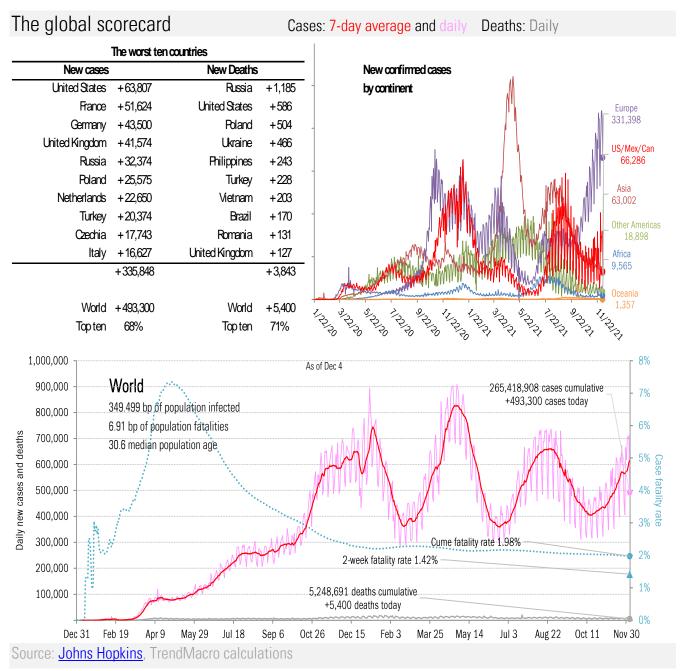


Trend Macrolytics, LLC Donald Luskin, Chief Investment Officer Thomas Demas, Managing Director Michael Warren, Energy Strategist

Data Insights: Covid-2019 Monitor

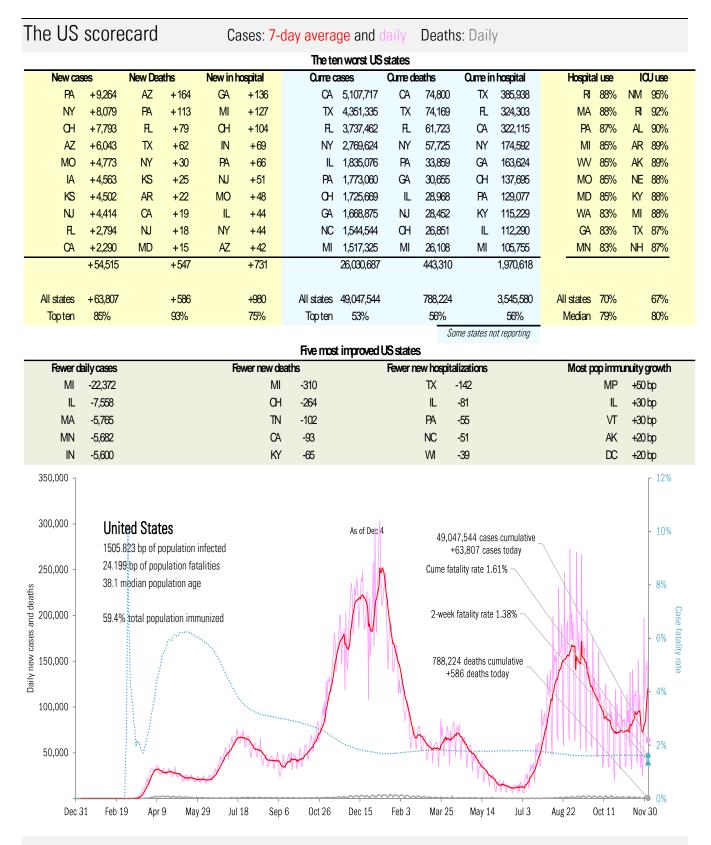
Sunday, December 5, 2021



For more information contact us:

Donald Luskin: 214 550 2121 <u>don@trendmacro.com</u> Thomas Demas: 704 552 3625 <u>tdemas@trendmacro.com</u>

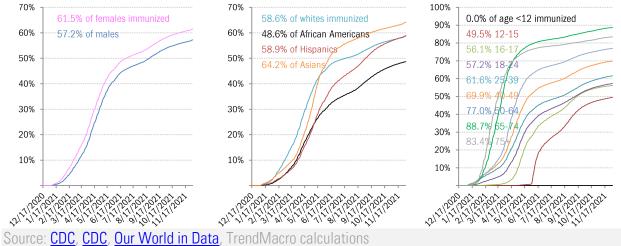
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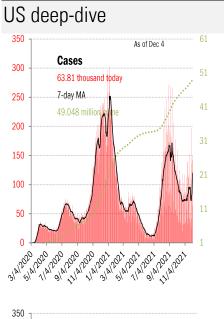


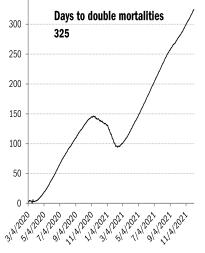
Source: Johns Hopkins, Dept. of Health and Human Services, CDC, TrendMacro calculations

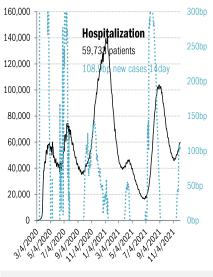
Rolling out the vaccines in the US and the world												
Administered Cumulative						To		Immunity	Full	Partial		
Doses								+2.080	million	US	59.4%	70.9%
Boosters		46,058,021							million	UK	68.2%	74.9%
		One dose				iune % pop		New immune today		France	70.0%	77.0%
Total population			241,170,275		72% 2		61%		million	Spain	80.6%	82.2%
-	Age 12 to 17		14,749,021			12,351,304	52%	+0.021	million	Germany	68.3%	71.2%
Age 18 to 64			63,580,451	80%		40,454,871	69%	+0.147 million		ltaly	73.1%	78.5%
Age 65 and over 57, 7		57,177,563			49,020,727	89%	+0.018 million		Australia	73.6%	77.9%	
1&I								8 immunized in		Israel	62.2%	68.5%
4%					_			days		Canada	76.4%	80.8%
		St	ate	Best						Japan	77.4%	79.2%
Moderna 38%				5030		by Jan 4,			Africa	7.5%	11.3%	
38%	Pfizer	At least partial immunity		Middle		73.2% of population >18 immunized				India	34.0%	57.4%
	58%	as % population		WIGO	10	17.2% previously tested positive			Brazil	63.9%	76.9%	
		Full im	,	Wors		90.5% vs 60% adult herd immunity			China		84.8%	
AK		as % po	pulation	vv or c						Global data diffe		s, timing
63.4% 54.7%						WI					ME	
						66.2%					82.6%	
						60.0%					72.9%	
	WA	ID	MT	ND	MN	IL	MI		NY	VT	NH	
	73.3%	51.0%	60.3%	58.5%	69.5%	69.5%	61.6%		79.1%	86.1%	89.1%	
	65.5%	45.4%	52.2%	49.2%	63.1%	62.0%	55.0%		68.9%	73.5%	65.1%	
	OR	NV	WY	SD	IA	IN	OH	PA	NJ	MA		
	71.9%	66.8%	54.1%	67.8%	63.0%	56.1%	58.8%	82.4%	79.9%	86.5%		
	64.4%	54.8%	46.0%	55.2%	57.2%	50.8%	53.5%	59.0%	68.3%	71.8%		
	CA	UT	CO	NE	MO	KY	WV	VA	MD	СТ	RI	
	79.5%	65.1%	71.9%	64.5%	60.3%	60.7%	69.3%	76.1%	77.5%	84.7%	84.0%	
	63.7%	55.9%	63.6%	57.9%	51.4%	52.6%	49.1%	65.6%	68.2%	72.4%	73.3%	
		AZ	NM	KS	AR	TN	NC	SC	DC	DE		
		64.8%	77.4%	66.7%	60.8%	57.2%	71.3%	60.7%	82.5%	73.5%		
		55.1%	64.0%	55.0%	49.6%	49.8%	54.7%	51.7%	65.1%	61.9%		
				OK	LA	MS	AL	GA				
				63.5%	55.9%	54.1%	56.9%	59.4%				
HI				52.0%	49.1%	47.1%	46.4%	49.4%				1
82.6%				TX					FL		PR	
61.5%				64.5%					72.2%		85.6%	
				55.1%					61.8%		74.5%	

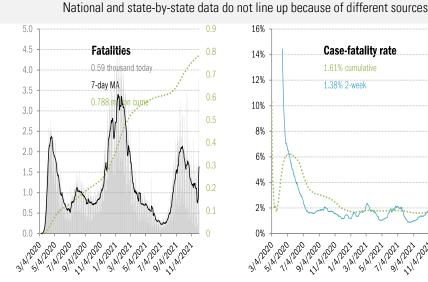
The demographics of US vaccination



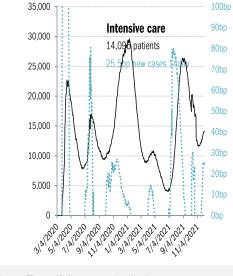


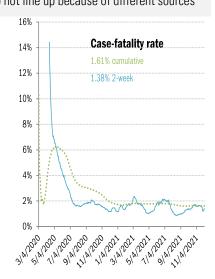


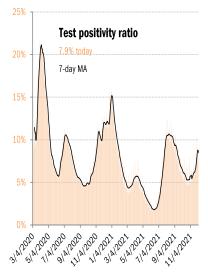


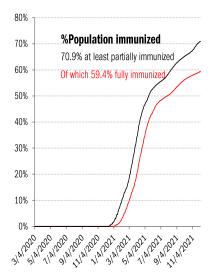




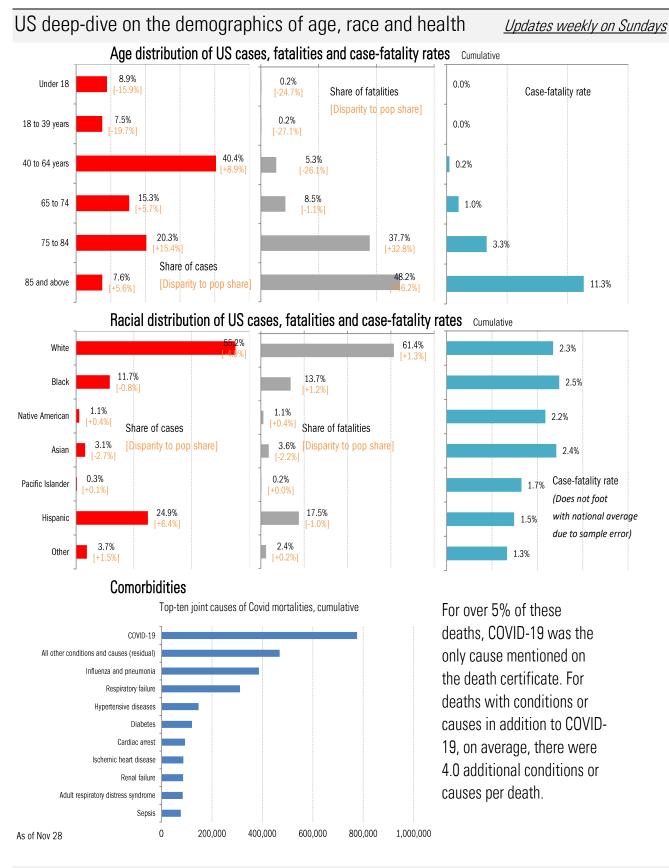








Source: Johns Hopkins, Covid Act Now, TrendMacro calculations



Source: Distributions <u>CDC</u>, Comorbidities <u>CDC</u>, TrendMacro calculations

Recommended reading

More than 40,000 march in Vienna against Austria's strict coronavirus measures.

Isabella Grullón Paz New York Times December 4, 2021

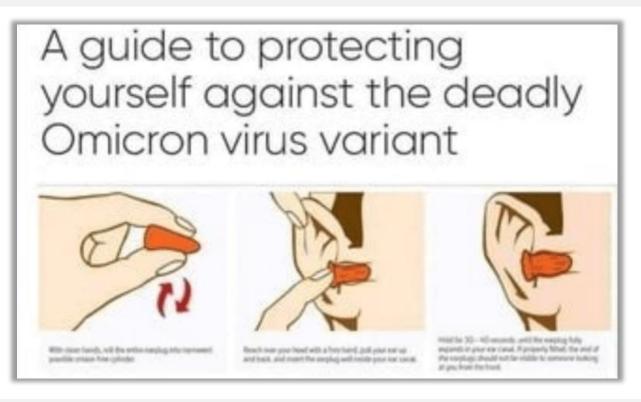
<u>Vaccine demand grows in the U.S. and so do wait</u> <u>times.</u> Vimal Patel

New York Times December 5, 2021

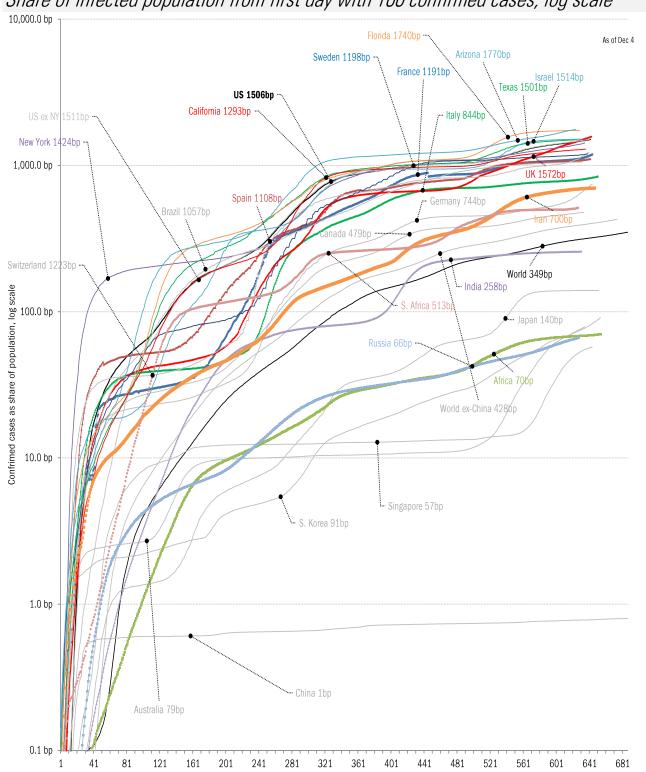
The Vast Promise of mRNA Technology

Allysia Finley *Wall Street Journal* December 3, 2021

Meme of the day



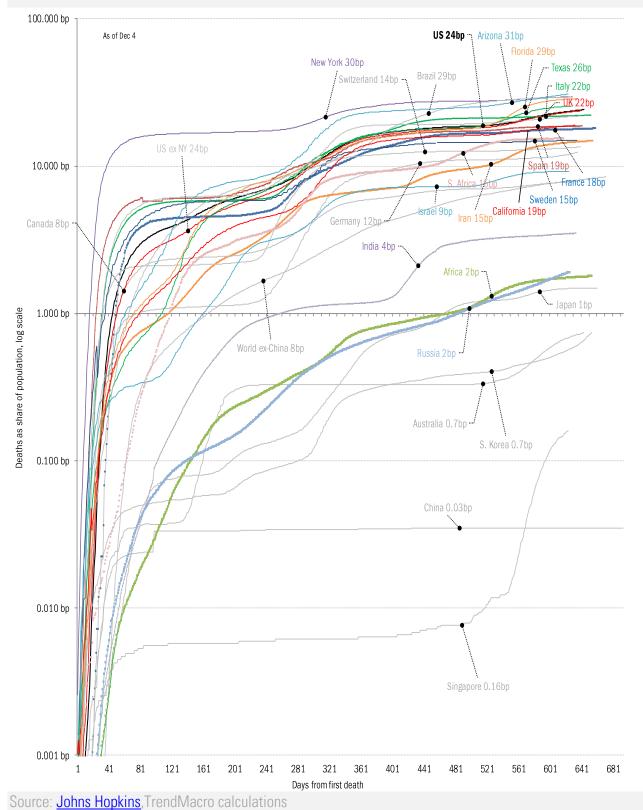
Source: Our beloved clients, Power Line blog "The Week in Pictures" and CTUP



The coronavirus <u>case</u> accelerometer... tracking the world's infection curves *Share of infected population from first day with 100 confirmed cases, log scale*

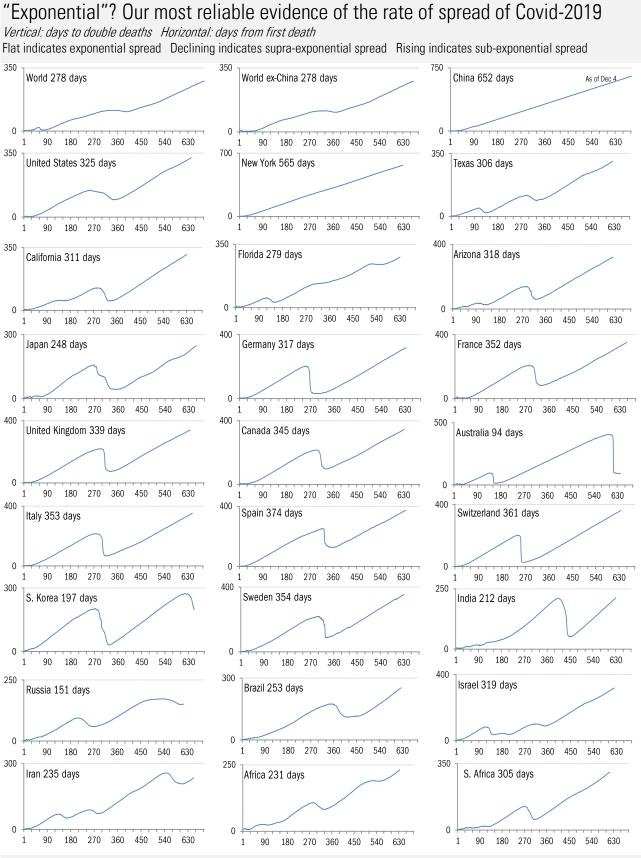
Source: Johns Hopkins, TrendMacro calculations

Days from 100 confirmed cases



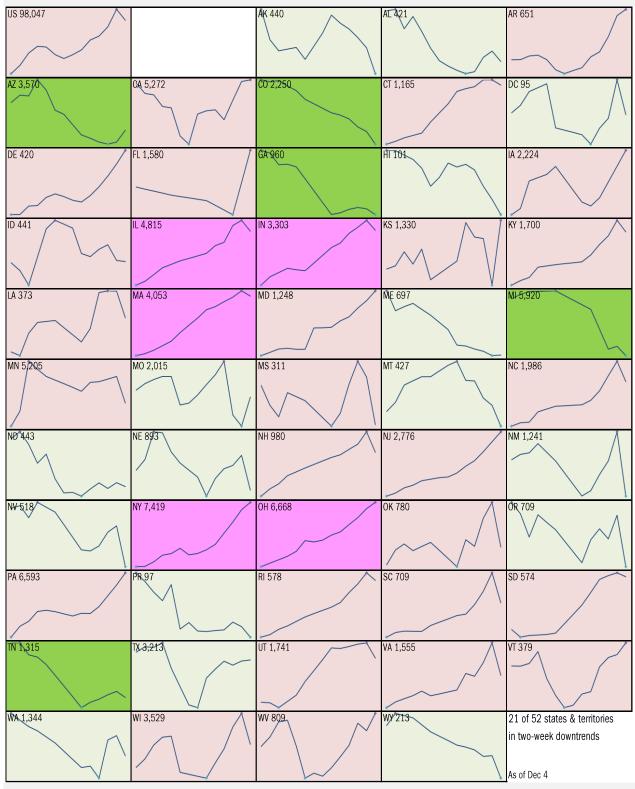
The coronavirus <u>mortality</u> accelerometer ... tracking the world's fatality curves *Share of deceased population from day of first fatality, log scale*

8



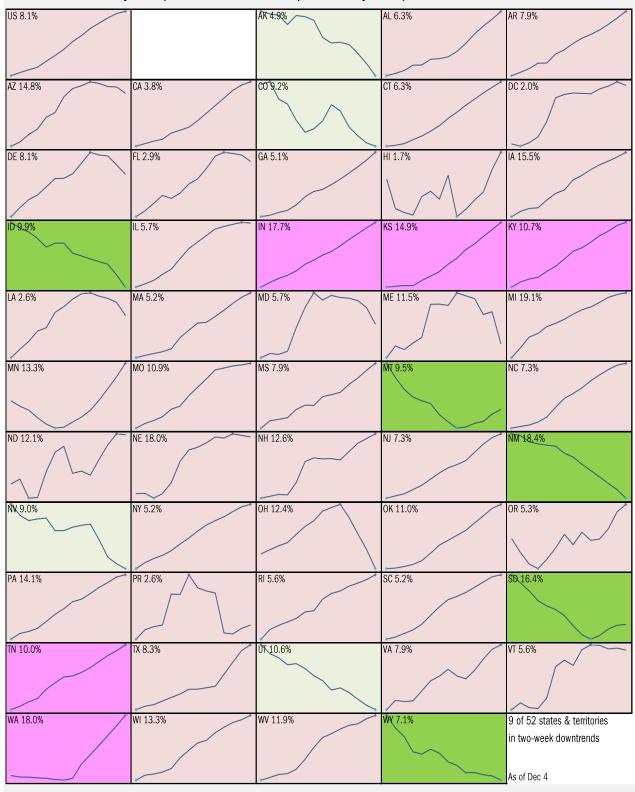
Source: Johns Hopkins, TrendMacro calculations

Requirement to <u>Open Up America Again</u>: 14-day "downward trajectory" in new cases *14-day moving average, last 14 days Most recent value displayed* • High • Low Downward trajectory Five best Upward trajectory Five worst



Source: Johns Hopkins, TrendMacro calculations

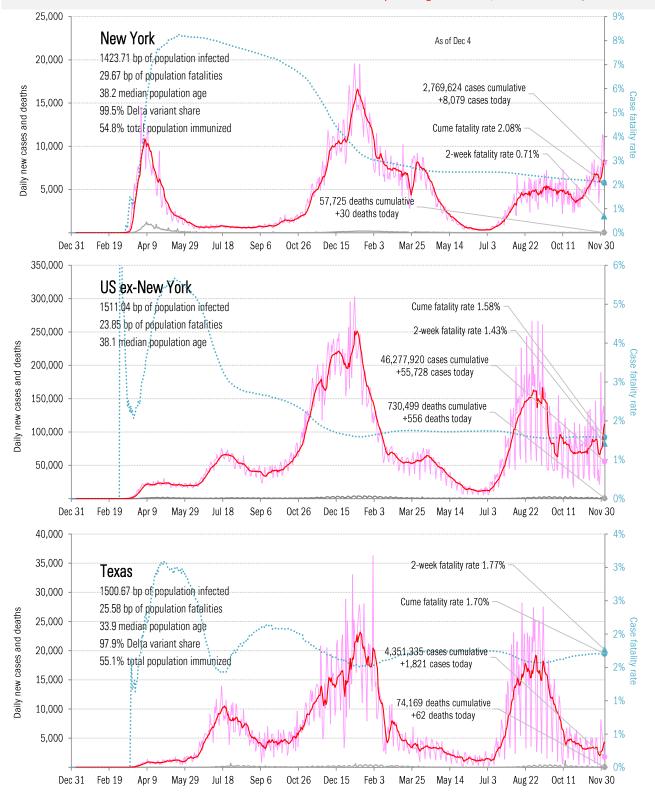
Alt requirement to <u>Open Up America Again</u>: 14-day "downward trajectory" in pos tests *14-day moving average, last 14 days Most recent value displayed* • High • Low Downward trajectory Five best Upward trajectory Five worst



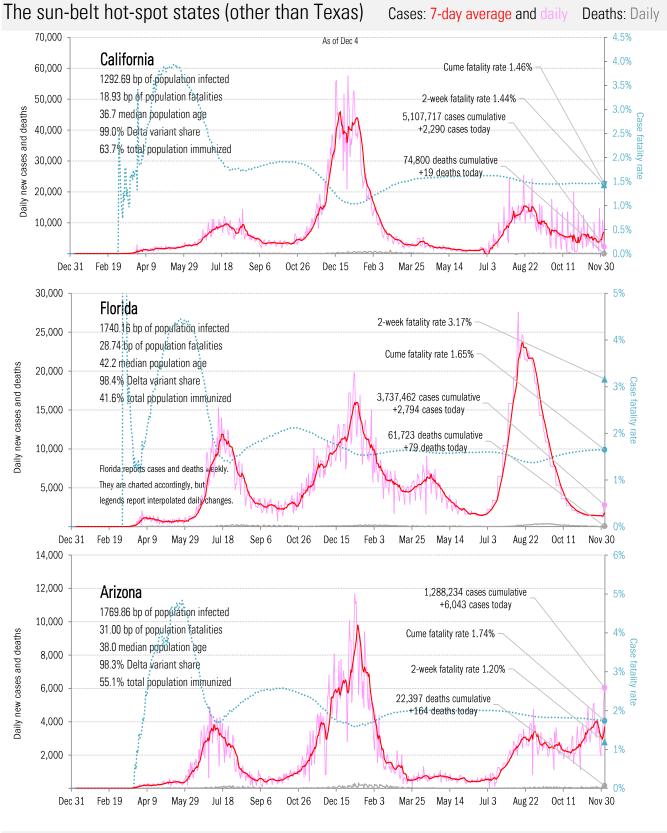
Source: Covid Act Now, TrendMacro calculations

From Ground Zero to the Rio Grande

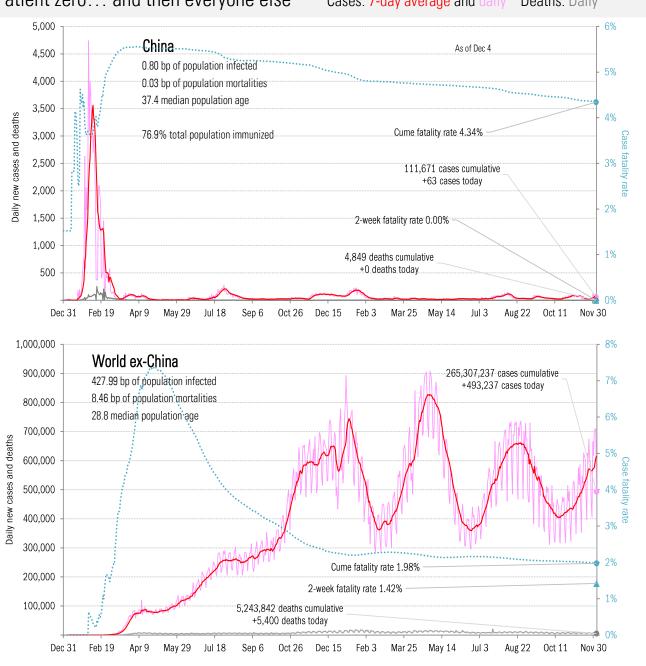
Cases: 7-day average and daily Deaths: Daily



Source: Johns Hopkins, TrendMacro calculations



Source: Johns Hopkins, TrendMacro calculations

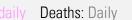


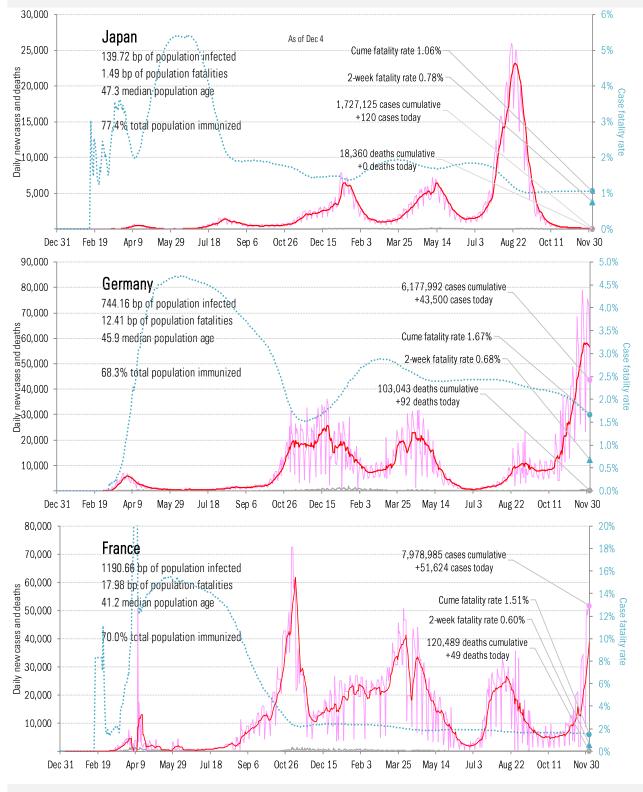
Patient zero... and then everyone else

Cases: 7-day average and daily Deaths: Daily

Source: Johns Hopkins, TrendMacro calculations

Impact in the largest economies Cases: 7-day average and daily

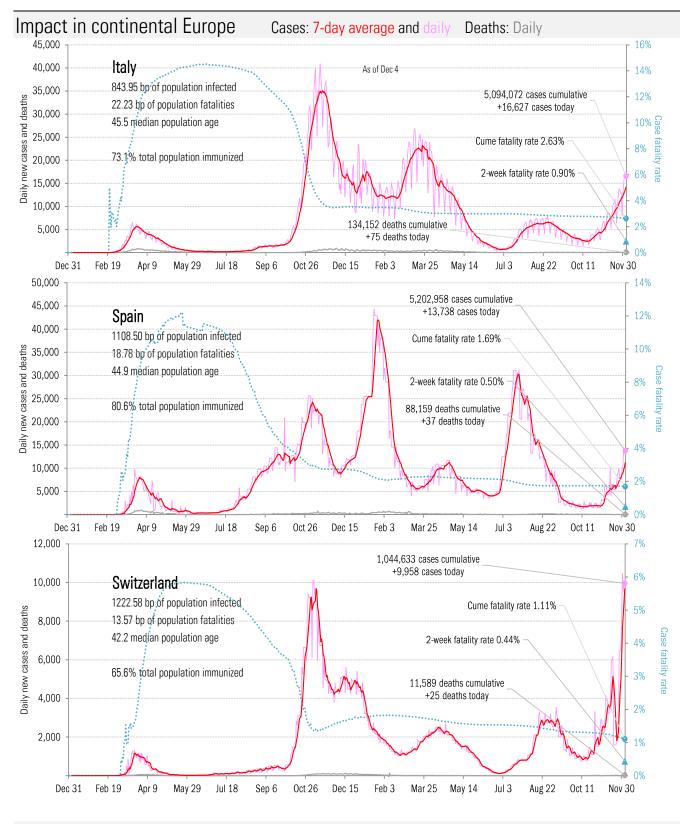




Source: Johns Hopkins, TrendMacro calculations

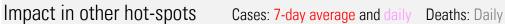
Impact in The Anglosphere Cases: 7-day average and daily Deaths: Daily 80,000 18% United Kingdom 16% 70,000 As of Dec 4 10,479,955 cases cumulative 1572.45 bp of population infected +41,574 cases today strap pure set 60,000 50,000 \$80 Met 20,000 30,000 14% 21.91 bp of population fatalities 12% 40.5 median population age Cume fatality rate 1.39% 10% 68.2% total population immunized 2-week fatality rate 0.31% 8% rate 6% Alino 20,000 146,001 deaths cumulative 4% +127 deaths today 10,000 2% 0% Dec 31 Feb 19 Apr 9 May 29 Jul 18 Sep 6 Oct 26 Dec 15 Mar 25 May 14 Aug 22 Oct 11 Feb 3 Jul 3 Nov 30 12,000 9.0% Canada 8.0% 10,000 1,813,304 cases cumulative 478.51 bp of population infected 7.0% +2,479 cases today 7.87 bp of population fatalities Daily new cases and deaths 8,000 6.0% 40.8 median population age Cume fatality rate 1.64% 5.0% 2-week fatality rate 0.78% 6,000 76.4% total population immunized 4.0% 4,000 3.0% 2.0% 2,000 1.0% 29,819 deaths cumulative +8 deaths today 0.0% Aug 22 Dec 31 Feb 19 Apr 9 May 29 Jul 18 Sep 6 Oct 26 Dec 15 Feb 3 Mar 25 May 14 Jul 3 Oct 11 Nov 30 3,000 4.5% Australia 4.0% 2,500 7874 bp of population infected 217,836 cases cumulative 3.5% +1,249 cases today 0.74 bp of population fatalities Daily new cases and deaths 2,000 379 median population age 3.0% 2.5% 1,500 73.6% total population immunized Cume fatality rate 0.94% 2.0% 1,000 2-week fatality rate 0.58% 1.5% 1.0% 500 2,050 deaths cumulative 0.5% +8 deaths today 0.0% Jul 3 Aug 22 Dec 31 Feb 19 Apr 9 May 29 Jul 18 Sep 6 Oct 26 Dec 15 Feb 3 Mar 25 May 14 Oct 11 Nov 30



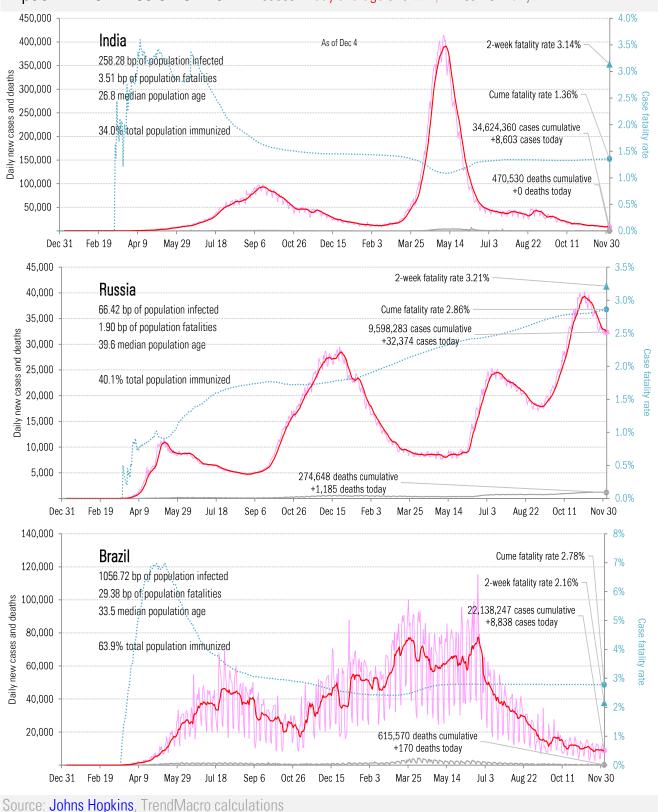


Source: Johns Hopkins, TrendMacro calculations

6,000 3.0% South Korea As of Dec 4 5,000 2.5% 91.24 bp of population infected 473,034 cases cumulative deaths 4,000 3,000 2,000 +5,127 cases today 0.74 bp of population fatalities 2.0% 41.8 median population age 2-week fatality rate 1.60% 1.5% 18.7% total population immunized Cume fatality rate 0.81% rate 1.0% ****** 3,852 deaths cumulative +43 deaths today 1,000 0.5% 0.0% Apr 9 Dec 31 Feb 19 May 29 Jul 18 Sep 6 Oct 26 Dec 15 Feb 3 May 14 Jul 3 Aug 22 Oct 11 Nov 30 Mar 25 4,500 0.6% Singapore 4,000 0.5% 471.03 bp of population infected 3,500 0.16 bp of population fatalities Cume fatality rate 0.28% Daily new cases and deaths 3,000 34.6 median population age 0.4% 2,500 2-week fatality rate 0.24% 91.9% total population immunized 0.3% 2,000 rate 268,659 cases cumulative +743 cases today 0.2% 1,500 746 deaths cumulative 1,000 +2 deaths today 0.1% 500 0.0% Feb 19 Jul 3 Aug 22 Dec 31 Apr 9 May 29 Jul 18 Sep 6 Oct 26 Dec 15 Feb 3 Mar 25 May 14 Oct 11 Nov 30 12,000 14% 1,212,145 cases cumulative Sweden +2,210 cases today 12% 10,000 1197.54 bp of population infected 14.99 bp of population fatalities Cume fatality rate 1.25% 10% Daily new cases and deaths 8,000 40.9 median population age ase fatality rate 8% 2-week fatality rate 0.50% 70.7% total population immunized. 6,000 6% 4,000 15,170 deaths cumulative 4% +0 deaths today 2,000 2% 0% Apr 9 May 29 Jul 18 Sep 6 Dec 31 Feb 19 Oct 26 Dec 15 Feb 3 Mar 25 May 14 Jul 3 Aug 22 Oct 11 Nov 30 Source: Johns Hopkins, TrendMacro calculations

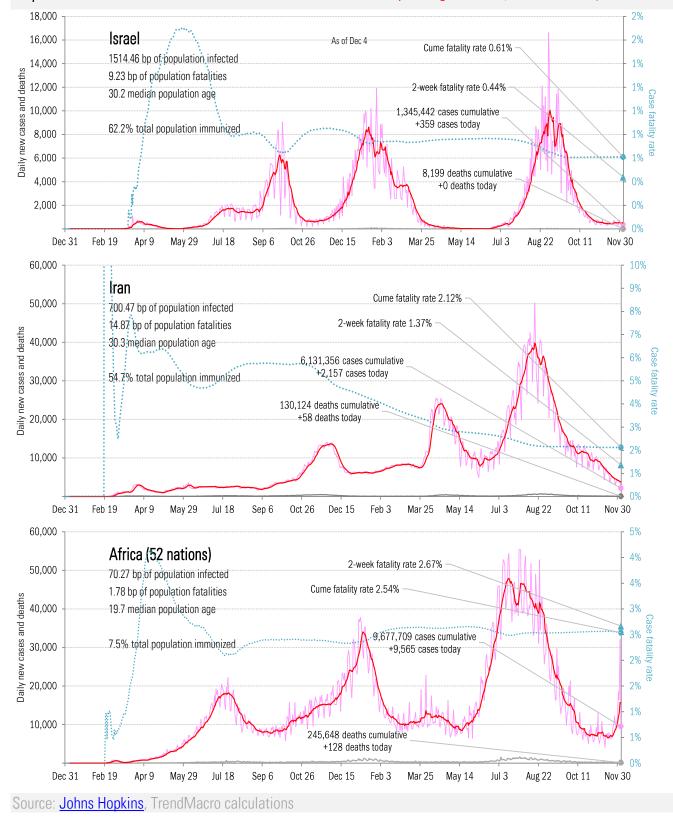


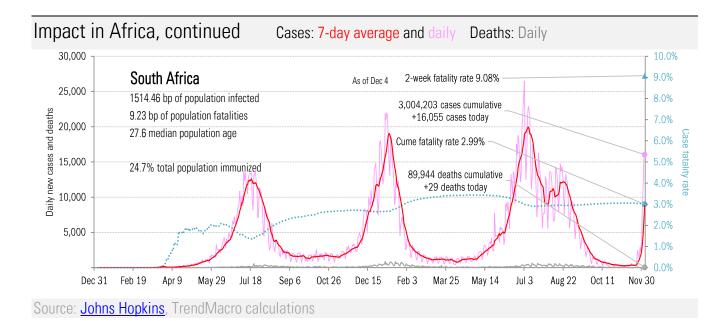
Impact in the BRICs ex-China Cases: 7-day average and daily Deaths: Daily



Impact in the Middle East and Africa

Cases: 7-day average and daily Deaths: Daily





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