research

Maciej Reluga*	Head Macro, Rates & FX Strategy – CEE	maciej.reluga@santander.pl	48-22-534-1888
Rodrigo Park *	Economist – Argentina	rpark@santander.com.ar	54-11-4341-1272
Ana Paula Vescovi*	Economist – Brazil	anavescovi@santander.com.br	5511-3553-8567
Juan Pablo Cabrera*	Economist – Chile	jcabrera@santander.cl	562-2320-3778
Guillermo Aboumrad*	Economist – Mexico	gjaboumrad@santander.com.mx	5255-5257-8170
Piotr Bielski*	Economist – Poland	piotr.bielski@santander.pl	48-22-534-1888
Mike Moran	Head of Macro Research, US	mike.moran@santander.us	212-350-3500

Fixed Income Research

Juan Arranz*	Chief Rates & FX Strategist – Argentina	jarranz@santanderrio.com.ar	5411-4341-1065
Mauricio Oreng*	Senior Economist/Strategist – Brazil	mauricio.oreng@santander.com.br	5511-3553-5404
Juan Pablo Cabrera*	Chief Rates & FX Strategist – Chile	jcabrera@santander.cl	562-2320-3778

Equity Research

Miguel Machado*	Head Equity Research Americas	mmachado@santander.com.mx	5255 5269 2228
Alan Alanis*	Head, Mexico	aalanis@santander.com.mx	5552-5269-2103
Andres Soto	Head, Andean	asoto@santander.us	212-407-0976
Walter Chiarvesio*	Head, Argentina	wchiarvesio@santanderrio.com.ar	5411-4341-1564
Mariana Cahen Margulies*	Head, Brazil	mmargulies@santander.com.br	5511-3553-1684

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