Brazil Macroeconomics Research

2 OCTOBER 2020

Santander Macro: Industrial Production

Lucas Maynard* lucas.maynard.da.silva@santander.com.br (+55 11) 3553 7495

Activity Continued to Improve in August

- Industrial Production has confirmed the expectations of a fourth gain in a row after April's sharp drop. The headline index pointed to growth of 3.2% MoM (s.a.), a result worse than our forecast (4.5%) and market consensus (3.7%). Relative to August 2019, there was a decline of 2.7%. Mining and Manufacturing posted monthly gains of 2.6% and 3.5%, respectively.
- This positive result for August implies the headline number is down by 2.6% since February (pre-crisis level), meaning that 90.3% of the drop registered between March and April has already been recovered. With today's result, the carryover for 3Q2020 stands at 20.8% QoQ (s.a.).
- Preliminary soft data for September points to continued improvement in Industrial Production. According to FGV, industrial business confidence stands at the highest level since January 2013, and industrial capacity utilization has surpassed the pre-crisis level, registering a reading close to the historical average. Based on this data, we project a rise of 2.4% MoM (s.a.) (2.9% YoY) for September.

Figure 1. Industrial Production Breakdown

| - 3 | | | | | | |
|-----------------------------|---------|--------|---------|--------|---------|--------|
| | % N | % MoM | | %YoY | | loQ |
| | July/20 | Aug/20 | July/20 | Aug/20 | July/20 | Aug/20 |
| Mining | 9.2 | 2.6 | 1.3 | -2.0 | 0.5 | 8.7 |
| Manufacturing Industry | 9.3 | 3.5 | -3.3 | -2.7 | -0.4 | 17.2 |
| Capital goods | 16.0 | 2.4 | -15.9 | 0.0 | -5.2 | 23.4 |
| Intermediate goods | 10.4 | 2.3 | 1.7 | 0.0 | -0.4 | 11.0 |
| Consumer goods | 10.4 | 2.9 | -7.4 | 0.0 | 0.3 | 23.5 |
| Durable goods | 37.0 | 18.5 | -16.5 | 0.0 | -9.4 | 91.9 |
| Non-durable goods | 5.2 | 0.6 | -4.9 | 0.0 | 2.1 | 13.6 |
| Total Industrial Production | 8.3 | 3.2 | -2.8 | -2.6 | -1.1 | 14.7 |
| Construction Supplies | 9.9 | 1.5 | 4.2 | 2.7 | 6.6 | 25.7 |

Sources: IBGE and Santander.

Continuing Industrial Recovery

Industrial Production has confirmed market expectations of a fourth gain in a row after April's sharp drop. The headline index pointed to growth of 3.2% MoM (s.a.), a result worse than our forecast (4.5%) and market consensus (3.8%). In relation to August 2019, there was a decline of 2.7%, almost closing the YoY gap. Mining and Manufacturing posted monthly gains of 2.6% and 3.5%, respectively.

This positive result for August implies the headline number is down by 2.6% since February (pre-crisis level), meaning that 90.3% of the drop registered between March and April has already been recovered. With today's result, assuming no growth in the remaining months of the quarter, we calculate that growth for 3Q20 stands at 20.8% QoQ (s.a.).

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

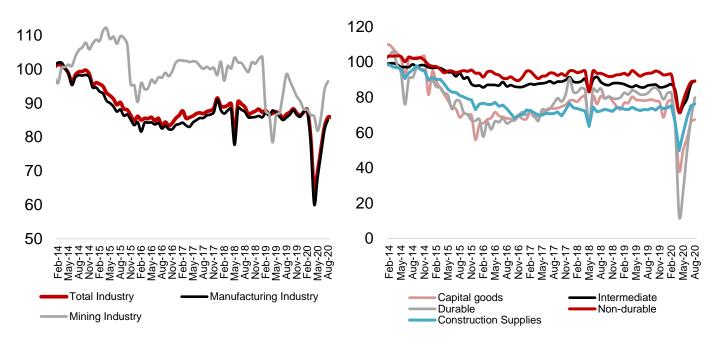
U.S. investors' inquiries should be directed to Santander Investment at (212) 350-0707.

^{*} Employed by a non-US affiliate of Santander Investment Securities Inc. and is not registered/qualified as a research analyst under FINRA rules, is not an associated person of the member firm, and therefore may not be subject to FINRA Rules 2241 and 2242 and incorporated NYSE Rule 472 restrictions.



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

Figure 2-B. Economic Categories (s.a., 2012=100)

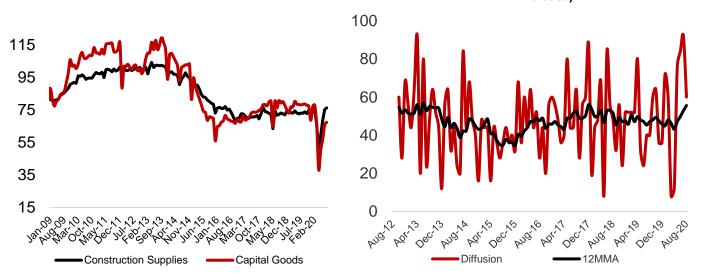


Sources: IBGE and Santander.

Sources: IBGE and Santander.

Among the categories, the positive highlight was Durable Goods, up 18.5% MoM (s.a.). Construction Supplies and Capital Goods, related to investments, posted increases of 1.5% and 2.4%, respectively. In our view, the behavior of these measures points to a possible rise in investments in the third quarter, especially in an environment with looser financial conditions. Regarding the accumulated drop, Construction Supplies and Intermediate Goods have already recovered all the losses registered in the crisis, while Durable Goods has recovered 96.4%. In comparison with February's reading, Intermediate Goods and Construction Supplies are 2.3% and 1.4% above the pre-crisis mark, while Capital Goods and Consumer Goods are the laggards, still 13.6% and 5.0% below that mark.

Figure 3-A: Construction Supplies and Capital Goods (s.a., 2012=100) Figure 3-B: Diffusion Index (% of sector with monthly increase)



Sources: IBGE and Santander.

Sources: IBGE and Santander.



In the survey details, the positive highlights were Vehicles (19.2%), Clothing Manufacture (11.5%), and Leather and Travel Items (14.9%); on the other hand, Personal Care and Printing posted declines of 9.7% and 7.1%, respectively. In general terms, the monthly gains are not widespread as in the previous month, with the Diffusion Index (percentage of industrial categories with monthly growth) reaching 60.0% (vs. 92.0% in July).

Preliminary soft data for September points to continued improvement of Industrial Production. According to FGV, industrial business confidence stands at the highest level since January 2013, and industrial capacity utilization has surpassed the pre-crisis level, registering a reading close to the historical average. Expected demand stands above current demand for the third month running, and expected production also showed a positive result for a fifth straight month, at around the highest level since October 2010. Finally, the inventories surplus (i.e., percentage of respondents that view inventories as excessive minus respondents reporting inventories as insufficient) reached the lowest value since August 2013. In our view, these figures are a tailwind for industrial activity ahead. Based on this data, we project a rise of 2.4% MoM (s.a.) (2.9% YoY) for September.

Figure 4. Recovery Breakdown

| | Capital Goods | Intermediate Goods | Consumer goods | Durables | Non-Durables | Construction Supplies | Manufacturing |
|---------|------------------|-----------------------|-------------------|----------|--------------|--------------------------|---------------|
| MoM % | 2.4 | 2.3 | 2.9 | 18.5 | 0.6 | 1.5 | 3.5 |
| YoY % | -15.9 | 1.7 | -7.4 | -16.5 | -4.9 | 4.2 | -3.3 |
| QoQ % | 23.4 | 11.0 | 23.5 | 91.9 | 13.6 | 25.7 | 17.2 |
| Rec% * | 73.4 | 112.5 | 86.8 | 96.4 | 82.4 | 104.1 | 90.9 |
| Feb% ** | -13.6 | 2.3 | -5.0 | -3.0 | -4.1 | 1.4 | -2.9 |

^{*} Percentage of the drop already recovered.

Sources: IBGE and Santander.

Figure 5. "Heatmap" Showing Industrial Production by Activities

| products and biofuel coke | 0.14 -0.39 -0.41 | 0.14 0.21 | Jan-20 -0.35 1.60 | Feb-20 0.97 | Mar-20 0.69 | Apr-20 1.19 | May-20 0.84 | Jun-20 | Jul-20 | Aug-20 |
|---|------------------------|--------------|-------------------------|----------------|----------------|----------------|----------------|--------|--------|--------|
| nd biofuel coke | -0.39 -0.41 | 0.21 | | 0.97 | 0.69 | 1 19 | 0.04 | | | |
| | -0.41 | | 1.60 | | | 1.13 | 0.04 | 0.84 | 0.53 | 0.82 |
| cles - | _ | | 1.00 | 1.57 | 0.69 | 1.19 | 0.84 | 0.84 | 0.53 | 2.06 |
| | | -3.65 | -1.96 | 0.43 | -7.30 | -33.36 | -40.49 | -23.62 | 72.62 | 36.19 |
| lurgy - | -1.45 | -1.88 | 1.00 | 1.61 | 1.26 | -10.24 | -8.96 | -9.06 | 9.37 | 6.65 |
| r chemical products | 0.25 | -0.54 | -0.33 | 1.46 | -0.25 | -3.25 | -4.92 | -0.51 | 4.49 | 4.00 |
| ines and equipments | -0.04 | -3.05 | -0.13 | 0.61 | 0.87 | -12.50 | -11.23 | -5.49 | 12.98 | 8.56 |
| lic products except machines and equipments | 1.51 | -0.61 | -0.40 | -0.09 | -3.06 | -11.49 | -8.84 | -0.17 | 14.43 | 9.80 |
| mentalic minerals | 0.37 | -0.69 | -1.02 | -0.37 | -3.64 | -12.29 | -8.53 | 1.55 | 15.40 | 10.06 |
| er and plastic products | 1.30 | 0.47 | 0.62 | 0.73 | -3.43 | -11.89 | -11.43 | -1.42 | 13.15 | 11.31 |
| rages | 2.53 | 1.03 | 0.03 | -0.27 | -6.85 | -17.62 | -6.04 | 12.09 | 25.16 | 6.98 |
| lose,paper and paper-based products | -0.22 | 0.25 | 0.13 | 1.52 | 1.13 | 0.06 | -2.81 | -2.48 | -1.24 | 1.61 |
| ines, equipments and eletric material | 0.74 | -0.09 | 0.00 | 0.04 | -2.99 | -14.35 | -11.43 | 0.53 | 19.17 | 11.25 |
| outer equipments, eletronics and optical products | 1.45 | -0.85 | 1.58 | -1.82 | -3.12 | -15.70 | -8.24 | 1.27 | 20.05 | 11.50 |
| maceuticals | 1.34 | 0.54 | -0.85 | 1.05 | -0.89 | -0.74 | -0.04 | 4.24 | 1.96 | -3.00 |
| ufacture of clothing and accessories | 1.35 | 1.45 | 1.06 | 0.16 | -13.55 | -24.13 | -27.99 | -10.79 | 19.00 | 15.99 |
| er, travel items and footwears | -0.18 | -2.91 | -1.10 | -1.57 | -9.15 | -24.85 | -23.55 | -5.07 | 23.64 | 15.15 |
| le products | 0.81 | 0.25 | 0.67 | 0.84 | -6.67 | -18.57 | -21.44 | -4.79 | 24.51 | 21.60 |
| r transport equipments, except motor vehicles | -0.49 | -1.60 | -3.31 | -5.52 | -5.10 | -28.82 | -29.21 | -8.10 | 52.45 | 24.38 |
| ines and equipments | -1.81 | -2.34 | -3.11 | -1.21 | -0.61 | -2.91 | -3.82 | -4.06 | -0.79 | -0.75 |
| ture | 1.61 | -3.29 | -0.13 | 0.80 | -7.46 | -19.69 | -15.53 | 8.18 | 28.05 | 16.38 |
| onal Care - | -0.61 | -0.29 | -0.13 | 1.59 | 1.63 | 2.24 | -0.77 | -0.28 | 0.56 | -0.12 |
| d products - | -0.21 | 0.53 | 0.39 | 0.53 | -4.91 | -7.71 | -7.83 | 4.21 | 10.61 | 8.53 |
| ing and playback of recordings | 0.87 | 26.03 | -6.01 | -13.09 | -29.05 | -8.85 | -9.80 | 11.27 | 0.00 | -0.65 |
| ellaneous | 1.94 | 1.94 | -0.07 | -0.24 | -4.84 | -13.41 | -19.50 | -10.75 | 13.54 | 20.53 |
| cco products | 0.46 | 1.70 | 0.72 | 3.58 | -0.86 | -5.54 | -2.82 | 3.18 | 6.91 | 1.67 |

Sources: IBGE and Santander.

^{**} Variation relative to February's reading



CONTACTS / IMPORTANT DISCLOSURES

| Macro Research | | | | | | | | | |
|------------------------|---|---------------------------------|-----------------|--|--|--|--|--|--|
| Maciej Reluga* | Head Macro, Rates & FX Strategy - CEE | maciej.reluga@santander.pl | 48-22-534-1888 | | | | | | |
| Juan Cerruti * | Senior Economist – Argentina | jcerruti@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 | | | | | | |
| Fixed Income Rese | Fixed Income Research | | | | | | | | |
| Juan Arranz* | Chief Rates & FX Strategist – Argentina& FX | 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 | | | | | | |
| Claudia Benavente* | Head, Chile | claudia.benavente@santander.cl | 562-2336-3361 | | | | | | |
| Walter Chiarvesio* | Head, Argentina | wchiarvesio@santanderrio.com.ar | 5411-4341-1564 | | | | | | |
| Daniel Gewehr* | Head, Brazil | dhgewehr@santander.com.br | 5511-3012-5787 | | | | | | |
| Electronic | | | | | | | | | |

Bloomberg SIEQ <GO>
Reuters Pages SISEMA through SISEMZ

This report has been prepared by Santander Investment Securities Inc. ("SIS"; SIS is a subsidiary of Santander Holdings USA, Inc. which is wholly owned by Banco Santander, S.A. "Santander"), on behalf of itself and its affiliates (collectively, Grupo Santander) and is provided for information purposes only. This document must not be considered as an offer to sell or a solicitation of an offer to buy any relevant securities (i.e., securities mentioned herein or of the same issuer and/or options, warrants, or rights with respect to or interests in any such securities). Any decision by the recipient to buy or to sell should be based on publicly available information on the related security and, where appropriate, should take into account the content of the related prospectus filed with and available from the entity governing the related market and the company issuing the security. This report is issued in Spain by Santander Investment Bolsa, Sociedad de Valores, S.A. ("Santander Investment Bolsa"), and in the United Kingdom by Banco Santander, S.A., London Branch. Santander London is authorized by the Bank of Spain. This report is not being issued to private customers. SIS, Santander London and Santander Investment Bolsa are members of Grupo Santander.

ANALYST CERTIFICATION: The following analysts hereby certify that their views about the companies and their securities discussed in this report are accurately expressed, that their recommendations reflect solely and exclusively their personal opinions, and that such opinions were prepared in an independent and autonomous manner, including as regards the institution to which they are linked, and that they have not received and will not receive direct or indirect compensation in exchange for expressing specific recommendations or views in this report, since their compensation and the compensation system applying to Grupo Santander and any of its affiliates is not pegged to the pricing of any of the securities issued by the companies evaluated in the report, or to the income arising from the businesses and financial transactions carried out by Grupo Santander and any of its affiliates: Lucas Maynard*.

*Employed by a non-US affiliate of Santander Investment Securities Inc. and not registered/qualified as a research analyst under FINRA rules, and is not an associated person of the member firm, and, therefore, may not be subject to the FINRA Rule 2242 and Incorporated NYSE Rule 472 restrictions on communications with a subject company, public appearances, and trading securities held by a research analyst account.

The information contained herein has been compiled from sources believed to be reliable, but, although all reasonable care has been taken to ensure that the information contained herein is not untrue or misleading, we make no representation that it is accurate or complete and it should not be relied upon as such. All opinions and estimates included herein constitute our judgment as at the date of this report and are subject to change without notice.

Any U.S. recipient of this report (other than a registered broker-dealer or a bank acting in a broker-dealer capacity) that would like to effect any transaction in any security discussed herein should contact and place orders in the United States with SIS, which, without in any way limiting the foregoing, accepts responsibility (solely for purposes of and within the meaning of Rule 15a-6 under the U.S. Securities Exchange Act of 1934) for this report and its dissemination in the United States.

© 2020 by Santander Investment Securities Inc. All Rights Reserved.

