

Early Read on Post-LNY Demand Below Expectations; Autos Hold Up, ICE Recaptures Share

Industry Sentiment Cautiously Optimistic on Stimulus Hopes

- Early read over last two weeks weaker-than-expected. Over the past two weeks, we had the opportunity to catch up with some of our industry contacts to gauge initial demand following the Lunar New Year holiday. Across the board, our industry contacts noted that it has been a soft start to the season, with sales and orders coming in below expectations thus far. Industry contacts within the Construction industry characterized the market as in a holding pattern, with industry participants waiting for macro signals from the "Two Sessions" or "Lianghui" meetings scheduled for Mar 4-5 where macro targets for 2022 would be officially released. Restrictions on Industrial activity tied to the Beijing Olympics also continued to dampen demand.
- Construction end-markets see soft January. Excavator sales in January came in at ~7,700 units or -57% y/y. Sequentially, sales were -49%, which was below historical seasonal trends for when the Lunar New Year fell in early February. Heavy-duty truck sales were 95,000 units or -48% y/y, which was above historical seasonal trends. Meanwhile, our channel checks indicate elevator orders were down 5.0-10.0% y/y to start the year. As with all data at the beginning of the year, investors should evaluate Jan+Feb data to get a clearer picture of y/y trends. Feb excavator sales, truck sales and elevator orders would need to come in at ~+33%, ~+74% and +5-10% to be roughly flat versus a year ago.
- Auto sales holding up as ICE recaptures share; Local gov't purchase subsidies introduced. January auto registrations were -3.9% y/y, improving from -14.4% y/y in Dec '21 despite tougher comparisons. As traditional ICE production picked up with supply chain pressures easing, ICE share recovered to ~86% of total from ~81% over the last three months, while NEV sales fell to ~14% of total, a 6-month low. Recent dealer checks indicate a healthy seasonal pick up in foot traffic following the Lunar New Year holidays, but buyers appear to be holding off on purchases in anticipation of future discounts. Dealer inventory levels appear to have improved notably, with wait times for popular models down to 2-8 weeks from 12-16 weeks in 4Q21. Local governments have started to introduce purchase subsidies to boost local auto sales (Table 2).
- Policy easing ramps up; Record credit data. While channel feedback points to a weaker-thanexpected start to the post-CNY season, industry sentiment was cautiously optimistic on the hopes that government policy would provide a lift to demand in coming months, most directly benefiting 2Q/3Q, based on historical lags. Since the start of the year, we have already seen incremental easing in property, environmental and monetary policy. Meanwhile, January credit data surpassed expectations, with total social financing (+19% y/y) hitting a new monthly high and M2 growth accelerating to an 11-month high.

Automotive sector view: Positive

OEMs: GM, F, Daimler, BMW, Volkswagen, Stellantis, Great

Wall

Suppliers: ADNT, BWA, JCI, LEA,

TEN, ALV, Valeo, VC

Automation sector view:

Positive

ROK, ABB, EMR, HON, SIE, SU, Yaskawa, Fanuc, SMC, Mitsubishi Electric

Elevator sector view: Neutral

Kone, OTIS, ThyssenKrupp, Yungtay, Schindler

Commercial Vehicle sector view:

Neutral

CMI, TEN, Daimler, Volvo, Scania, Volkswagen

Commercial Aerospace sector

view: Positive OEMs: BA, Airbus

Suppliers: SPR, TDG, RTX, HEI,

Safran, Rolls Royce

Construction & Mining sector

view: Negative

CAT, Komatsu, Volvo, CNH, HCM,

TEX, MTW

- Silk Road Research
- Pfizer anti-viral emergency approval a game changer, in our view. On Feb 17, the head of China's CDC made public comments (link) hinting that China is actively evaluating re-opening strategies, the first public signal from a government official that China may relax its Zero-COVID policy. We do not believe it was a coincidence that these comments came off the heel of China's approval of the Pfizer anti-viral drug, Paxlovid, for emergency use. We view the news of the Pfizer approval more significant than any future headline of an approval of an mRNA vaccine for domestic use given the pressure on China's healthcare system (namely, severe lack of ICU beds) in a re-opening scenario without an anti-viral drug, as it provides the first indication that China is open and willing to rely on a foreign, even US-based, solution to its COVID challenges, a statement we could not make with confidence previously. While we still view 2023 as the likely earliest date for relaxing Zero-COVID, we now have a potential visible path to a transition towards "living with COVID" in China.
- Cyclical dynamics drive sector selection; Favor Automation/Autos/Aerospace; Neutral with Positive bias on Elevators; Negative Trucks and Construction Equipment.



Table 1: SRR 2021 China Government Report Key Targets

Key Economic Indicator	2021 Target	2021 Actual	2020 Target	2020 Actual	2019 Actual	2019 Target
GDP (Y/Y %)	>6%	8%	-	2.3%	6.1%	6-6.5%
M2 (Y/Y %)	-	9.0%	-	10.1%	8.7%	in-line with nominal GDP growth (~9-9.5%)
Total social financing (Y/Y %)	-	10.3%		2.0%	10.7%	in-line with nominal GDP growth (~9-9.5%)
FAI (Y/Y %)	-	4.9%	-	2.9%	5.4%	-
Retail sales (Y/Y %)	-		-	-3.9%	8.0%	-
Inflation (Y/Y %)	3.0%		3.5%*	2.5%	2.9%	3.0%
Fiscal deficit (% of GDP)	3.2%		3.6%*	6.2%	4.9%	2.8%
Newly added jobs (million people)	>11		9.0*	11.9	13.5	>11.0
Steel capacity cut (million tons)	-		Hebei: 14 mn tons	~16.8 mn tons	Hebei: 14 mn tons	Hebei: 14 mn tons
Coal capacity cut (million tons)	-		Hebei: 6 mn tons	Hebei: 7.83 mn tons	Hebei: 10.1 mn tons; Shaanxi: 2.8 mn tons	Hebei: 10 mn tons; Shaanxi: 2.1 mn tons
Transport investment (trillion yuan)	2.40		2.70	3.42	3.21	-
- Railway investment (billion yuan)	-		800	778	803	800
- Road and Waterway investment (trillion yuan)	-		1.80	2.54	2.32	1.80
out of which: Road investment (trillion yuan)	-		-	>2.25	2.19	-
- civil aviation investment (billion yuan)	-		-	105	95	-
Special Purpose Bond Issuance (trillion yuan)	3.65		3.75*	4	2.15	2.15

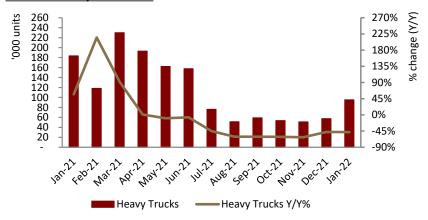
Note that * represents actual target released at the NPC meeting.

Exhibit 1: Excavator Sales - Domestic Total



Source: Silk Road Research, China Construction Machinery Association (CCMA)

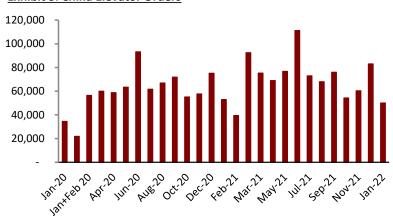
Exhibit 2: Heavy Truck Sales



Source: Silk Road Research, China Association of Automobile Manufacturers



Exhibit 3: China Elevator Orders



Source: Silk Road Research



Table 2: Local Government Auto Stimulus Measures

Date Announced	City	% of China Registrations (LTM)	Stimulus type	Effective period	Details
29-Dec-20	Guangdong	11.3%	New purchase	1 Jul 2021 - 30 June 2022	 Subsidies for buyers of cars when they scrap old for new: (a) Scrap old for new NEV: 10k RMB subsidies to NEV usage (b) Scrap old for new ICE car: 5K RMB purchase subsidies
23-Det-20	Guanguong	11.376	subsidies	1 Jul 2021 - 30 Julie 2022	• Subsidies for buyers of cars when they transfer out old cars for new: (a) Transfer old for new NEV: 8k RMB subsidies to NEV usage (b) Transfer old for new ICE car: 3K RMB purchase subsidies
15-Apr-20	Jiangsu	7.6%	New purchase subsidies	Not mentioned	• Subsidies of 1.5x of current standard, and not lesser than 3K RMB per car for car owners who replace old cars with NEVs.
31-Mar-20	Beijing	2.5%	Subsidies for NS3 cars	1 Apr - 31 Dec 2021	Subsidies for scrappage of NS3 passenger vehicles: (a) 1 Apr 2020 to 31 Dec 2020: Mini: 4K RMB Small: 10 K RMB Md-sized: 7K RMB Large: 22K RMB (b) 1 Jan 2020 to 31 Dec 2021: Mini: 3.2K RMB Small: 8K RMB Md-sized: 5.6K RMB Large: 17.6K RMB Subsidies for transfer of NS3 passenger vehicles to other cities: (a) 1 Apr 2020 to 31 Dec 2020: Mini: 2K RMB Small: 5K RMB Md-sized: 3.5K RMB Large: 11K RMB (b) 1 Jan 2020 to 31 Dec 2021: Mini: 1.6K RMB Small: 4K RMB Small: 4K RMB Small: 4K RMB Md-sized: 2.8K RMB Large: 8.8K RMB
03-Mar-20	Guangzhou	2.4%	New purchase subsidies	Mar-Dec 2020	 Subsidies of 10K RMB for NEV car buyers Subsidies of 3K RMB for buyers of cars that meet NS6 emission standards
09-Apr-20	Shanxi	2.4%	New purchase subsidies	1 Apr - 31 Dec 2020	For vehicles that are locally-produced and registered, and fulfil NS6 emission standards Passenger vehicles above 7m, and heavy and medium duty trucks above 4.5T: 8K RMB Passenger vehicles (SUVs, sedans, MPVs): 6K RMB Passenger and commercial vehicles (micro vehicles below 3.5m): 4K RMB
01-Mar-20	Xiangtan/Zhuzhou/ Changsha	1.9%	New purchase subsidies	From 1 Mar 2020; Limited to first 3,500 buyers	Subsidies of 3K RMB for car buyers of Xiangtan-produced Geely Binyue and Yuanjing models
25-Mar-20	Hangzhou	1.7%	Raise License Plate Quota	License plates are balloted in May 2020	• Increase license plate quotas by 20K units in 2020
16-Mar-20	Changsha	1.4%	New purchase subsidies	Mar-Jun 2020	Subsidies of 3% car price or a maximum of 3K RMB for Changsha- produced cars
17-Feb-20	Foshan	1.2%	New purchase subsidies	1 Mar 2020 - 1 Mar 2021	 Subsidies of 2K RMB for buyers of new cars that meet NS6 emission standards Subsidies of 3K RMB for buyers that scrapped old cars and replaced with new car that meet NS6 emission standards



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30-Mar-20	Ningbo	1.2%	New purchase subsidies	25 Mar - 30 Sep 2020	Subsidies of 5K RMB for buyers of locally-produced and registered cars (Limited to 6K units per auto OEM) Subsidies of up to 5 million RMB for auto OEMs who are launching new models this year (production exceeds 10K units)
30-Mar-20	Changchun	0.8%	New purchase subsidies	20 Mar - 30 Jun 2020	Subsidies of 3% car price or a maximum of 4K RMB for buyers that purchase locally-produced and registered cars Subsidies of up to 6K/car when buyers purchasing 5 or more new cars at one time Subsidies of up to 5K/car for replacement of old car
10-Feb-22	Linhai (Zhejiang)	0.7%	New purchase subsidies	16 Feb - 15 Mar 2022	Applies to purchase of cars from local OEMs car price 50-100K RMB: (a) purchase subsidies: 2,500 RMB coupon for mall/groceries spending car price 100-200K RMB: (a) purchase subsidies: 5,000 RMB coupon for mall/groceries spending car price >200K RMB: (a) purchase subsidies: 8,000 RMB coupon for mall/groceries spending
25-Mar-20	Nanchang	0.7%	New purchase subsidies	NA	• Subsidies of 1,000 yuan for car buyers
14-Feb-22	Taiyuan (Shanxi)	0.7%	New purchase subsidies	29 Jan - 30 Apr 2022	ICE car price 60-100K RMB: (a) purchase subsidies: 2,000 RMB ICE car price 100-200K RMB: (a) purchase subsidies: 3,000 RMB ICE car price >200K RMB: (a) purchase subsidies: 5,000 RMB
08-Feb-22	Shaoxing (Zhejiang)	0.6%	New purchase subsidies	Until fully redeemed, up to 40 million RMB subsidies available	New car price 100-200K RMB: 3K RMB groceries subsidies (b) New car price >200K RMB: 6K RMB groceries subsidies Shangyu district subsidies for for replacement of old cars: (a) New car price >0-100K RMB: 3K RMB purchase subsidies New car price 50-100K RMB: 3K RMB purchase subsidies (b) New car price 100-200K RMB: 5K RMB purchase subsidies (c) New car price 200-400K RMB: 8K RMB purchase subsidies (d) New car price >400K RMB: 12K RMB purchase subsidies Shengzhou district subsidies for for replacement of old cars: (a) New car price <100K RMB: 3K RMB purchase subsidies (b) New car price 100-200K RMB: 5K RMB purchase subsidies (c) New car price >200K RMB: 7K RMB purchase subsidies
18-Feb-22	Jiangmen (Guangdong)	0.4%	New purchase subsidies	15 Feb-30 Jun 2022	Applies to purchase of cars from local OEMs NS6 car price <15K RMB: (a) purchase subsidies: 1,000 RMB NS6 car price >15K RMB: (a) purchase subsidies: 2,000 RMB Total subsidies of 20 million RMB allocated to this campaign (include both ICE and NEV purchase subsidies).
13-Mar-20	Zhuhai	0.3%	New purchase subsidies	3 Mar 2020 (for lifting of car purchase restriction for eligible non- locals)	Subsidies (amount unknown) for buyers of cars that meet NS6 emission lift standards Lift car purchase restrictions for eligible non-locals
11-Feb-22	Zhangzhou (Fujian)	0.2%	New purchase subsidies	From 10 Feb 2022	• car price 50-100K RMB: (a) purchase subsidies: 3,000 RMB • car price 100-200K RMB: (a) purchase subsidies: 4,000 RMB • car price 200-300K RMB: (a) purchase subsidies: 5,000 RMB • car price >300K RMB: (a) purchase subsidies: 6,000 RMB
09-Apr-20	Sichuan	Nationwide coverage; Sichuan ~3% of 2019 auto production	Subsidies for rural buyes	10 Apr-10 Aug 2020	Eligible for nationwide rural car buyers, and limited to the purchase of Sichuan-produced cars Subsidies for trucks (<3.5T) or passenger vehicles (<1.6L) including NEVs: 1K RMB
	Provinces with subsidies (current)	13.9%			
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Source: Silk Road Research, Local government announcements.



Table 3: Local	Government	NFV	Support	Policies

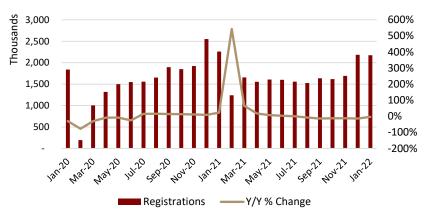
Table 3: Local Governm	nent NEV Support Policies	D-t-			
City	% of China NEV Registrations (LTM)	Date Announced	Stimulus type	Effective period	Details
		15-Apr-20/ 27-Apr-20	New purchase subsidies	until 31 Dec 2020	• To target rural car buyers, the local government authorities will provide additional NEV purchase subsidies of 10,000 RMB for OEMs who offer subsidies of not less than 10,000 RMB per car.
		28-Jun-21	Subsidies for NEVs usage (i.e parking, charging fees)	1 Jul - 31 Dec 2021	• Subsidies of 10,000 RMB for car owners who scrap old cars and purchase an NEV • Subsidies of 8,000 RMB for car owners who transfer old cars and purchase an NEV.
Guangdong 14.2%	14.2%	29-Dec-21	Subsidies for NEVs usage (i.e parking, charging fees)	1 Jan 22 - 30 Jun 22	Subsidies for buyers of cars when they scrap old for new: (a) Scrap old for new NEV: 10k RMB subsidies to NEV usage (b) Scrap old for new ICE car: 5K RMB purchase subsidies Subsidies for buyers of cars when they transfer out old cars for new: (a) Transfer old for new NEV: 8k RMB subsidies to NEV usage (b) Transfer old for new ICE car: 3K RMB purchase subsidies
		20-May-20	NEV charging subsides	By 31 Dec 2020	NEV charging subsidies of 5,000K RMB for NEV car buyers.
Shanghai	9.1% Extension of period		until 31 Dec 2023	Continue to offer NEV license plates for free until 31 Dec 2023 (eligible for first-time NEV car buyers). For PHEVs, this is only applicable if they have a private charging pile, and do not own other vehicles.	
Beijing	4.7%	07-Jun-20	NEV license plate quota	From Aug 2020	Added 20K new NEV license plate quotas for households without cars
		07-Jun-20	NEV purchase subsidies	7 Jun 2020 - 31 Dec2020	New purchase subsidies of 2,000 RMB for BEVs, and 1,000 RMB for PHEVs
Shenzhen	6.9%	07-Jan-21	NEV purchase subsidies	1 Jan 2021 - 30 Jun 2021	Extend NEV purchase subsidies of 2,000 RMB for BEVs, 1,000 RMB for PHEVs. For replacement of old cars with a new NEV purchase, buyers are entitled to 20,000 RMB purchase subsidies upon purchase of BEV (high-end variant) and PHEVs (high-end variant), and 10,000 RMB purchase subsidies if they purchase a BEV (mass market variant).
		07-Jan-21	Parking incentives	1 Jan 2021 - 30 Jun 2021	NEVs are able to enjoy free parking for the first two hours each day
		14-Dec-21	NEV license plate quota	14 Dec 2021 - 31 Dec 2022	Residents with no cars registered are able to register for an NEV license plate
Jiangsu	7.8%	15-Apr-20	New purchase subsidies	Not mentioned	Subsidies of 1.5x of current standard, and not lesser than 3,000 RMB per car for car owners who replace old cars with NEVs.
Guangzhou	2.5%	03-Mar-20	New purchase subsidies	Mar-Dec 2020	NEV purchase subsidies of 10,000 RMB
Sichuan	4.1%	09-Apr-20	Purchase subsidies for rural buyes	10 Apr-10 Aug 2020	 Participating OEMs to provide subsidies of 1,000 RMB for rural buyers of new trucks (<3.5T) or passenger vehicles (<1.6L) including NEVs
Tianjin	2.8%	21-May-20	NEV charging subsidies	1 Jun - 31 Dec 2020	 NEV charging subsidies of 1,000 RMB for existing NEV owners with cars registered in Tianjin. Subsidies to cover a maximum of 30K cars within the city.
Zhengzhou (Henan)	2.2%	17-Aug-20	New purchase subsidies	1 Jun - 31 Dec 2020	NEV purchase subsidies of 5,000 RMB for locally-produced cars
Wuhan (Hebei)	1.7%	19-May-20	New purchase subsidies	14 May to 31 Dec 2020	NEV purchase subsidies of 10,000 RMB
		21-May-20	New purchase subsidies	30 Apr - 31 Dec 2020	NEV purchase subsidies of 10,000 RMB (for the first 15,000 vehicles)
Hainan	2.0%	30-Apr-21	Subsidies for NEVs usage (i.e parking, charging fees)	1 Jan - 31 Dec 2021	 NEV car price <10K RMB: (a) Usage subsidies of 6,000 RMB NEV car price 100-200K RMB: (a) Usage subsidies of 8,000 RMB NEV car price >200K RMB: (a) Usage subsidies of 10,000 RMB Subsidies will apply to the first 25,000 cars sold.
Xi'an (Shaanxi)	1.6%	25-Nov-21	New purchase subsidies	25 Nov 21 - 28 Feb 2022	 NEV car price <10K RMB: (a) purchase subsidies: 2K RMB (25 Nov -31 Dec '21); 1K RMB (1 Jan - 28 Feb '22) NEV car price 10-30K RMB: (a) purchase subsidies: 6K RMB (25 Nov -31 Dec '21); 3K RMB (1 Jan - 28 Feb '22)



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Foshan (Guangdong)	1.2%	14-Feb-22	New purchase subsidies	1 Sep 2021 - 31 Aug 2022	NEV car price <100K RMB: (a) purchase subsidies: 5,000 RMB NEV car price 100-300K RMB: (a) purchase subsidies: 10,000 RMB NEV car price >300K RMB: (a) purchase subsidies: 15,000 RMB NEV car price <100K RMB (Replace old car with NEV): (a) purchase subsidies: 7,000 RMB NEV car price 100-300K RMB (Replace old car with NEV): (a) purchase subsidies: 12,000 RMB NEV car price >300K RMB (Replace old car with NEV): (a) purchase subsidies: 12,000 RMB NEV car price >300K RMB (Replace old car with NEV): (a) purchase subsidies: 17,000 RMB
Jinan	0.9%	18-Jun-21	Subsidies for NEVs charging	1 Jul 2020 - 30 Jun 2022	NEV charging subsidies of 3,000RMB upon purchase of an NEV.
Taiyuan (Shanxi)	0.7%	14-Feb-22	New purchase subsidies	29 Jan - 30 Apr 2022	NEV car price 60-100K RMB: (a) purchase subsidies: 3,000 RMB NEV car price 100-200K RMB: (a) purchase subsidies: 4,000 RMB NEV car price >200K RMB: (a) purchase subsidies: 6,000 RMB
Jiangmen (Guangdong)	0.4%	18-Feb-22	New purchase subsidies	15 Feb-30 Jun 2022	Applies to purchase of NEVs from local OEMs NEV car price <15K RMB: (a) purchase subsidies: 1,500 RMB NEV car price >15K RMB: (a) purchase subsidies: 3,000 RMB Total subsidies of 20 million RMB allocated to this campaign (include both ICE and NEV purchase subsidies).
Ningde (Fujian)	0.1%	7-Feb-22	New purchase subsidies	1 Jan - 31 Dec 2022	 NEV purchase subsidies of 4,000 RMB upon purchase of an NEV. Applies to first-time car buyers Applies to the first 658 NEVs sold.
Provinces with subsidies (current)	33.2%				

Source: Silk Road Research, Local government announcements.

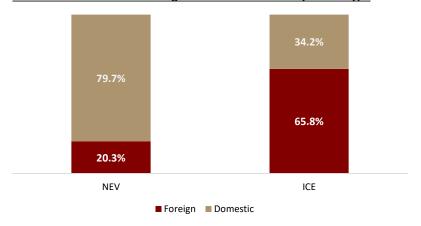
Exhibit 4: Passenger Vehicle Registration



Source: Silk Road Research, CPCA, Insurance Association of China

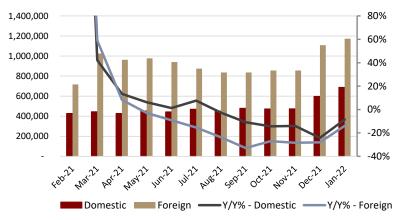


Exhibit 5: NEV and ICE LTM Registrations Breakdown by Brand Type



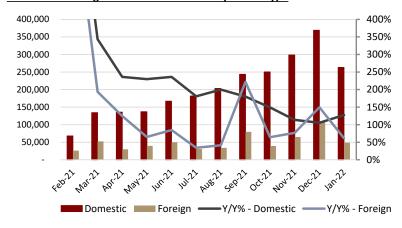
Source: Silk Road Research, CPCA, Insurance Association of China

Exhibit 6: ICE Registrations - Breakdown by Brand Type



Source: Silk Road Research, CPCA, Insurance Association of China

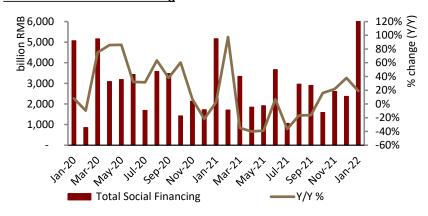
Exhibit 7: NEV Registrations - Breakdown by Brand Type



Source: Silk Road Research, CPCA, Insurance Association of China

Silk Road Research

Exhibit 8: Total Social Financing



Source: Silk Road Research, Xinhua, Qianzhan

Exhibit 9: M2 Supply



Source: Silk Road Research, Eastmoney.com, Sina Finance



Table 4: China COVID Scenario Analysis

China total population (pop)	1,447,402,781		
Vaccinated rate (%)	80.8%		
No. of fully vaccinated people (pop)	1,169,501,447		
Unvaccinated rate (%)	19.2%		
No. of unvaccinated people (pop)	277,901,334		
No. of ICU beds per 100,000 people (est)	3.6		
Total no. of ICU beds available (est)	52,107		

Calculations	Bear	Base	Bull
% of infections		50.0%	
Total no. of infected people (unvaxx'd)		138,950,667	
Mild or no symptoms	50.0%	75.0%	98.0%
No. of people with mild or no symptoms	69,475,333	104,213,000	136,171,654
Require oxygen supplementation	15.0%	10.0%	1.0%
No. of people requiring oxygen	20,842,600	13,895,067	1,389,507
ICU (close monitoring)	10.0%	8.0%	0.5%
No. of people in ICU under monitoring	13,895,067	11,116,053	694,753
ICU (critically ill)	25.0%	7.0%	0.5%
No. of people in ICU critically ill	34,737,667	9,726,547	694,753
ICU demand : supply (est)	934:1	400:1	27:1

Source: Silk Road Research, Worldometers



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