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SPECIAL REPORT

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# Resilience Factors for 2022 GDP Growth

- We expect the economy to be resilient in 2022 even with the current worsening in financial conditions, and this report aims to show evidence that supports our outlook for economic growth this year. Our view is based mainly on two factors: first, the solid output expected for non-cyclical sectors like farm output, and second, solid contributions from mobility-related services segments that account for a substantial share of total GDP. The expected drag from industrial output is not likely to be enough to fully offset these growth contributions, in our view.

- In the first section, we argue that a considerable improvement in the main crop yields in 2022 should drive the agricultural sector, as weather forecasts remain favorable for Brazil's main products, despite the risk of drought in some important producing locations throughout the summer. Furthermore, we expect the beginning of a favorable leg of the cattle cycle, together with a depreciated base due to the suspension of Brazilian meat imports by China, to lead to strong growth in meat production. We forecast 5.0% growth for farm output in 2022, contributing roughly 0.4 p.p. to GDP.

- In the second section, we argue that mobility-related segments will be the main driver of the services sector in 2022 as the economy's reopening process consolidates. Indeed, important services segments still show wide idleness relative to their pre-pandemic levels, which leaves room for solid contributions from the services sector to overall growth as mobility continues to recover. In our baseline scenario, we expect the tertiary sector to contribute roughly 0.8 p.p. to GDP growth in 2022.

- Conversely, the third section evaluates how much the industrial sector would have to retreat in order to fully offset the positive contributions from services and farm output. According to our calculations, a drop of roughly 6% for industrial output would be necessary to fully offset the 1.2 p.p. contribution from services and farm output. That is unlikely, in our view, especially considering the still positive outlook for mining and construction in 2022, and with upside risk for manufacturing given a possible inventory replenishment process.

- In the last section, we offer an overview of our assumptions for domestic demand's contribution to a resilient economy in 2022. A household consumption recovery, along with a resumption of government spending (in an environment with fiscal impulse) and resilience in investments, are the main elements of our growth thesis from a demand standpoint.

- In our baseline scenario, we forecast 5.0% growth for farm output, 1.3% growth for services, and a 1.4% retreat for industrial output; summing up, we expect 0.7% GDP growth in 2022. This growth is in accordance with a contraction cycle, consistent with the monetary tightening under way.

## Overview of Our 2022 GDP Outlook

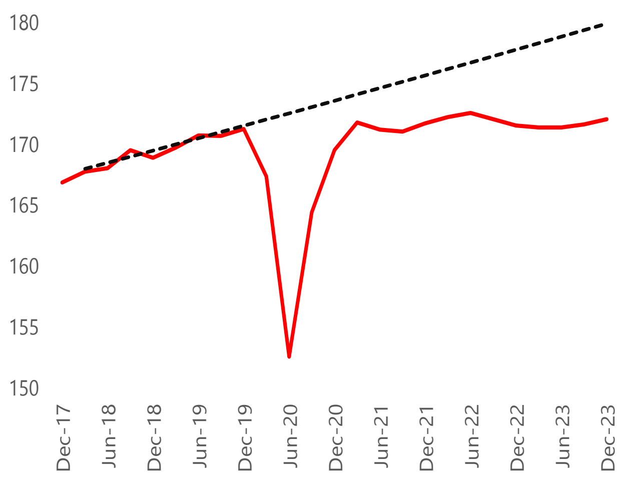
We expect 2022 to be a challenging year on the economic activity front. A strong inflationary shock prompted the BCB to tighten its policy stance even further, and the deterioration on the fiscal front worsened financial conditions. This tighter monetary policy path and its expected delayed effects on economic activity – mainly in goods-related sectors – caused the market's expectations of GDP growth for 2022 to plummet. However, although we likewise lowered our estimates of GDP growth for this year, we believe there are important reasons to expect some resilience in the economy. Indeed, our baseline scenario is based mainly on two factors: first, we expect solid contributions from less cyclical sectors like farm output, given the prospect of an all-time high agricultural harvest of Brazil's main crops; and second, we expect solid contributions from mobility-related services segments that account for a substantial share of total GDP, like Other Services and Public Services, and that still show wide idleness relative to their pre-pandemic mark. In our view, the strong impact expected to hit industrial output – mainly in 2H22 – is not likely to fully offset the contributions to growth from farm output and services. In the following sections, we offer details on our arguments and scenarios for each sector of total GDP (from a supply standpoint) and a general overview of domestic demand.

**Figure 1 – GDP Breakdown (% Full Year)**

| GDP Projections | | | | | |
|---|---|---|---|---|---|
| | 2018 | 2019 | 2020 | 2021e | 2022e |
| Total GDP | 1.8 | 1.2 | -3.9 | 4.6 | 0.7 |
| Farm Output | 1.3 | 0.4 | 3.8 | -0.9 | 5.0 |
| Industry | 0.7 | -0.7 | -3.4 | 4.9 | -1.4 |
| Services | 2.1 | 1.5 | -4.3 | 4.8 | 1.3 |
| Household Consumption | 2.4 | 2.6 | -5.4 | 3.2 | 1.0 |
| Government Consumption | 0.8 | -0.5 | -4.5 | 2.3 | 2.1 |
| Investments | 5.2 | 4.0 | -0.5 | 14.9 | -0.6 |
| Exports | 4.1 | -2.6 | -1.8 | 6.8 | 5.3 |
| Imports | 7.7 | 1.3 | -9.8 | 10.8 | 2.2 |

Sources: IBGE, Santander.

**Figure 2 – GDP Path (sa, average 1995=100)**



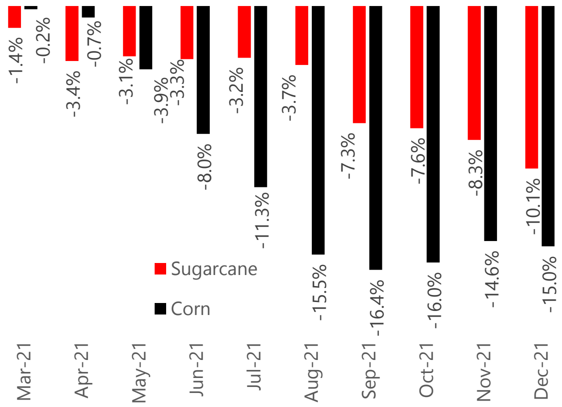

Sources: IBGE, Santander.

## Considerable Improvement in the Main Crops in 2022 Expected to Drive the Agricultural Sector

We calculate that the agricultural and livestock sectors should be two of the main growth drivers in 2022. After being hard hit by the weather and trade problems in 2021, we expect more favorable conditions to allow a rebound in most farm products output in 2022.

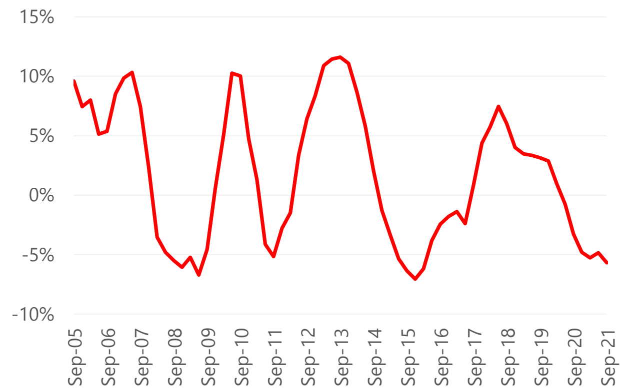
After a strong performance in 1Q21, mostly accounted for by record soybean crops, the agricultural sector has suffered from the historical drought that hit Brazil in mid-2021, affecting some of the country's main crops. The corn and sugarcane crops had much lower volumes than what was initially forecasted by both market analysts and the IBGE. The livestock sector was also hard-hit in 2H21, as some isolated cases of the mad cow disease have been reported in the country. As a result, Chinese authorities suspended the importation of Brazilian cattle meat in September, partially lifting the restrictions only by the end of November, leading to a considerable reduction in cattle slaughter in both 3Q21 and 4Q21.

**Figure 3 – Evolution of IBGE's Estimates of Farm Output (% Full-Year 2021)**




Sources: IBGE, Santander.

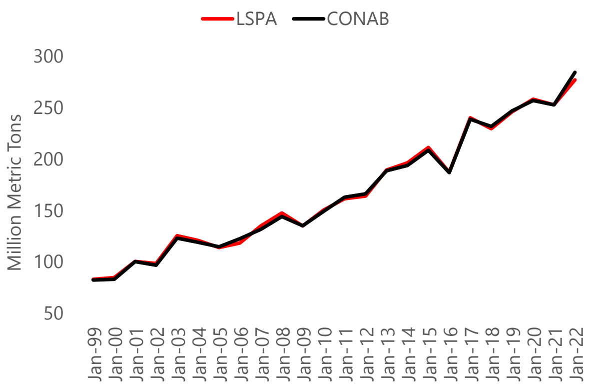
**Figure 4 – Cattle Slaughter (12-month % variation)**




Sources: IBGE, Santander.

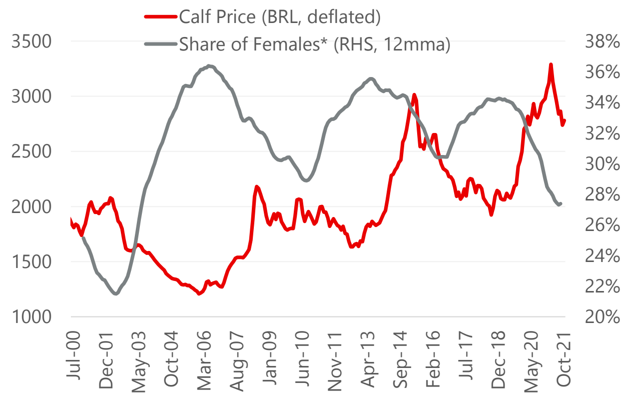
Looking at 2022, however, the outlook seems much more favorable. First, the poor performance of both agriculture and livestock in 2021 should enable a rebound in 2022. Second, weather forecasts for Brazil remain favorable for the main crops. Despite the consolidation of *La Niña* in late 2021 and early 2022, both the observed precipitation volume and the forecasts are favorable for the majority of Brazil. The risks of dry periods remain present, especially in the southern region, which may have some productivity problems after a dry December, but we still see the overall outlook as positive. Soybean planting is on schedule, which also reduces the risks for the corn second crop. The low sugarcane production in 2021 also favors output growth in 2022. This outlook is already reflected in the CONAB[1] estimates and IBGE's monthly Agricultural Survey[2]. Last, the cattle production cycle enters a favorable period in 2022. We are currently at the low point of the share of females in total cattle slaughter. In order to produce more calves to take advantage of high prices, cattle producers tend to retain females, reducing the total slaughter numbers. As calf prices have already started to fall, the female retention should be gradually reduced, therefore we expect an increase in both female and total cattle slaughter, with a direct positive impact on meat production and farm output.

**Figure 5 – IBGE and CONAB Estimates for Total Crops**




Sources: IBGE, CONAB, Santander.

**Figure 6 – Cattle Slaughter and Calf Price**

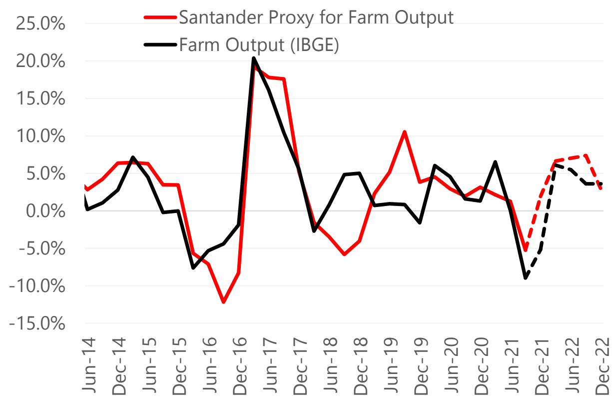



Source: IBGE, FGV, CEPEA, Santander.
*Share in total cattle slaughter.

It is important to note that the agricultural sector is accounted for in GDP as a seasonal distribution of IBGE's estimate of the output of each product, based on the monthly Agricultural Survey. Therefore, based on IBGE's prognostication for the main agricultural products output for 2022, the seasonal distribution, and the outlook for the livestock sector, we built a proxy for farm output that indicates positive YoY variations throughout 2022. Based on this proxy, we expect farm output to achieve 5.0% full year growth, contributing 0.4 p.p. to GDP growth.

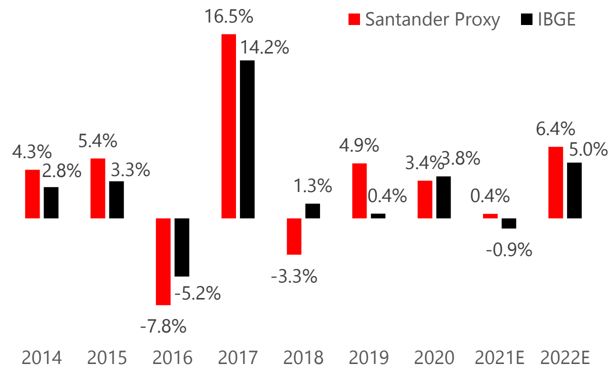
[1] National Agricultural Supply Company, in the Portuguese acronym.

**Figure 7 – Farm Output (% YoY)**




Sources: IBGE, Santander.

**Figure 8 – Farm Output (% Full Year)**




Source: IBGE, Santander.

**Mobility-Related Services Segments as the Main Source of Cyclical Growth**

In our baseline scenario, we expect the services sector to play a major role in the economic resilience expected in 2022, as the reopening process advances and mobility consolidates a recovery. From a supply standpoint, this sector is the most important in the composition of GDP, accounting for almost 70% of the added value, and it was seriously affected by the lockdown measures adopted in order to address the public health crisis resulting from the COVID-19 outbreak. In addition to the substantial direct impact of strict measures for social distancing in the worst periods of the pandemic, the maintenance of lower levels of mobility and the difficulty faced by some segments in adapting to the lockdown contributed to a slower resumption of growth for the services sector since 2H20. Conversely, goods-related sectors like industry and retail sales were boosted by the emergency aid stipends and by the shift in demand from services consumption toward goods.

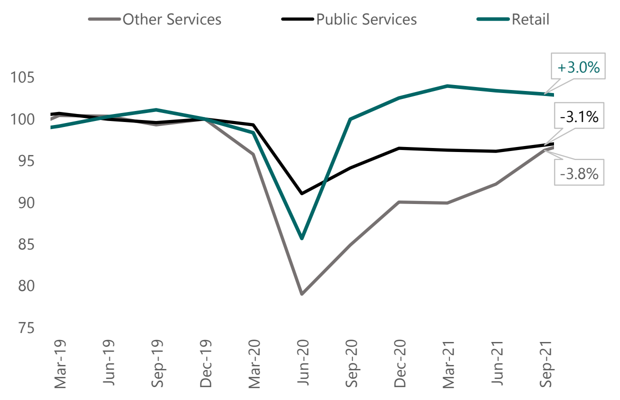
Our growth thesis for the services sector this year mainly rests on the fact that mobility is currently reaching “normal” levels following a massive vaccination campaign, and we do not expect any setbacks in the reopening process. Thus, important mobility-related segments that still show wide idleness relative to their pre-pandemic levels will benefit, in our view, gradually filling those gaps and contributing to economic growth in 2022, despite the delayed effects of the current worsening financial conditions. Indeed, the Public Services segment, which mainly corresponds to public administration, non-mercantile health, and education services and accounts for almost 15% of overall GDP, remains 3.1% below its pre-pandemic mark and shows an insignificant 0.01 correlation with our proxy for monetary stimuli[3]. Moreover, the Other Services segment, which mainly corresponds to services provided to families, mercantile health, and education services and accounts for almost 13% of overall GDP, remains 3.8% below its pre-pandemic mark. While it highly correlates with our proxy for monetary stimuli (-0.53), our assumption is that the recovery process as household demand shifts from goods to services will offset the impact of worsening financial conditions. To quantify the potential contributions from these segments to GDP growth in 2022, we simulated conservative paths of recovery and weighted their annual growth rates by their proportion of total GDP. According to our calculations[4], the Public Services and Other Services segments could contribute 0.4 p.p. (annual growth of 3.0%) and 0.7 p.p. (annual growth of 6.0%) to GDP growth this year.

[2] *Levantamento Sistemático da Produção Agrícola* (LSPA), released monthly by the IBGE, with estimates for the full-year output of Brazil's main agricultural products.

[3] The correlation here is calculated between our monetary stimuli proxy (two quarters ahead) and the four-quarter rolling variation of each services segment, and comprises the period from December 2010 to December 2019. The proxy is calculated approximately as the difference between the real rate and the proxy for the neutral rate.

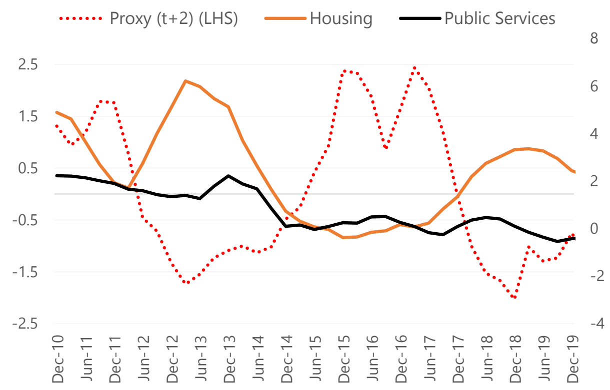
[4] This exercise uses seasonally adjusted series, so final results may slightly differ from official calculations that use the non-seasonally adjusted series.

**Figure 9 – Selected Services Segments (sa, 4Q19=100)**



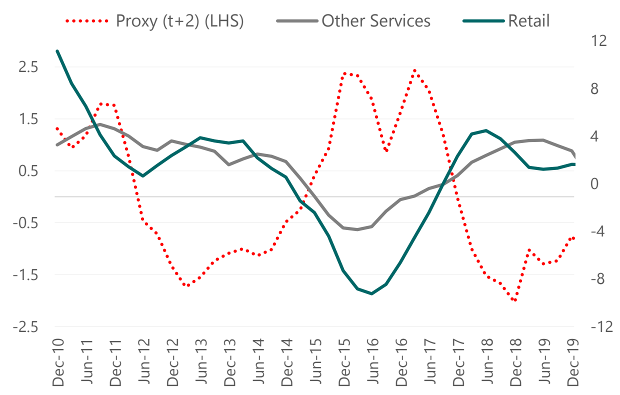

Sources: IBGE, Santander.

**Figure 10 – Proxy and Services Segments[5] (4-Quarter Rolling %)**



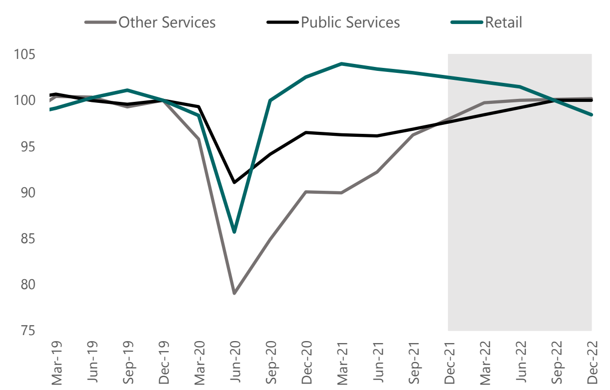

Sources: IBGE, Santander.

**Figure 11 – Proxy and Services Segments (4-Quarter Rolling %)**




Sources: IBGE, Santander.

**Figure 12 – Selected Services Segments (sa, 4Q19=100)**




Sources: IBGE, Santander.

Conversely, we do expect some segments to suffer from the tightening in financial conditions, especially Retail and Housing. The Retail segment accounts for almost 12% of total GDP and highly correlates with our proxy for monetary stimuli (-0.48). Currently, it stands roughly 3.0% above its pre-pandemic mark, but we expect a continuation of its recent downward trend and a stronger negative impact in 2H22. We simulated a path of recovery for the segment, and, according to our calculations, we estimate that Retail could constitute a drag of 0.3 p.p. on GDP growth (annual growth of -2.7%). The Housing segment, which accounts for almost 8% of total GDP, highly correlates with our proxy for monetary stimuli (-0.63). However, despite that strong relationship, we simulated a path for the segment applying a 2015-16 quarterly growth average for 4Q21 onward, and, according to our calculations, Housing will make no contribution (0 p.p., annual growth of -0.3%). All in all, based on this exercise – which considers more than 80% of services GDP – we expect the services sector to contribute 0.8 p.p. to GDP in 2022.

**Potential Industry Drags**

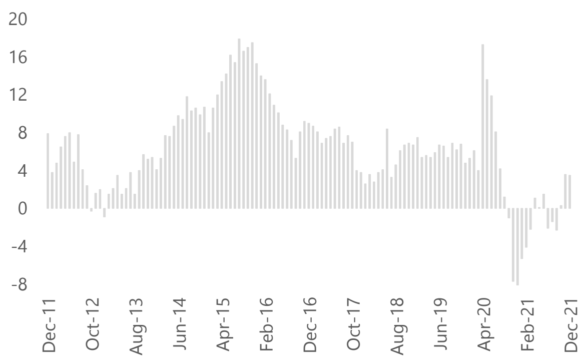
The previous sections described our view of services and farm output in 2022 and their potential contributions to GDP growth, already considering the potential drag from more cyclical services (like Retail and Housing). The next step is evaluating how much the industrial sector would have to retreat in order to fully offset the positive contributions from services and farm output. Currently, industrial output accounts for

[5] Figures 10 and 11 were plotted comprising a period until 4Q19 to avoid the charts distortions in the pandemic period.

roughly 20% of total GDP, with manufacturing accounting for almost half of this share, and with mining, construction, and utilities completing the set of industrial subsectors. According to our calculations, a roughly 6% drop in industrial output would be necessary to fully offset the 1.2 p.p. contribution from services and farm output. Such a drop is similar to the one observed in 2015 (-5.8%) and more intense than the observed in 2020 (-3.4%). In our opinion, such a drop is quite unlikely, especially considering that the less cyclical mining sector and the construction sector still have a bright outlook for 2022.

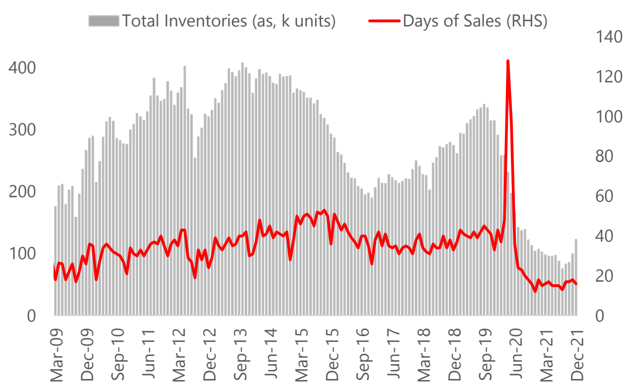
Additionally, it is worth noting that inventory replenishment may be an upside risk to manufacturing output in 2022. Despite the substantial uncertainty regarding the solution of issues arising from the worldwide shortage of inputs, it is possible that we are seeing the first signs of inventory replenishment, which could be a tailwind for industrial production ahead, in an environment with worsening financial conditions. Indeed, according to FGV, the inventories surplus (i.e., the percentage of respondents stating that inventories are excessive, minus respondents seeing inventories as insufficient) in November reached the highest level since August 2020, although it remains considerably below the historical average. Regarding the auto industry, according to Anfavea, inventories were up (again), rising 18.4% in November and reaching 100k units-sa for the first time since February 2021.

**Figure 13 – Inventories Perception (sa, points)**




Sources: FGV, Santander.

**Figure 14 – Auto Inventories (sa, units in thousands)**



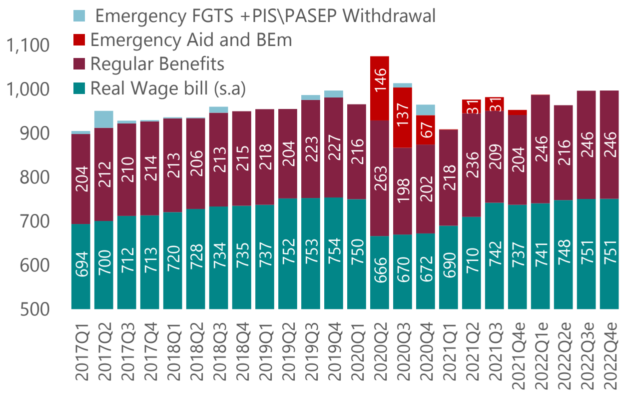

Sources: Anfavea, Santander.

### Comments on Domestic Demand

From a demand standpoint as well, we expect the remaining effects of a normalization of public health conditions to boost domestic demand. Household consumption currently stands 2.1% below its pre-pandemic level, but we expect it to normalize throughout 2022 amid increased mobility and demand shifting from goods to services. Moreover, we expect a significant expansion in the real wage bill[6], as a byproduct of labor market recovery and government transfers. Regarding government spending, the segment remains 2.2% below its pre-pandemic level; following our expectations of a resumption of regular (non-COVID-related) health procedures, education, and public administration services, we expect a resumption of government spending in 2022, reinforced by the forecasted fiscal impulse. Lastly, after investments reached a double-digit growth rate in 2021, we expect continued resilience in 2022, stemming mainly from good contributions from the building sector (which accounts for nearly half of investments). Indeed, the building sector has a longer economic cycle, so that after a considerable period of historically easy financial conditions, we expect the sector to show resilience even in the tighter monetary policy environment in 2022. Currently, we forecast 1.0% growth for household consumption, 2.1% growth for government spending, and a slight retreat of 0.6% for investments.

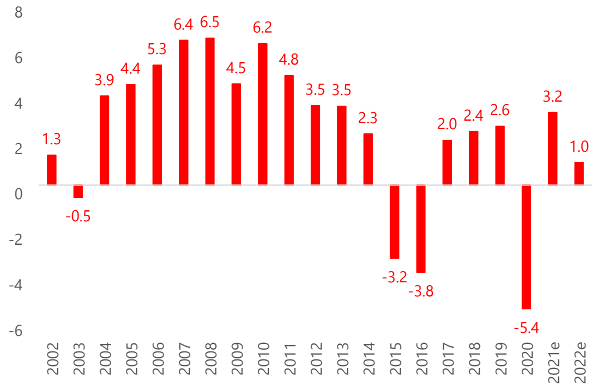
[6] **Santander Brazil Economic Activity -** ***"Chartbook – Lowering (Again) Our GDP Estimates" –*** December 8, 2021 – Available on: https://bit.ly/Std-chart-econact-dec21

**Figure 15 – Real Wage Bill (sa, BRL Bn)**




Sources: National Treasury, IBGE, Ministry of Economy, Santander.

**Figure 16 – Household Consumption (Full Year %)**



Sources: IBGE, Santander.

## Final Remarks

This report aims to show evidence supporting our outlook for economic growth in 2022. We expect the economy to be resilient even amid the current worsening in financial conditions, mainly thanks to two factors: first, solid output expected for non-cyclical sectors like agriculture and livestock; and second, solid contributions from mobility-related services segments that account for a significant share of total GDP, like Other Services and Public Services. The expected drag from industrial output is not likely to be enough to fully offset this growth, in our view. In our baseline scenario, we forecast 5.0% growth for farm output, 1.3% growth for services, and a 1.4% retreat for industrial output; summing up, we expect 0.7% GDP growth in 2022. This growth is in keeping with a contraction cycle (we calculate the potential output growth around 1.5%), which is consistent with monetary tightening offsetting fiscal easing, amid a global economy still in an expansionist cycle (growth above potential, with both fiscal and monetary policies still in an expansionary phase in advanced economies).

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