

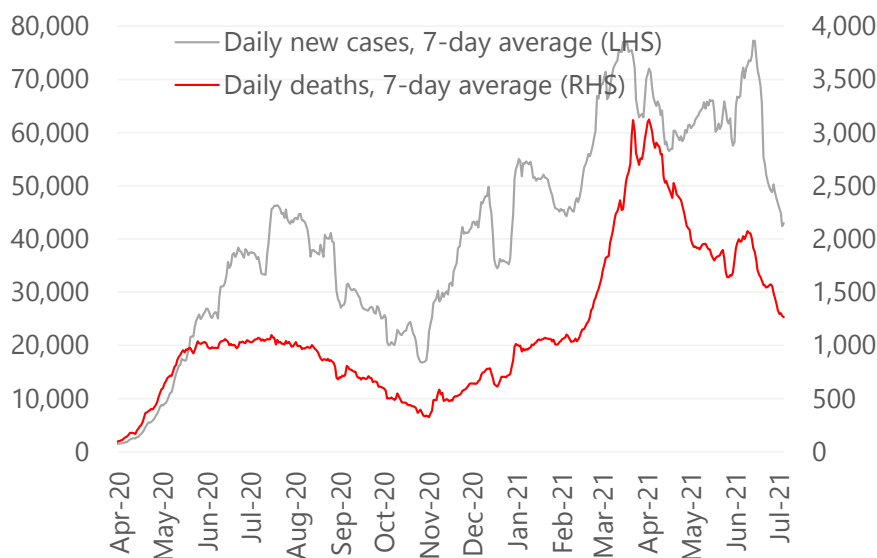
COVID MONITOR

Felipe Kotinda*

felipe.kotinda@santander.com.br
+5511 3553 8071

- Brazil's vaccination pace continues to hold up above the 1 million/day mark. We expect the daily average pace of vaccination to stand at 1.5 million doses in 2H21, as vaccine inventories remain high (32 million doses) and deliveries are expected to remain above vaccine administration.
- By the end of this week *Butantan* and *Fiocruz* will have received API (active pharmaceutical ingredient) sufficient for 20 million and 10 million doses, respectively.
- Our proxy for a nation-wide average ICU occupancy rate continues to decline, now close to 65%, the lowest level since early February. That number compares to a previous peak of 92% (late March). As the pandemic gradually eases, we believe local governments will probably continue to lift restrictions further.
- Data from Brazil's Health Ministry showed an average of 43k new daily cases (7-day moving average) as of Wednesday (July 14), down 14% from last week, while daily casualties (7-day moving average) totaled 1,264, down 15% in the same period.

Figure 1 – Daily New Cases and Deaths (July 14)



Sources: Brazilian Ministry of Health, Santander.

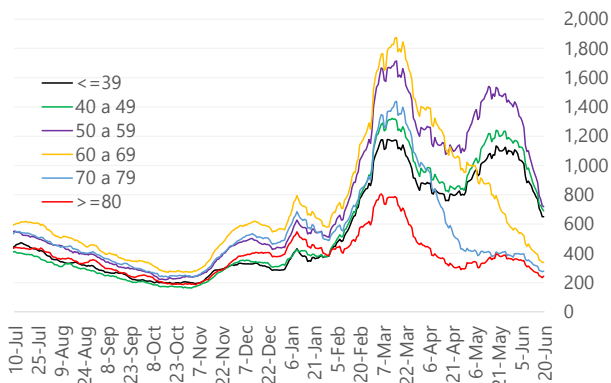
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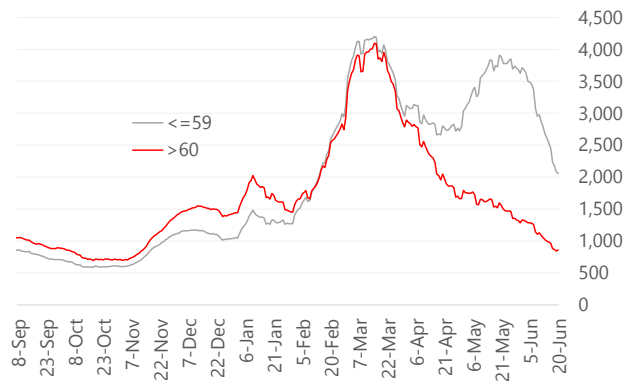


Figure 2 – New Hospital Admissions by Age (June 20)



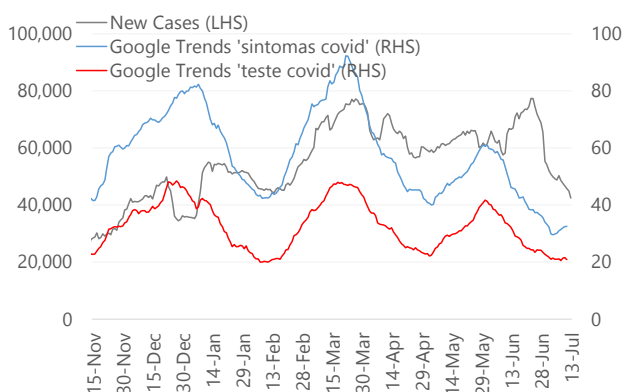
Sources: openDataSUS, Santander.

Figure 3 – New Hospital Admissions by Age (June 20)



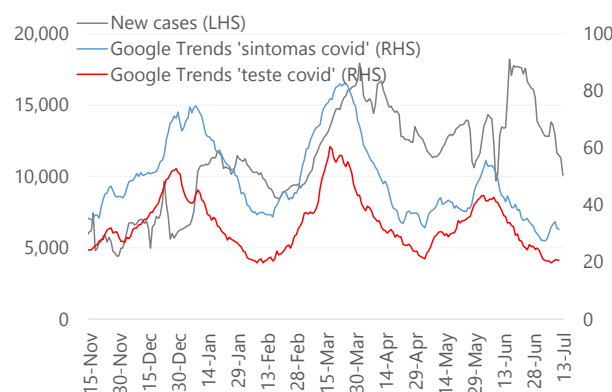
Sources: openDataSUS, Santander.

Figure 4 – Google Trends – Brazil (July 13)



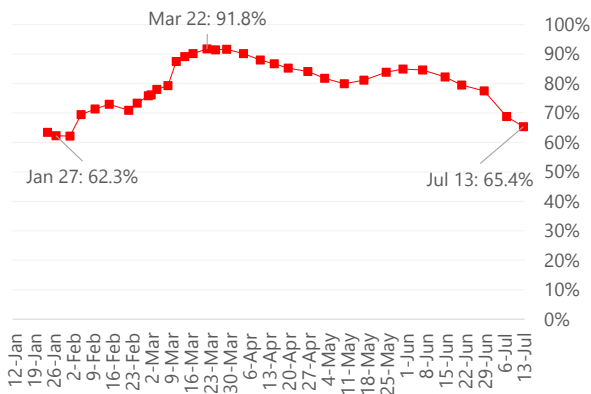
Sources: Brazilian Ministry of Health, Google Trends, Santander.

Figure 5 – Google Trends - São Paulo (July 13)



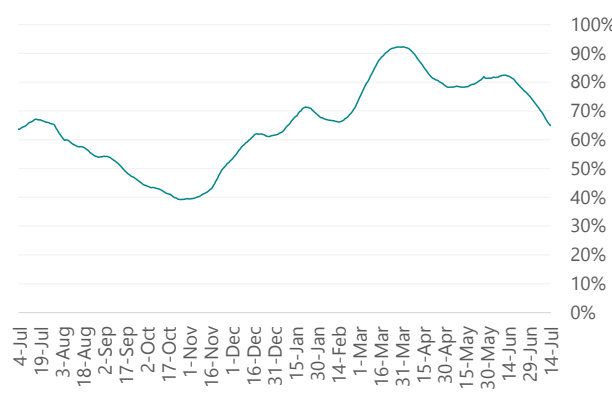
Sources: Brazilian Ministry of Health, Google Trends, Santander.

Figure 6 – Nation-wide Average ICU Occupancy¹ (%)



Sources: @coronavirusbra1, Santander.

Figure 7 – ICU Occupancy – São Paulo (July 14)

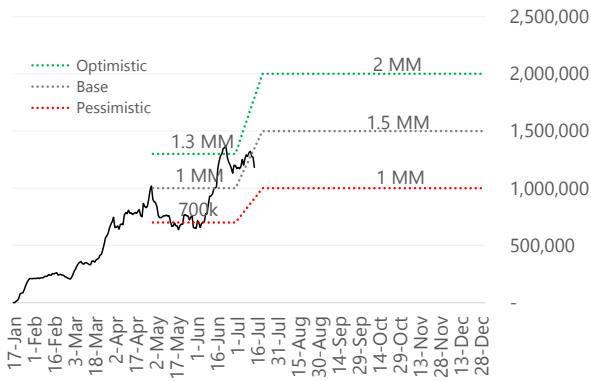


Sources: São Paulo Government, Santander.

¹ The nation-wide average is a weighted average (by state population) of state ICU occupancy rates. Hence, it does not reflect the actual national occupancy rate = Total beds occupied in Brazil / Total beds available in Brazil.

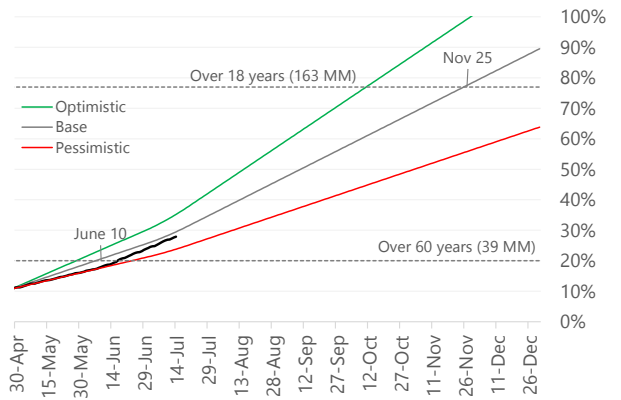


Figure 8 – Vaccination Pace (Daily Shots 7dma)



Sources: Brazilian Ministry of Health, Santander.

Figure 9 – Population Fully Vaccinated (%)



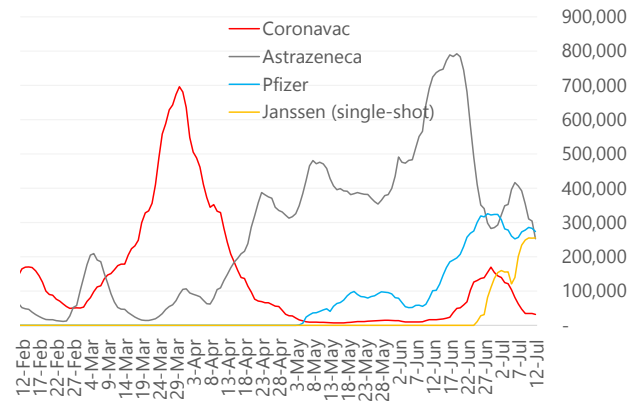
Sources: Brazilian Ministry of Health, Santander.

Figure 10 – Vaccination by Age and Gender (July 14)



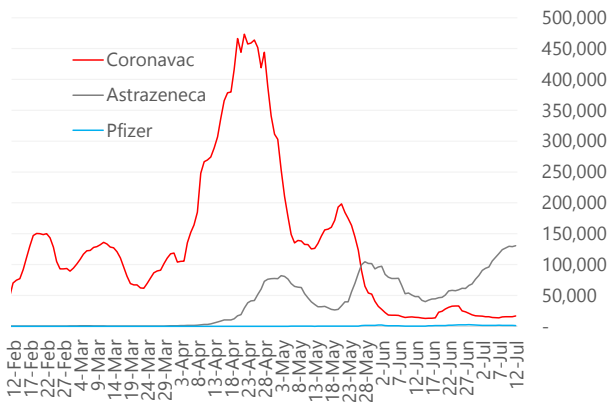
Sources: openDataSUS, Santander.

Figure 11 – Daily shots (1st dose) by Vaccine (July 12)



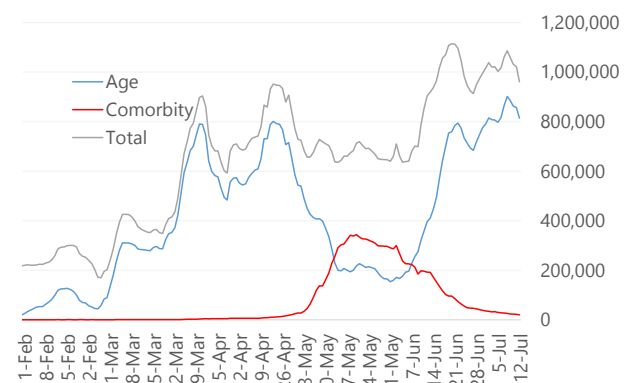
Sources: openDataSUS, Santander.

Figure 12 – Daily shots (2nd dose) by Vaccine (July 12)



Sources: openDataSUS, Santander.

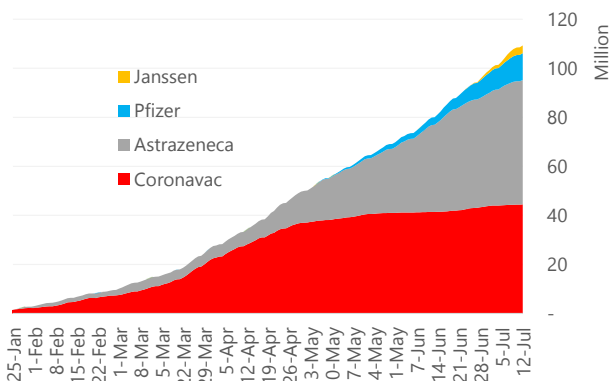
Figure 13 – Daily shots by Criteria (July 12)



Sources: openDataSUS, Santander.

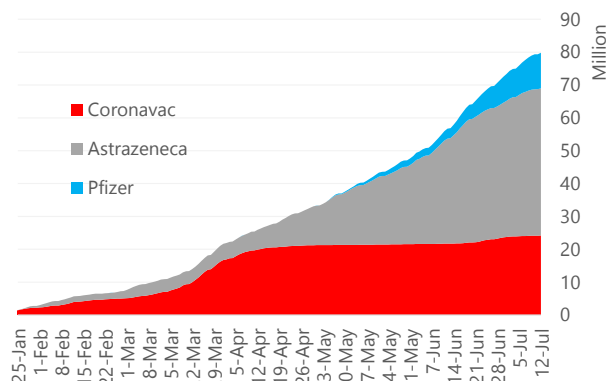


Figure 14 – Accumulated Doses Administered (Total) by Vaccine (July 12)



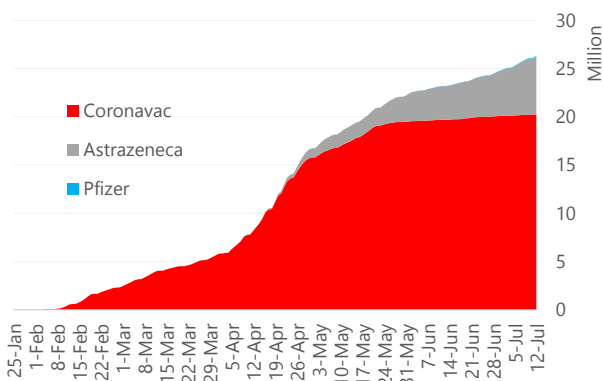
Sources: openDataSUS, Santander.

Figure 15 – Accumulated Doses Administered (1st dose) by Vaccine (July 12)



Sources: openDataSUS, Santander.

Figure 16 – Accumulated Doses Administered (2nd dose) by Vaccine (July 12)



Sources: openDataSUS, Santander.

Figure 17 - Vaccination Schedule (July 14)

	AstraZeneca		CoronaVac		Covax		Pfizer		Sputnik V	Covaxin	Janssen	Moderna	Accum. Doses		Accum. IFA	Accum. Doses + IFA
	Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual					Expected	Actual		
Jan-21	2,000,000	2,000,000	8,702,348	8,702,348	-	-	-	-	-	-	-	-	10,702,348	10,702,348		10,702,348
Feb-21	1,999,600	1,999,600	4,853,000	4,853,000	-	-	-	-	-	-	-	-	17,554,948	17,554,948		17,554,948
Mar-21	2,822,000	2,822,000	22,758,970	22,758,970	1,022,400	1,022,400	-	-	-	-	-	-	44,158,318	44,158,318		44,158,318
Apr-21	19,186,750	19,186,750	5,800,000	5,800,000	-	-	1,000,000	1,000,000	-	-	-	-	70,145,068	70,145,068		70,145,068
May-21	21,677,750	21,677,750	5,116,010	5,116,010	4,051,200	4,051,200	2,500,000	2,500,000	-	-	-	-	103,490,028	103,490,028		103,490,028
Jun-21	18,041,000	18,041,000	5,000,000	6,000,000	842,000	842,000	12,000,000	11,066,000	-	-	4,800,000	-	139,373,028	144,239,028		144,239,028
Jul-21	12,000,000	4,000,000	10,000,000	800,000	4,048,000		15,000,000	2,460,200	-	-	-	1,000,000	181,421,028	150,699,228	32,945,250	183,644,478
Aug-21	13,136,250	2,945,250	18,884,836	30,000,000			34,741,680					1,000,000	249,183,794			
Sep-21	13,136,250		18,884,836				34,741,680					1,000,000	316,946,560			
Oct-21	39,333,333		10,000,000		10,845,333		33,333,333				12,066,667		410,458,560			
Nov-21	39,333,333		10,000,000		10,845,333		33,333,333				12,066,667	10,000,000	526,037,227			
Dec-21	39,333,333		10,000,000		10,845,333		33,333,333				12,066,667		608,703,893			
Total	221,999,600		130,000,000		42,499,600		199,983,360		47,000,000	20,000,000	41,000,000	13,000,000				

Available doses
In production (API in the country)

Sources: Brazilian Ministry of Health, Santander.



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*	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 – Credit	felipe.kotinda@santander.com.br	5511-3553-8071
Gabriel Couto*	Economist – Special Projects	gabriel.couto@santander.com.br	5511-3553-8487
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
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
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
Claudia Benavente*	Head, Chile	claudia.benavente@santander.cl	562-2336-3361
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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