

Lithium is a key material in electric vehicle (EV) batteries. Not surprisingly, with the rampant growth of EVs, lithium is in high demand. The problem, however, is that there is currently not enough lithium to meet the forecasted demand. The table below shows that there is not even enough annual production of lithium to create 20 million cars. Further, that source assumes 100% of the lithium is only used for EV batteries! To put the data into context, there were almost 80 million cars produced globally in 2021.

Kent Masters, Chief Executive of Albermarle, the largest publically traded lithium producer claims the demand/supply imbalance will remain problematic for years to come. In an interview in the [Financial Times](#) he states: *It's systemic for a pretty long period of time,* Masters said of the challenge facing the industry. *For seven to eight years it stays pretty tight.*

Disclaimer- we own Albermarle in our equity model and the ETF LIT in our sector model.

TESLA'S MASSIVE METALS NEEDS

Commodity	Material required for 20m vehicles (t)	Global production 2021 (t)	Share of 2021 production (%)
Lithium	755.4K	532K	142%
Cobalt	61.4K	170K	36%
Aluminum (battery)	14.6K	68M	+0%
Aluminum (vehicle)	6.6M	68M	10%
Copper (vehicle)	1.8M	21M	9%
MagREO (NdPr, Dy, Tb)	18K	58K	31%
Manganese	19K	7.5M	+0%
Nickel	670.4K	2.7M	25%
Graphite	1.1M	1M	113%

Based on 20 million vehicles per year
 2021 production: USGS
 Lithium = Lithium Carbonate Equivalent.
 Rare earths: NdPr, Dy, Tb bundle based on average distribution in NdFeB magnets

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What To Watch Today

Economy

- 7:30 a.m. ET: **Challenger Job Cuts**, year-over-year, August (36.3% prior)
- 8:30 a.m. ET: **Initial Jobless Claims**, ended August 27 (248,000 expected, 243,000 prior)

- 8:30 a.m. ET: **Continuing Claims**, ended August 20 (1.438 million expected, 1.415 million prior)
- 8:30 a.m. ET: **Nonfarm Productivity**, Q2 final (-4.5% expected, -4.6% prior)
- 9:45 a.m. ET: **S&P Global U.S. Composite PMI**, August final (51.3 expected, 51.3 prior)
- 10:00 a.m. ET: **Construction Spending**, month-over-month, July (-0.4% expected, -1.1% prior)
- 10:00 a.m. ET: **ISM Manufacturing**, August (52.0 expected, 52.8 prior)
- 10:00 a.m. ET: **ISM Prices Paid**, March (55.5 expected, 60.0 prior)
- 10:00 a.m. ET: **ISM New Orders**, August (48.0 prior)
- 10:00 a.m. ET: **ISM Employment**, August (49.0 expected, 49.9 prior)
- 7:00 p.m. ET: **WARDS Total Vehicle Sales**, August (13.30 million expected, 13.35 million prior)

Earnings

	Company	Time	Estimate		Growth	Surprise	
					Show only confirmed?		
✓	AVGO Broadcom Limited	4:15 PM ET	\$9.55	\$8.37 B	23.5%	+ = -	+
✓	HRL Hormel Foods Corp.	6:30 AM ET	\$0.41	\$2.95 B	3.0%	+ = -	+
✓	CPB Campbell Soup Co.	7:15 AM ET	\$0.56	\$1.98 B	5.7%	+ = -	+
✓	SAIC Science Applications ...	7:00 AM ET	\$1.68	\$1.83 B	-0.3%	+ = -	+
✓	SIG Signet Jewelers Ltd	6:55 AM ET	\$2.54	\$1.75 B	-2.1%	+ = -	+
✓	PDCO Patterson Companies...	7:00 AM ET	\$0.38	\$1.54 B	-4.6%	+ = -	+
✓	LULU lululemon athletica inc.	4:05 PM ET	\$1.85	\$1.77 B	22.0%	+ = -	+
✓	GMS GMS Inc.	6:00 AM ET	\$2.27	\$1.35 B	29.5%	+ = -	+
✓	CIEN Ciena Corporation	7:00 AM ET	\$0.34	\$904.66 M	-8.4%	+ = -	+
✓	TTC Toro Company	8:30 AM ET	\$1.13	\$1.19 B	21.8%	+ = -	+
✓	HOV Hovnanian Enterprise...	9:15 AM ET	-	-	-	+ = -	+
✓	WB Weibo Corporation	5:00 AM ET	\$0.43	\$441.00 M	-23.2%	+ = -	+
✓	MOMO Hello Group Inc.	4:10 AM ET	\$0.25	\$454.85 M	-20.0%	+ = -	+
✓	GCO Genesco Inc.	6:50 AM ET	\$0.26	\$546.43 M	-1.6%	+ = -	+
✓	JOAN JOANN Inc.	4:15 PM ET	(\$0.72)	\$453.75 M	-8.7%	+ = -	+
✓	FLWS 1-800-Flowers.com, I...	6:45 AM ET	(\$0.22)	\$486.04 M	-0.2%	+ = -	+
✓	OLLI Ollie's Bargain Outlet ...	7:30 AM ET	\$0.33	\$456.28 M	9.7%	+ = -	+
✓	LE Lands' End, Inc	6:45 AM ET	(\$0.12)	\$343.34 M	-10.6%	+ = -	+
✓	SPWH Sportsman's Wareho...	4:05 PM ET	\$0.26	\$337.74 M	-6.6%	+ = -	+
✓	OXM Oxford Industries, Inc.	4:05 PM ET	\$3.45	\$364.00 M	10.7%	+ = -	+
✓	BRC Brady Corp.	7:00 AM ET	\$0.81	\$332.24 M	8.5%	+ = -	+
✓	MEI Methode Electronics, ...	7:00 AM ET	\$0.48	\$286.35 M	-0.5%	+ = -	+
✓	CVGW Calavo Growers Inc.	4:05 PM ET	\$0.36	\$332.50 M	16.7%	+ = -	+
✓	NX Quanex Building Pro...	4:15 PM ET	\$0.62	\$300.46 M	7.4%	+ = -	+
✓	TLYS Tilly's, Inc.	4:05 PM ET	\$0.17	\$174.88 M	-13.4%	+ = -	+
✓	JILL J.Jill, Inc.	6:45 AM ET	\$1.05	\$162.40 M	2.0%	+ = -	+
✓	DLTH Duluth Holdings Inc.	6:45 AM ET	\$0.16	\$156.21 M	4.7%	+ = -	+

Market Trading Update

As noted previously, the violation of the 50-dma yesterday sets the market up to retest the July lows. With the market deeply oversold, a bounce by the end of the week would not be surprising. However, if the market does not reclaim the 50-dma by Friday, I would expect weaker prices over the next couple of weeks. In the short term, there is support along May's bottoms. Most importantly, the MACD sell signal remains well entrenched, which suggests downward pressure on prices short-term. Use rallies to rebalance risk and lower exposures as needed.



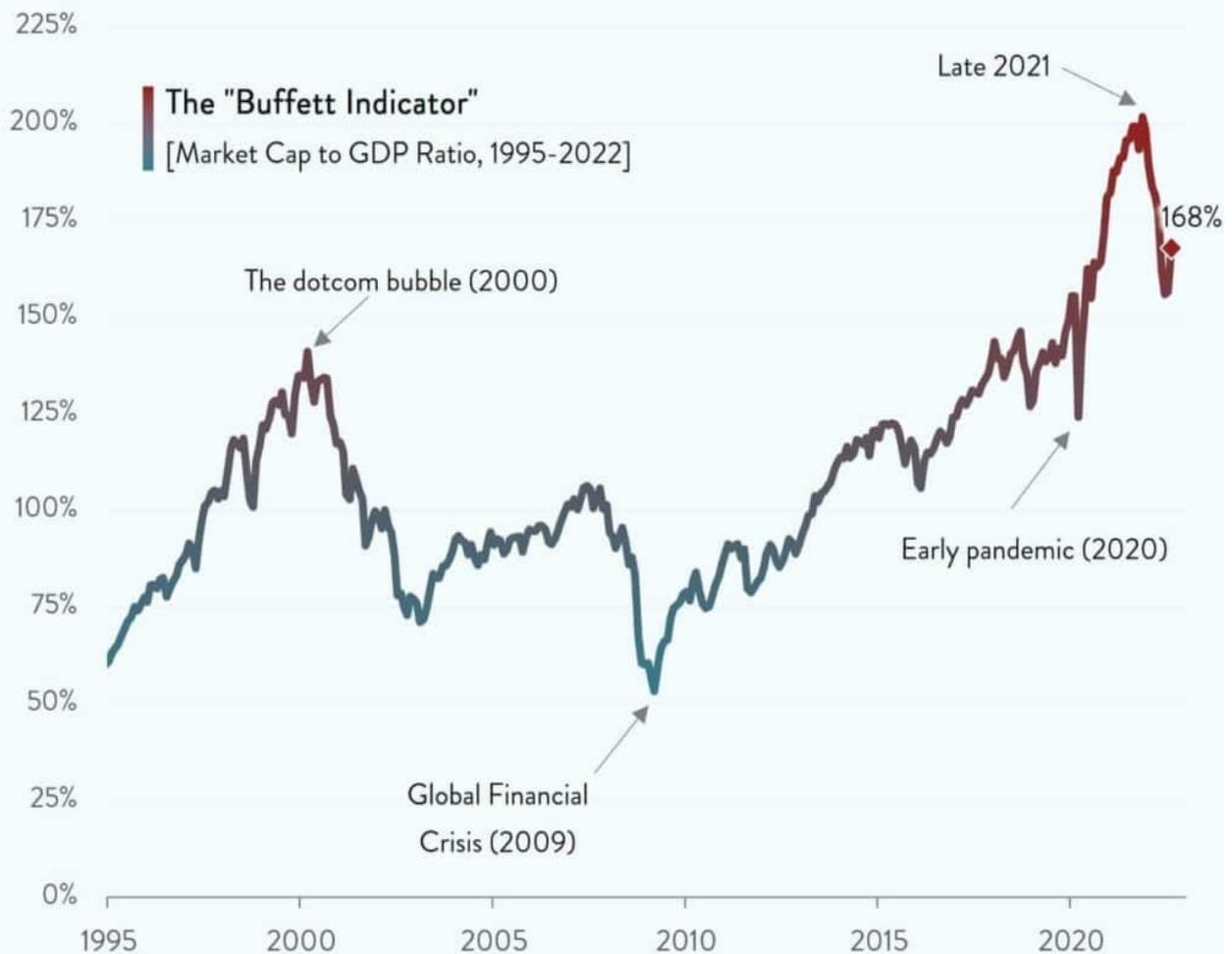
The Buffett Indicator

"Investor optimism was extinguished last week by Fed chair Jay Powell, who poured cold water on the idea that the Fed might slow down. Powell warned that more rate rises are coming and that there will be 'some pain' for households and businesses. US stocks fell more than 3% immediately after he finished speaking and slid further this week.

*The recent stock market moves left us wondering where equity valuations were. With hundreds of different ways to value stocks, we settled on arguably the simplest: the ratio of **total market cap. to GDP**. It's a simple metric that compares the total value of public equities with the actual economic output of the country as a whole.*

*A favorite of a certain **Warren Buffett**, the indicator currently sits just shy of **170%**. That number doesn't mean much on its own, but when placed in historical context, it's striking. Even after the recent fall in markets, the ratio is still one of the highest on record, north of the ~140% recorded during the dot-com bubble of **2000**, and considerably elevated compared to the average since **1995 (109%)**." - Chart*

The Buffett Indicator: Where Are US Stock Market Valuations Now?



Source: US Bureau of Economic Analysis, Wilshire 5000 Full Cap Index (via FRED)

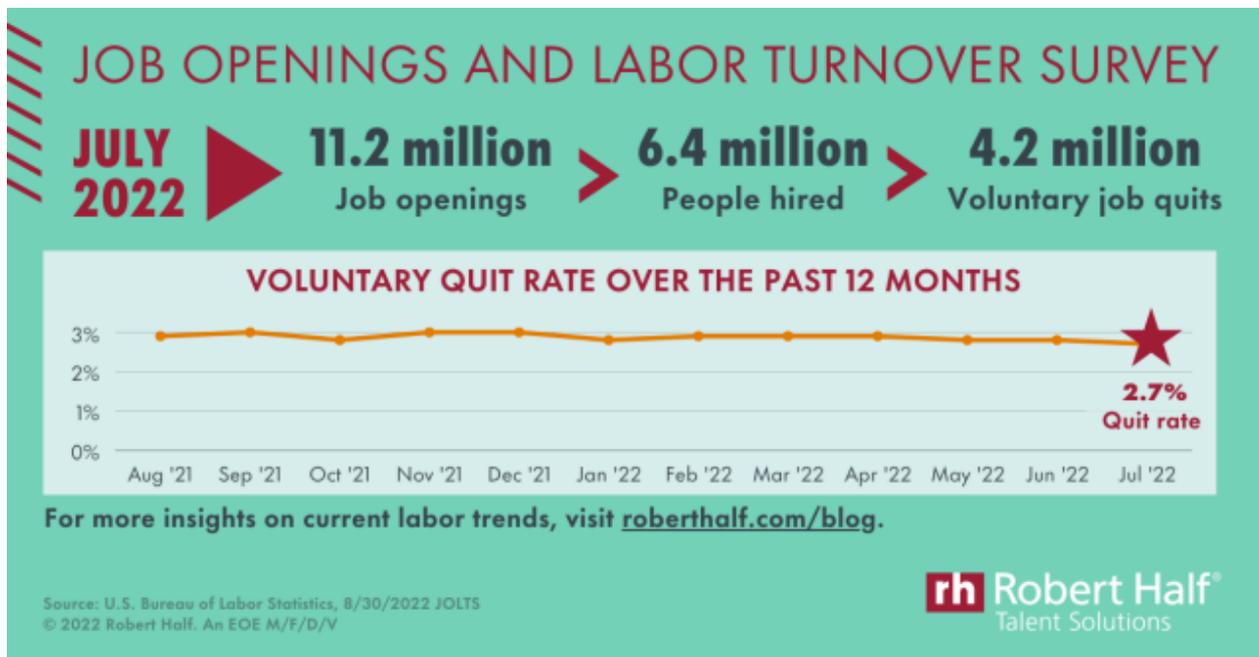
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The Fed is Following Jobs

The Fed is making it clear they are concerned that a price-wage spiral will keep high inflation levels persistent. Making such a spiral possible is the ability of the labor force to demand and get higher wages. Accordingly, we commented on yesterday's surprising increase in job openings and the quits rate. Richmond Fed President Tom Barkin thinks the Fed is more focused on the jobs market than the economy. Per Yahoo Finance:

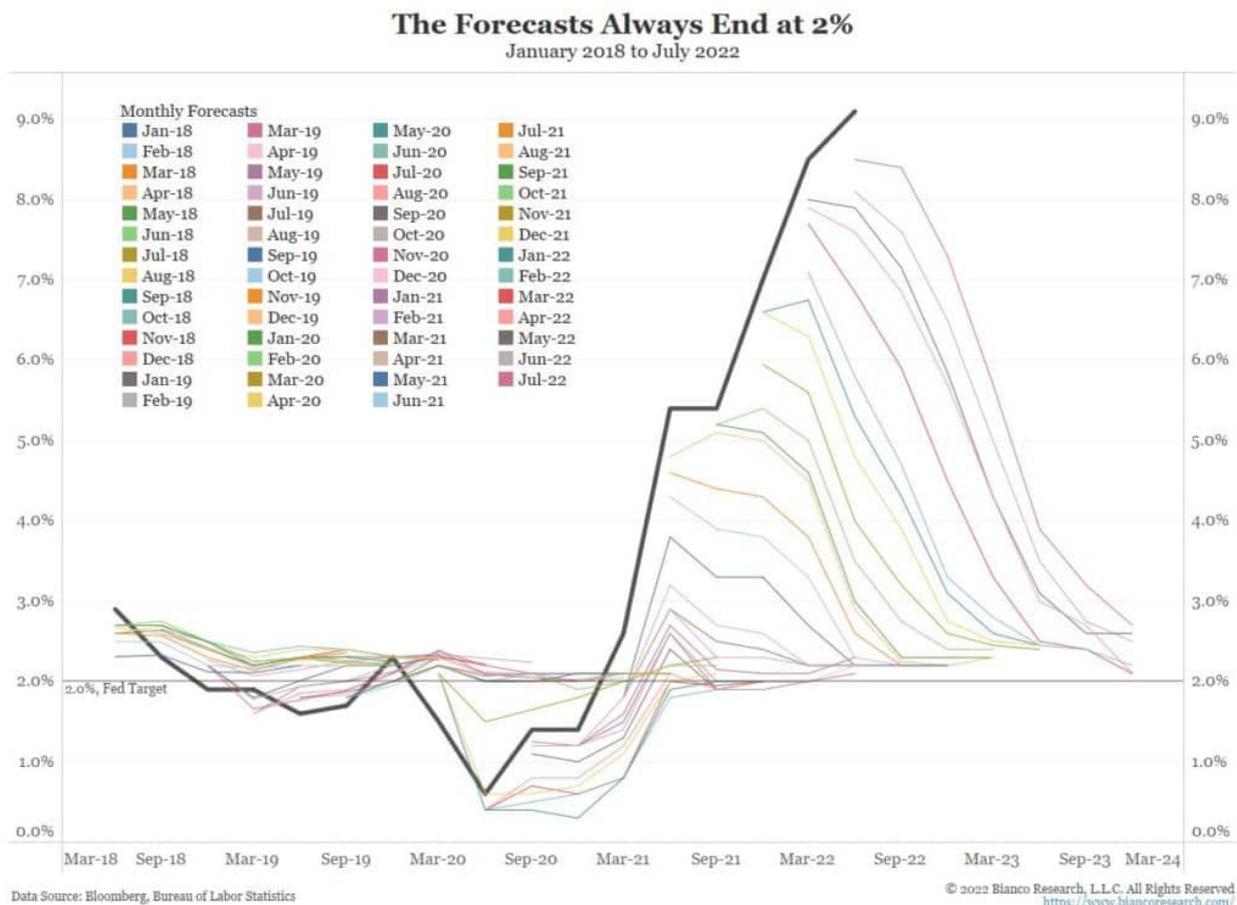
"A month or two ago, the debate was whether we were in a recession or not, I don't think that's the debate today," [Barkin told Yahoo Finance Live in an exclusive interview](#). "The job market is still very tight."

?Economic data, which quantifies the strength of the jobs markets, may likely rival inflation data as the key data points used by investors to try to gauge how the Fed will conduct monetary policy.



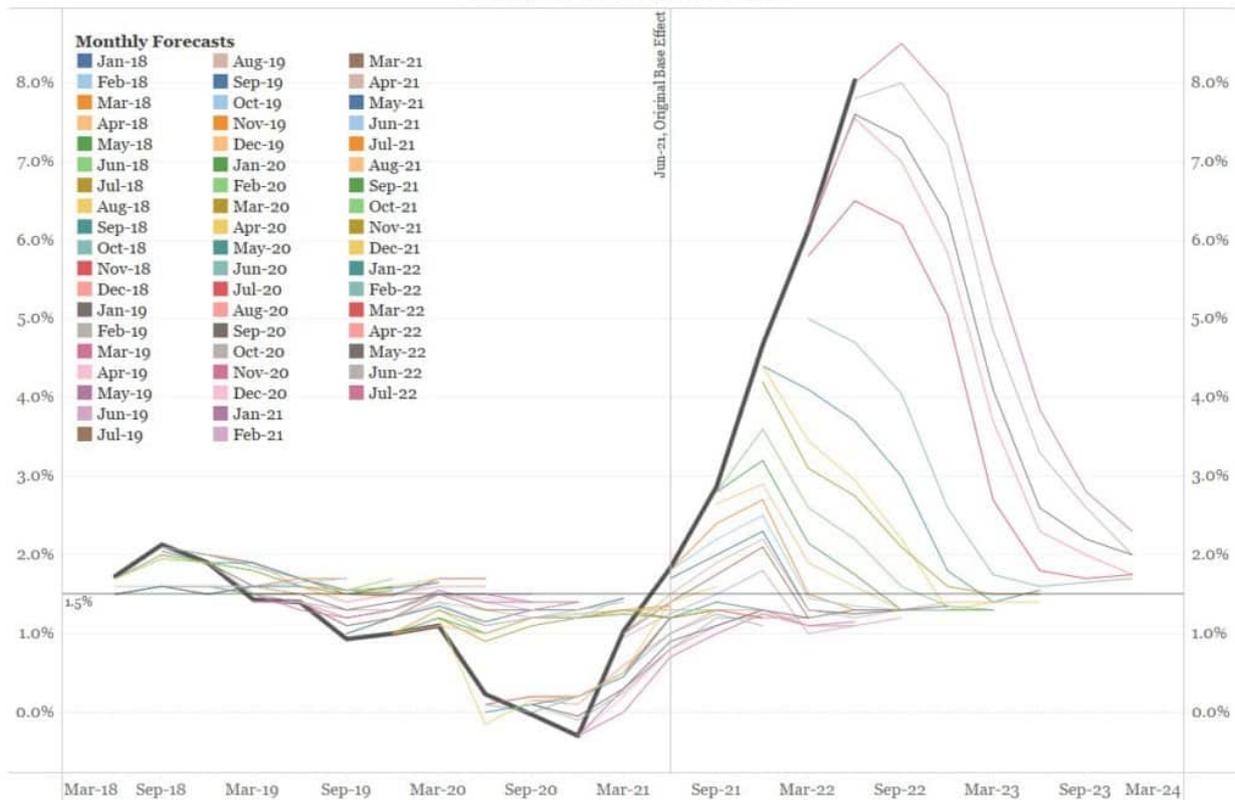
2% Inflation

U.S. economists expect inflation to return quickly to 2% despite being repeatedly wrong. Their colleagues across the Atlantic Ocean continue to make similar mistakes. Both graphs show that domestic and European forecasters continued to forecast transitory inflation for the last two years. They may be correct at some point, but relying on their forecasting versus recent warnings from the Fed about the persistence of inflation can lead investors down the wrong path.



EuroZone Inflation Forecasts Always End At ~1.5%

Monthly from January 2018 to Date



Data Source: Bloomberg, Bureau of Labor Statistics

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Which Volatility Regime Are We In?

Using the VIX to Distinguish between Transitory and Persistent Risk: "VIX futures and the volatility surface provide clearer information about the market perception of risk and should be used in conjunction with the VIX Index.

The quote is from risk management expert Dr. Peter Niculescu. In his most recent paper, Peter defines four volatility regimes as follows:

- Classic- lasts a few months
- Transitory- ends in days or weeks
- Continuing high volatility- implied volatility remains high for several years
- Tranquility- low volatility

The author claims that the VIX alone does not clearly depict which volatility regime markets are in. However, the VIX with an array of information on longer-dated VIX contracts is more reflective of the environment.

Per Niculescu, stocks are currently in a high volatility regime that started in 2020. This portends higher than normal risk going forward until the regime changes. Stay buckled up; the roller coaster ride since 2020 may not end soon.



Tweet of the Day



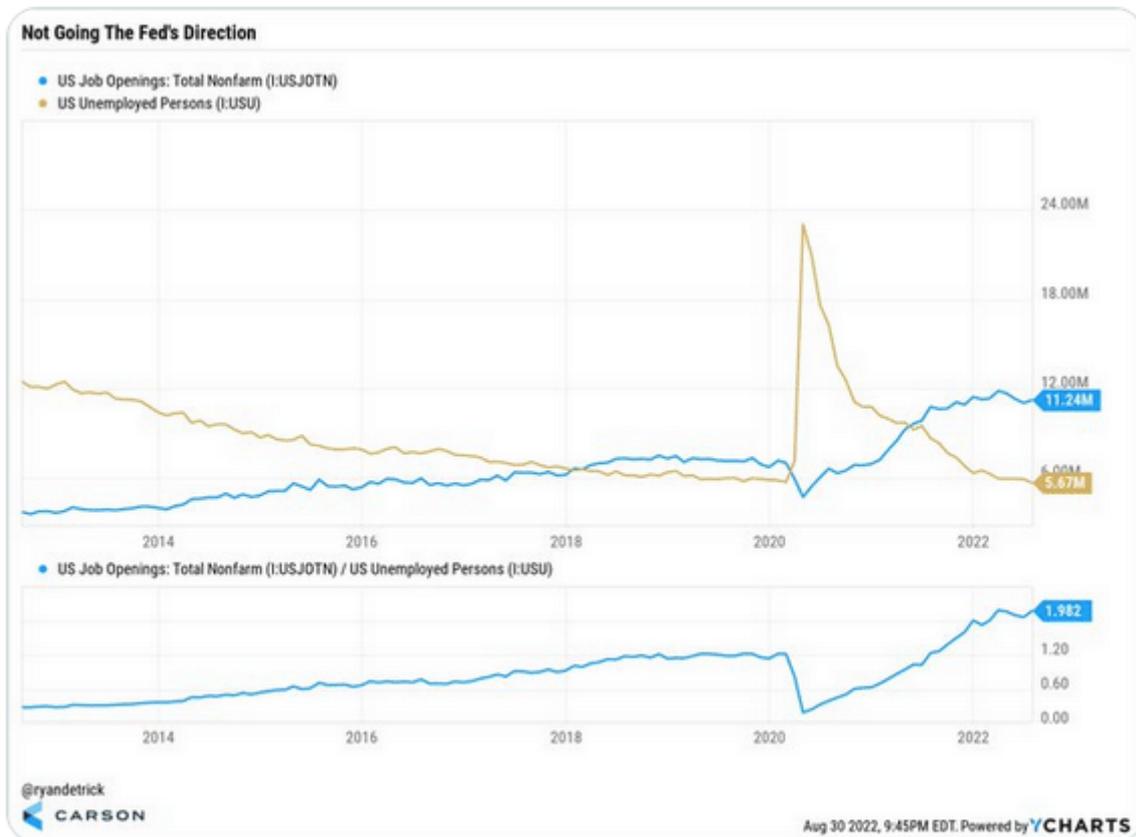
Ryan Detrick, CMT 
@RyanDetrick



More job openings and falling unemployment isn't what the Fed wants to see.

The number of job openings to unemployed workers is back to near 2.

The Fed has said many times they need to see this trend lower. Not happening yet.



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