

## Effects of the pandemic on different inflation groups

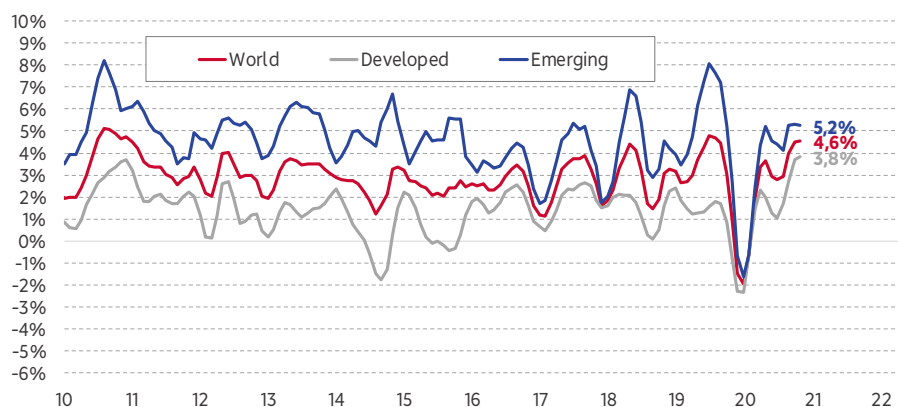
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The world economy has been facing a series of major shocks since the beginning of the pandemic, which increase the challenges of analyzing not only current inflation but also estimating price behavior for the years ahead. Transitory factors such as supply shocks should correct themselves over time. Here we are talking about commodities, but also about different electronic components, lack of labor and even supply shocks in the case of some services, since several establishments – such as restaurants and hotels – ended up closing last year. There is also a change in relative prices (favoring the prices of goods at the expense of some services) and the base effect, which compromises the year-over-year comparison.

While these are ongoing pressures, especially on goods, the economy is reopening and gradually adding pressure on services prices. This should keep inflation numbers high in the vast majority of countries, given that all these vectors are at work simultaneously.

### Chart 1: Consumer inflation

Year-over-year – 3-month moving average



Source: Bloomberg

### Chart 2: inflation surprise index

The higher the index, the greater the surprise



Source: Bloomberg

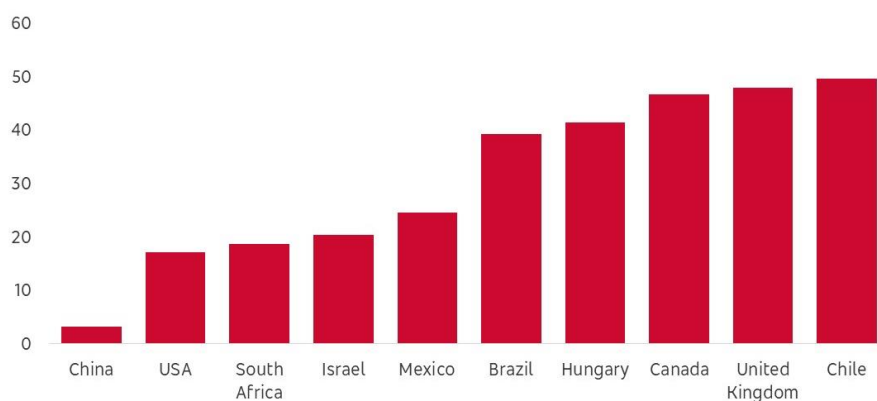
**Furthermore, demand fundamentals suggest that inflation pressures may still linger for a while.**

Here, we draw attention to the unprecedented monetary expansion – which has ensured high liquidity to the economy – that could turn into overall inflation, not only of asset prices. In addition, the rapid recovery of most countries leads us to forecast the closing of the world output gap at the end of this year/beginning of next year (remembering that this has already happened for some countries, such as China). Finally, central banks have shown greater tolerance for inflation, especially the Fed. As such, the withdrawal of stimuli should only take place at a point when there is certainty that the economy is healthier – taking into account the recovery of the job market and the closing of the services sector gap.

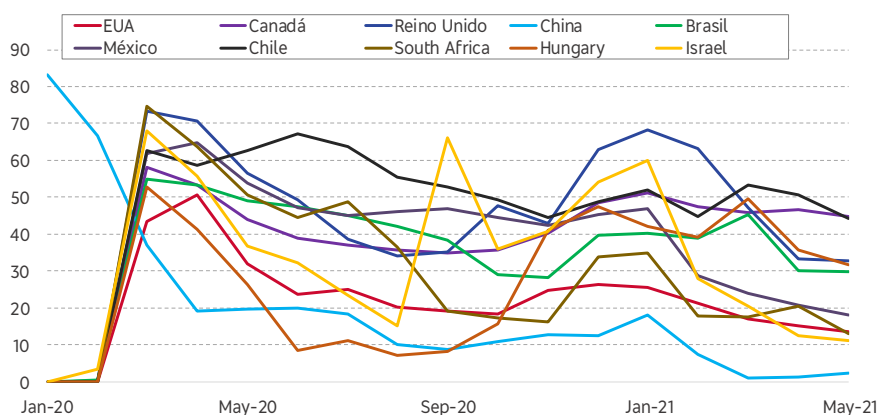
**We will focus here on analyzing the pressures possibly arising from the pandemic.** We chose a sample of countries, with different rates of immunization or opening, as shown in the charts below<sup>1</sup>.

**Chart 3: Lockdown index**

The higher the index, the more closed, Feb-April/2021



**Chart 4: Lockdown index**



Source: GS, Oxford University

<sup>1</sup> It is worth noting that even countries with advanced immunization, such as Chile, the United Kingdom and Canada, had a high level of lockdown in the recent period – since we extended our studies to April, as this is the last inflation data available. In addition, Chart 4 shows how the opening and closing processes were frequent over the past year and a half, given the evolution of the pandemic.

Our exercise consists of observing the average behavior of items possibly affected by the pandemic when compared to the rest. For most countries in our sample, restaurants, rent, education, apparel and tourism inflation was relatively lower than the overall index in the period from March/2020 to April/2021 compared to the 2018-2019 average. On the other hand, furniture and household appliances showed variation above the full index during the pandemic, when compared to the pattern of previous years. The following table illustrates this comparison.

**Table 1: Consumer inflation: ratio of selected items to the full index**

Average monthly variation for the periods

		Mexico	Chile	US	Canada	United Kingdom	Hungary	China	Israel	South Africa	Brazil	Median
restaurants	2018-19	1,44	1,29	1,40	1,51	1,41	- 0,33	3,08	1,79	0,78	0,86	1,40
	2020-21	0,99	0,76	1,15	1,19	1,04	0,50	6,00	3,14	0,38	0,45	1,02
healthcare	2018-19	1,18	1,03	1,56	0,66	1,52	- 0,67	0,72	- 0,07	1,17	1,43	1,10
	2020-21	1,01	0,63	0,51	1,12	0,89	- 0,17	- 0,67	- 1,17	0,89	0,54	0,58
education	2018-19	1,19	1,91	1,12	1,51	1,00	0,67	0,93	2,44	1,56	1,56	1,35
	2020-21	0,41	0,72	0,26	1,19	1,00	0,33	- 2,00	1,32	1,05	- 0,07	0,56
rent	2018-19	0,72	1,94	1,54	1,12	0,44	1,66	0,53	2,05	0,84	0,66	0,98
	2020-21	0,40	1,02	0,61	0,15	1,25	- 0,17	0,08	0,84	0,16	0,59	0,49
tourism	2018-19	1,39	7,02	- 0,24	- 0,30	2,68	- 14,17	0,99	3,33	- 0,98	0,68	0,84
	2020-21	- 1,47	- 0,86	- 1,18	- 1,68	0,84	14,05	2,00	16,57	- 0,37	0,16	- 0,11
apparel	2018-19	0,60	- 0,19	- 0,30	0,74	- 0,50	- 0,33	0,35	- 5,73	0,47	0,39	0,08
	2020-21	0,39	- 0,76	- 0,76	- 1,58	- 0,91	3,62	- 1,07	- 2,64	0,10	0,19	- 0,76
furniture	2018-19	0,39	0,20	0,68	- 0,30	0,70	- 1,67	- 0,22	- 0,74	- 0,28	0,29	- 0,01
	2020-21	2,16	4,72	1,64	1,81	2,51	0,67	- 0,08	3,30	- 0,54	0,72	1,73
household appliances	2018-19	- 0,70	0,01	1,16	- 0,60	- 0,09	2,01	- 0,22	- 3,79	0,36	- 0,19	- 0,14
	2020-21	1,28	2,67	2,31	2,09	1,20	- 1,51	- 0,08	2,45	- 0,21	2,06	1,67

Source: Bradesco, CEIC

We also analyzed them individually, comparing the inflation pattern of these items before and during the pandemic. We noted that goods prices have varied well above what we had previously observed. As expected, given the mobility restrictions, services items related to entertainment, such as tourism, have shown variation well below the 2018 and 2019 average. Even some items less sensitive to the pandemic – such as rent and healthcare – showed some relief compared to the pre-pandemic period. However, in general, pressures coming from goods – in addition to commodities – explain the variations in the full index above that observed before the pandemic. The following table illustrates this differential among the selected items.

**Table 2: Consumer inflation: difference between 2020-21 and 2018-19 periods**

Average monthly variation, in p.p.

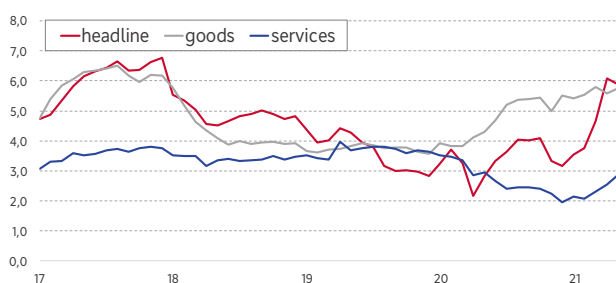
	Mexico	Chile	US	Canada	United Kingdom	Hungary	China	Israel	South Africa	Brazil	Median
full index	0,06%	0,05%	0,09%	0,03%	-0,01%	0,03%	-0,35%	-0,02%	-0,05%	0,15%	<b>0,03%</b>
restaurants	-0,08%	-0,07%	0,06%	-0,02%	-0,06%	0,03%	-1,31%	0,03%	-0,16%	-0,38%	<b>-0,07%</b>
healthcare	0,01%	-0,05%	-0,14%	0,11%	-0,10%	0,00%	-0,13%	-0,05%	-0,14%	-0,19%	<b>-0,07%</b>
education	-0,22%	-0,21%	-0,13%	-0,02%	-0,01%	0,01%	-0,07%	-0,09%	-0,23%	-0,50%	<b>-0,11%</b>
rent	-0,08%	-0,14%	-0,11%	-0,17%	0,09%	-0,03%	-0,14%	-0,09%	-0,24%	0,07%	<b>-0,10%</b>
tourism	-0,99%	-1,63%	-0,27%	-0,29%	-0,27%	0,82%	-0,43%	0,56%	0,23%	-0,13%	<b>-0,27%</b>
apparel	-0,04%	-0,15%	-0,15%	-0,45%	-0,04%	0,17%	0,00%	0,24%	-0,14%	-0,03%	<b>-0,04%</b>
furniture	0,69%	1,13%	0,31%	0,42%	0,21%	0,05%	0,07%	0,20%	-0,06%	0,24%	<b>0,23%</b>
household appliances	0,70%	0,66%	0,40%	0,54%	0,16%	-0,09%	0,07%	0,35%	-0,19%	0,99%	<b>0,38%</b>

Source: Bradesco, CEIC

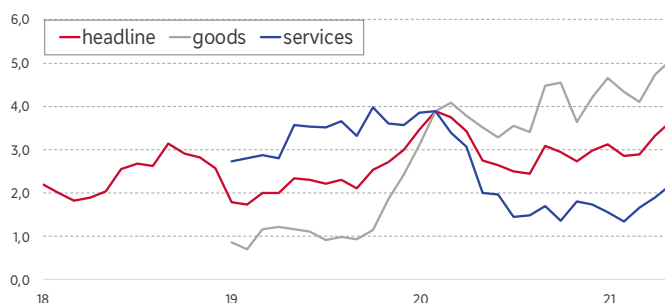
**In other words, countries with a significant reduction in mobility or legally enacted lockdowns behaved as expected: the inflation of goods was higher than that of services.** Looking ahead, it is expected that full economic reopening will lead to a change in this process, with services gaining relative weight in relation to goods. This change, however, will occur in parallel with the increase in income and the existence of accumulated savings in most countries, which can limit “disinflation” in the goods sector – except for that caused by the normalization of supply – in a context of monetary and fiscal policies that are still quite expansionary. If there are reasons to assume that inflationary pressures may be transitory, it is convenient to closely monitor this change in relative prices to check whether there are secondary effects, such as spreading inflation. If they come to light, the reversal of monetary policy in several countries could be more intense than currently expected.

### Appendix: consumer price index, year-over-year variation, available openings

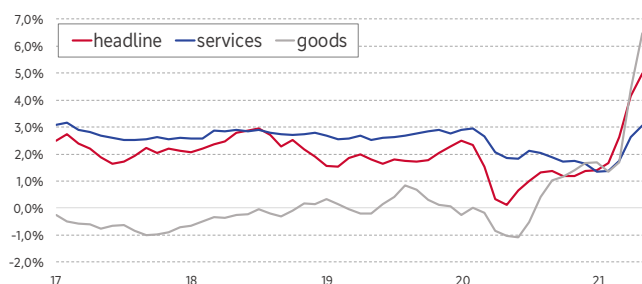
#### Mexico



#### Chile



#### USA



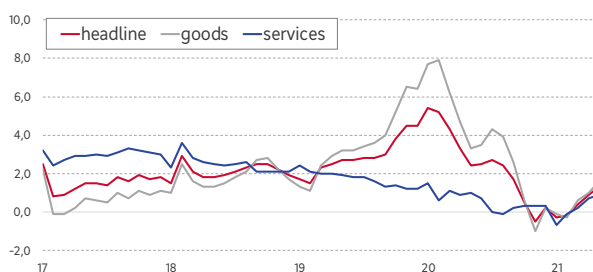
#### Canada



#### United Kingdom

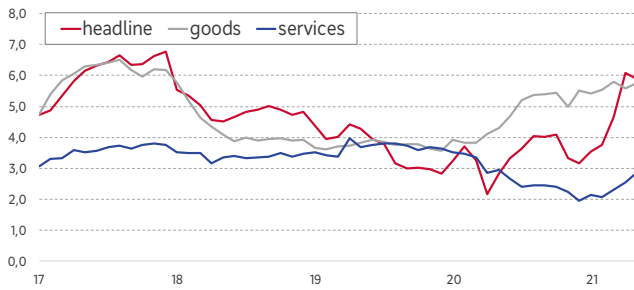


#### China

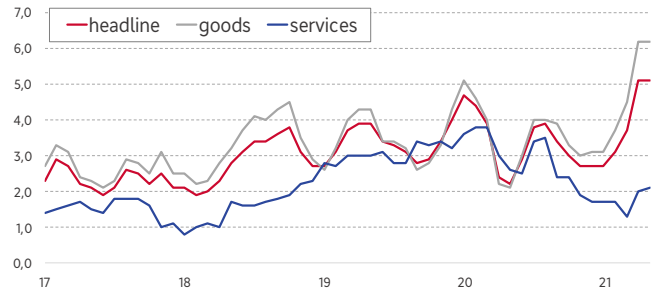


## Appendix: consumer price index, year-over-year variation, available openings

### South Africa



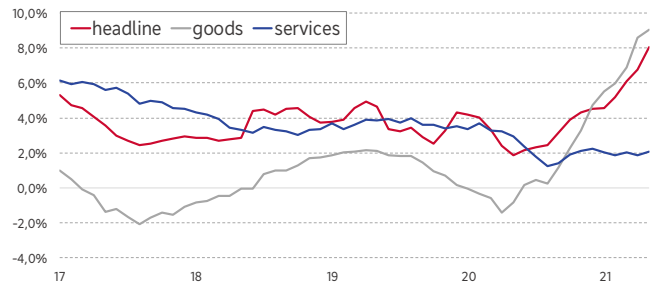
### Hungary



### Israel



### Brazil



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