Shocks, supply shortage and industry inventories

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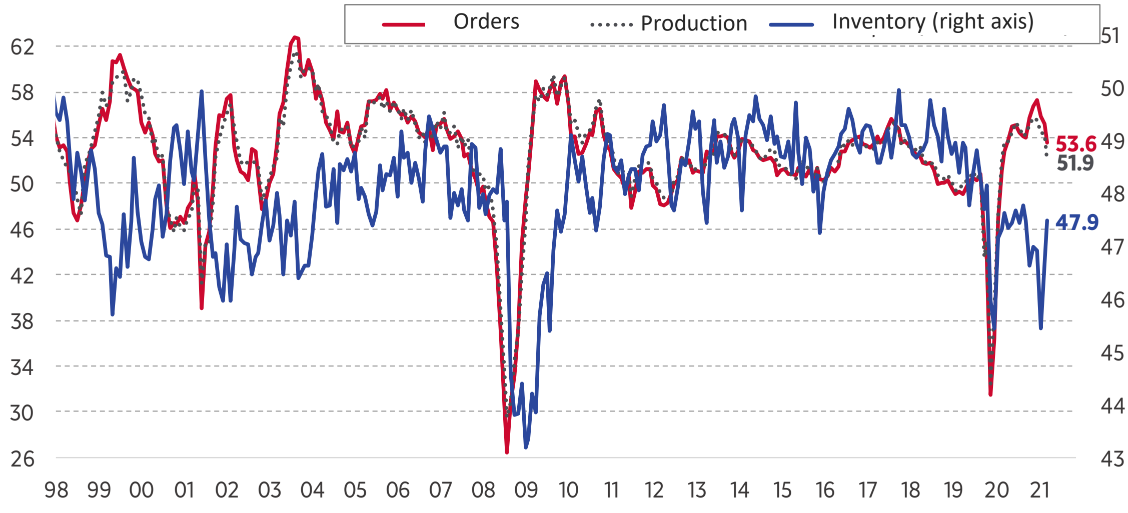
More than 18 months after initial restriction measures were imposed due to the pandemic, global production chains have still not fully recovered. Even though there is demand, the global industrial sector's operation is limited due to the shortage of parts, components and raw materials. The shortage is seen not only in longer delivery deadlines, but also in higher prices – both for goods and shipping. In recent months, new pandemic outbreaks sparked new problems with global chains. Brazilian industry is naturally affected by these dynamics and will still feel the impact of these shocks over the next few months.

Chart 1: PMI indexes of the global industry
Production components, inventories and orders

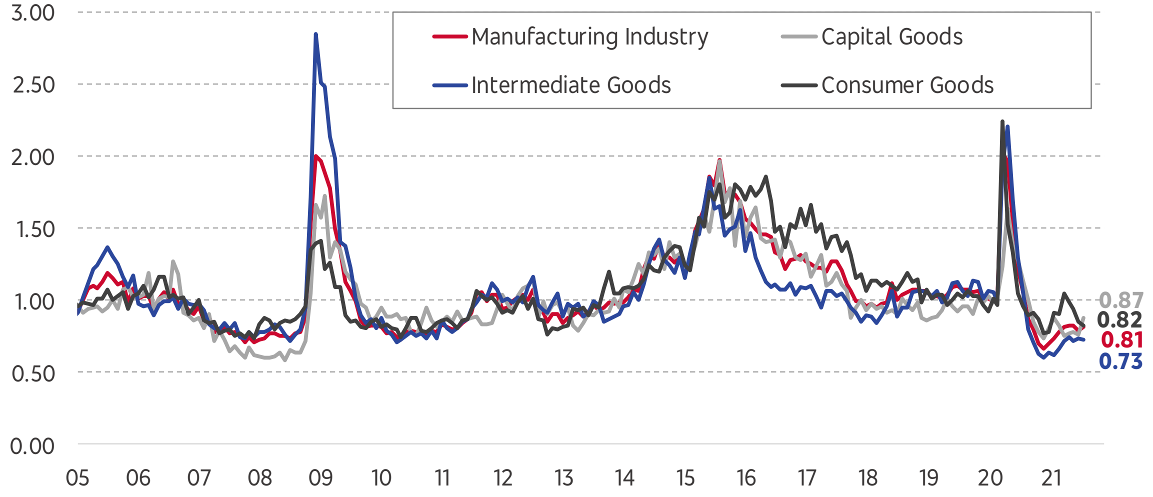


Source: JP Morgan, Bradesco

Brazil's economy kicked off the year with low industry inventory levels . The dynamics were very similar to other countries: as business owners geared up for a massive reduction in demand, production levels plummeted early on in the second quarter of 2020. As the economic policy's reactions induced a strong recovery in demand in the following months, the phenomenon was reversed. Not only demand recovered strongly, but there was a shift in consumption towards goods, leaving services behind. With low inventory levels, a cyclical replenishment gained momentum. Even if the economic activity failed to recover completely, the simple replenishment of inventories back to historical averages would boost the industry towards some degree of normalcy.

Chart 2: Inventory/demand indicator

Indicator below 1 suggests demand above current inventory levels

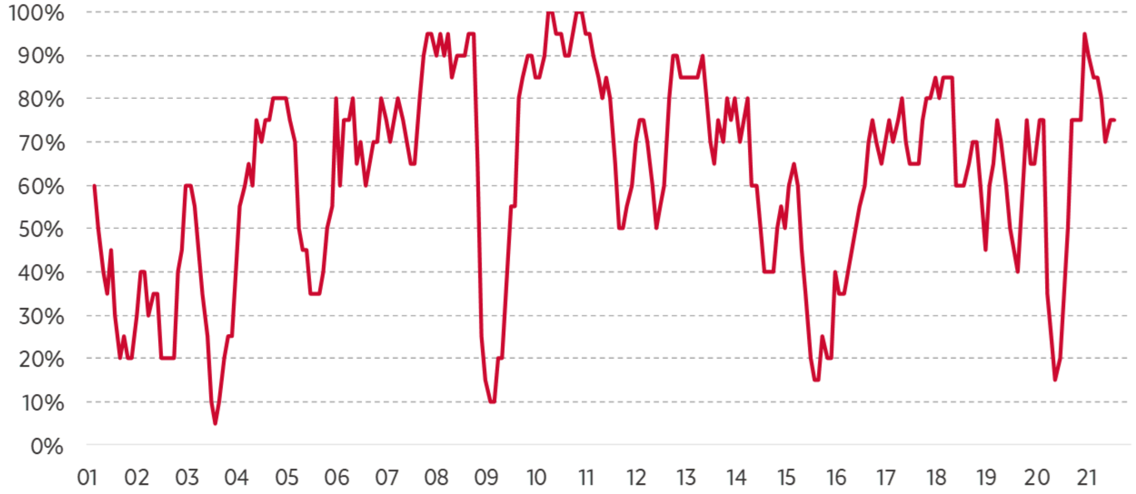


Source: FGV, Bradesco

However, what we have seen throughout 2021 is only a sluggish recovery in inventories, reflecting the struggle of global chains to replenish their stocks. This phenomenon stems mainly from a combination of two vectors: i) the limitations of certain sectors in regaining their supply capacity in the very short term; and ii) occasional episodes of closed distribution hubs or ports after new rounds of restriction measures due to Covid outbreaks, especially in Asia. The result has been still low inventories across multiple industrial segments, despite the growing demand. Therefore, the bet of a new cycle of industry growth based on inventory replenishment has been postponed and the industry, after reaching and surpassing the pre-pandemic level in late 2020, lost steam throughout the year.

Chart 3: Low inventory levels spread across sectors

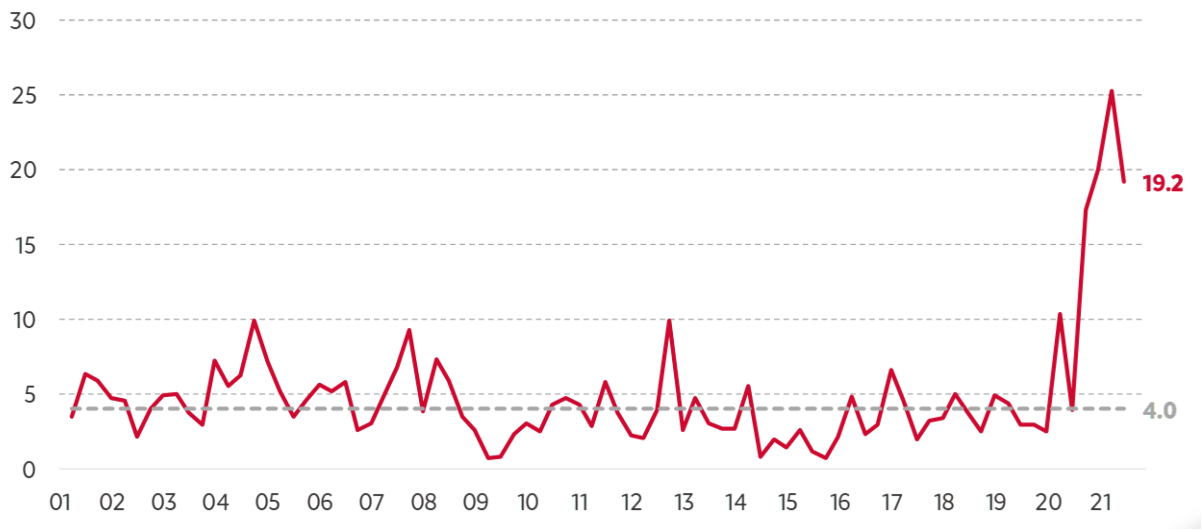
Dispersion of sectors below average



Source: FGV, Bradesco

The supply shortage is also widespread across multiple sectors. Semiconductors represent the worst and perhaps most emblematic case of restricted supplies, but the problem stretches across most industrial segments. Nearly 20% of executives from the industrial sector report 'supply shortage' as a business limiting factor, according to FGV – a rate approximately 5 times higher than the historical average. Not by chance, low inventory levels are also widespread[1] and 13 of 17 industrial segments, with inventories below the historical average, mention the 'supply shortage' as a limiting factor. Despite the sector's relevance for the industry as a whole, the automotive sector does not entirely explain the dynamics of low industrial inventories. Inventory indicators are low even if we disregard this sector.

Chart 4: Shortage of supplies as business limiting factors in the industry
Shortage of supplies as a limiting factor (Processing Ind.), % of mentions

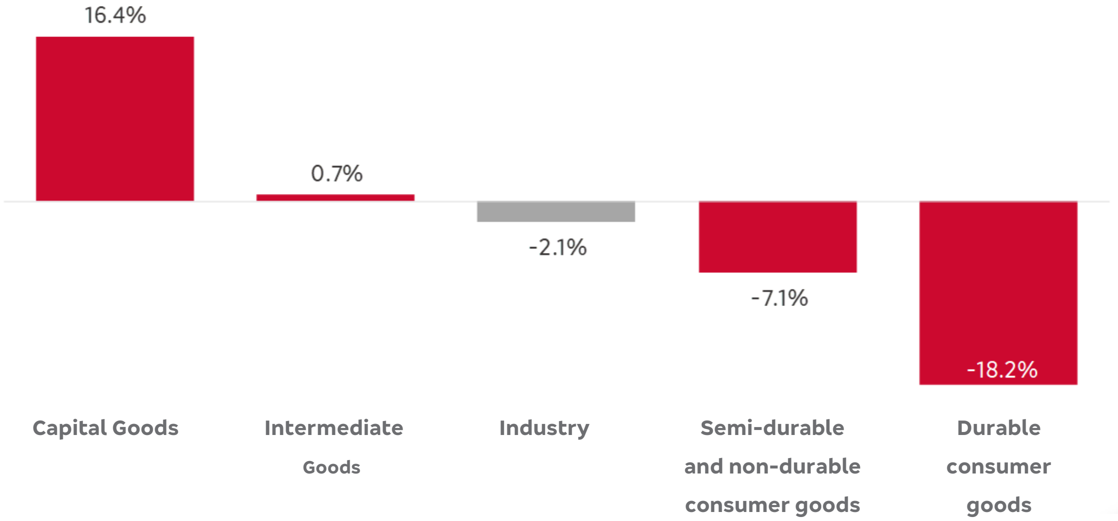


Source: FGV, Bradesco

As a result, industrial production performance in recent months has been heterogeneous. Some sectors have been able to bypass these restrictions, mainly the capital goods category, approximately 16% above pre-pandemic levels, driven by the positive performance of the agro-export sector, with no signs of reversal on the radar, at least for now. On the other end, the production of consumer goods is still more than 11% below the level recorded in February 2020, mainly influenced by automobile production. Intermediate goods have had a virtually stable performance in the period, with subcategories in line with the previously mentioned sectors: while the segment of parts and accessories for capital goods advanced nearly 15% in the period, the sector of parts and accessories for transport equipment dropped 19.5%.

[1] Chart 3 shows that the situation is slightly better than earlier this year, but 75% of the industry's subsectors still report inventories below the historical average – still well above what was suggested by the inventory replenishment thesis at the beginning of the year.

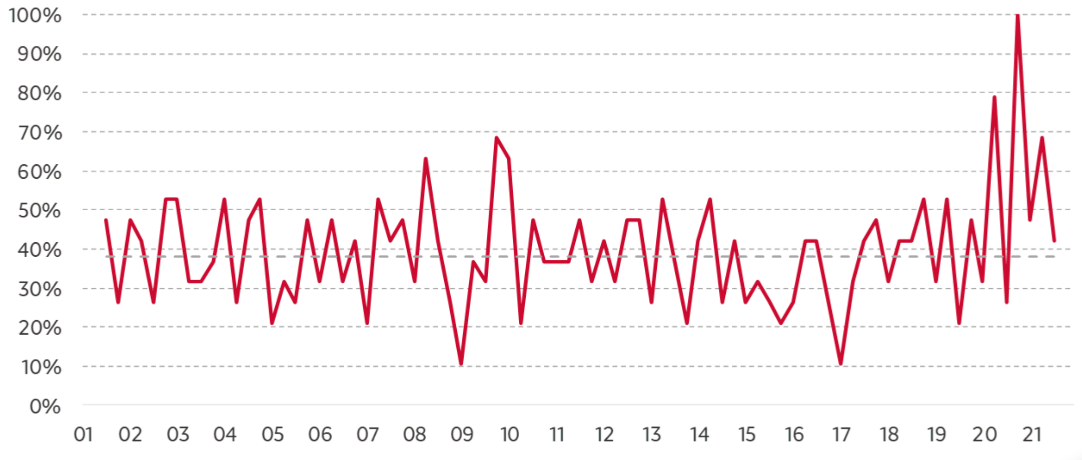
Chart 5: Industrial production components
Comparison with pre-pandemic levels



Source: IBGE, Bradesco

Despite still sluggish normalization prospects, at least the restrictions caused by the supply shortage have been gradually yielding. Although the dynamics are particularly complex in the case of semiconductors (with important impacts especially in the automotive chain), the problem has been gradually watered down. The percentage of industrial sectors reporting the shortage of supplies as a limiting factor for production dropped between April and July, and should continue to fall in the next few months, as supply bottlenecks are minimized and manufacturers themselves find new alternatives to bypass some of the restrictions. Again, the expectation is that, in the specific case of chip manufacturing, the these restrictions should be present until mid 2022.

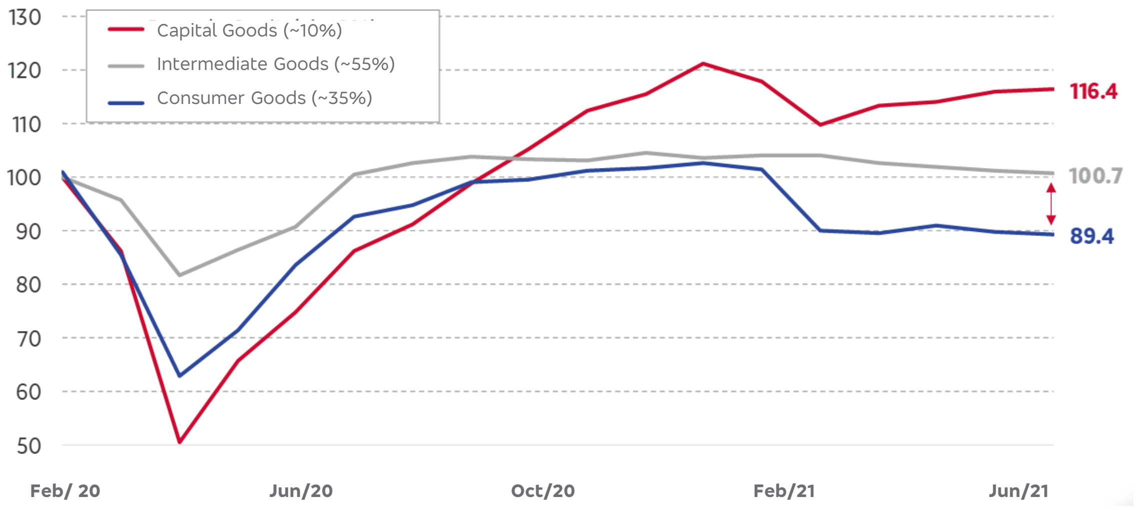
Chart 6: Evolution of the dispersion of supply shortage
% of sectors mentioning 'shortage of supplies' rising vs. previous quarter



Source: FGV, Bradesco

In a scenario of normalized supplies, the drops seen in industry also tend to decrease. In 2021, the industry fell approximately 5%, nearly 40% of which was caused by the drop in passenger automobile production. Even if this sector still takes several months to fully recover, the gradual normalization of the supply chains of other items may help interrupt the declining trend seen so far. Assuming the industry maintains the levels seen in July until the end of the year, the statistical effect alone would guarantee a growth of 4.7% in 2021, compared to 2020. Thinking ahead, and assuming that the sectors still below pre-pandemic levels reach the level recorded in February 2020, the industry could rise 4.5% at the end in the coming quarters. Similarly, the supply shortage (taking as a proxy the distance between the current level of the consumer goods segment compared to pre-pandemic levels), could have taken away around 0.3 p.p. from the GDP in 2021.

Chart 6: Industrial production components
Trend per use category, Feb/2020 = 100



Source: IBGE, Bradesco

The supply shortage contribute to the industry's decline at the end, but the accommodation of these dynamics could contribute to a better scenario over the next few quarters. While the normalization of some specific sectors could still take several quarters, we expect this problem to become less intense in general. And as it becomes more visible, the inventory replenishment thesis will gain momentum again and represent an additional growth vector for the sector, whose expected demand (especially external demand) remains high and above the levels seen in early 2020. We expect the industry to grow 5.4% in 2021 and 1.5% in 2022. Although these dynamics could have marginally limited growth this year, looking ahead, the continuing process of migrating goods to services should be enough to reach a growth rage above 5% in 2021.

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