

# RESEARCH REPORT

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**I'm a thousand miles from nowhere  
Time don't matter to me  
'Cause I'm a thousand miles from nowhere  
And there's no place I want to be  
—Dwight Yokum “A Thousand Miles From Nowhere”**

Is anyone going to be in a hurry to belly up to a buffet in a restaurant, hotel ballroom or even a church picnic? Even assuming authorities allow buffet lines to open, we struggle to imagine the allure of gathering with others to grab a spoonful of this and ladle of that. Farewell, smörgåsbord. Goodbye chocolate fountain. If you are already somehow feeling nostalgic, we can still offer buffet-style dairy market intelligence. It's probably the most appropriate set up for an environment featuring so many different interests and flavors. So step in line, get ready to grab the slotted spoon and fill your proverbial plate with a variety of tasty items.



**Can \$1.00 per pound and \$2.50 per pound cheese both be “real” within 45 days of each other? Yes.** More than anything else, the massive drop in prices and recovery toward all-time highs has been mostly about supply chain upheaval, not massive changes in aggregate supply or demand. In late March, after holding on for a few weeks, all the food service business went away. Retail business was accelerating, but not enough to catch all the milk or cheese. And so we saw cheese prices sink. We

saw a lot of milk go down the drain. It felt and looked like Armageddon because it was...Armageddon. Fast forward a few weeks and we were suddenly dealing with an entirely different reality. Retail orders still hot, food service customers reloading pipelines, export shipments rolling, USDA bringing a big bid to the marketplace and milk producers throttling back output. Keep in mind that while the level of supply chain violence is new, at least one market accelerant is not: four-to-30 day old cheddar is what matters in Chicago. We can – and often do – have fresh cheese shortages even when warehouses are full. That can add some pressure in short squeeze situations.

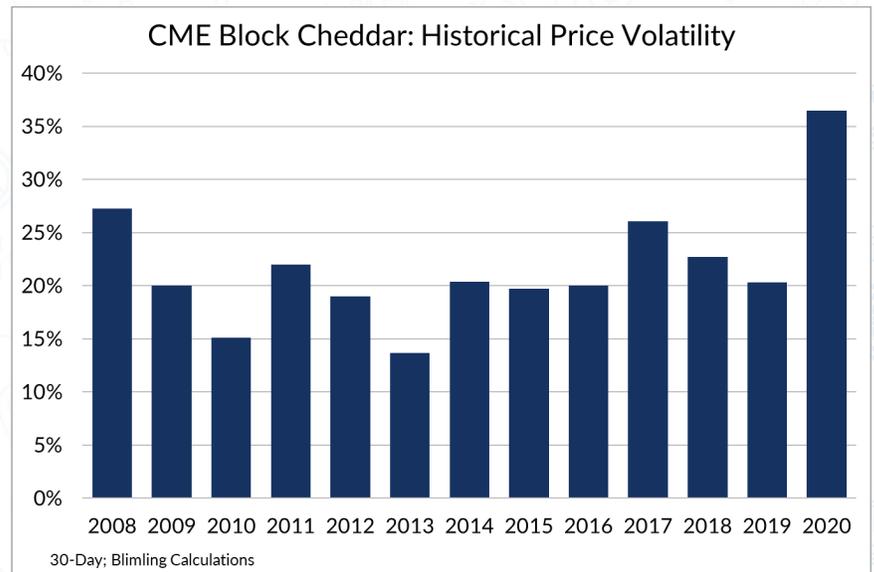
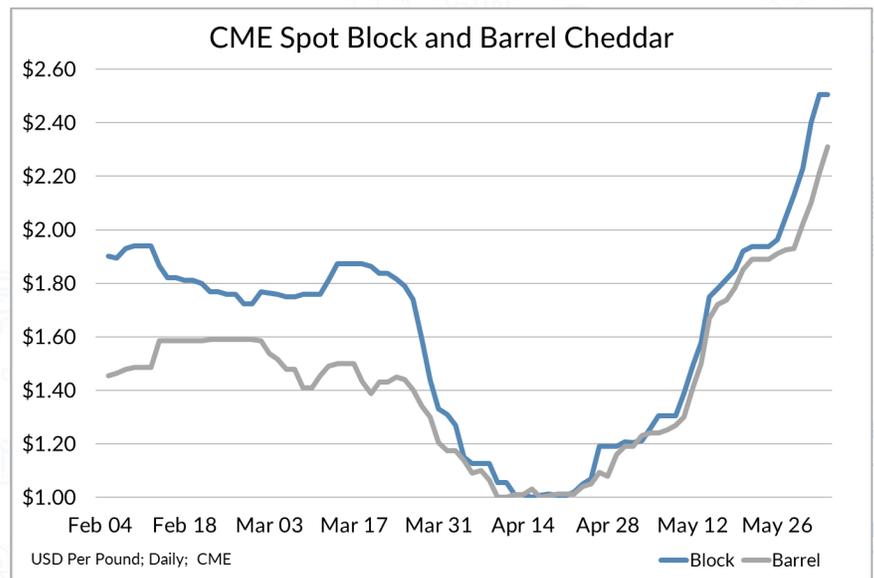
Short squeezes all end the same way: someone either gives up the cheese or gives up the chase. A steeply inverted futures curve only reinforces the message. If you have cheese, bring it to the board. If you don't really, really need cheese, defer purchases. We know that \$1.00 per pound cheese was too low. We believe \$2.50 per pound is too high. In 30 days, we are guessing prices are a lot closer to the middle.

Over the past decade, block cheddar 30-day historic volatility has averaged just under 20% on an annual average basis. It's been running at 36% year-to-date through last Friday. That's more volatile than the S&P500 and several other major markets. And the story is not over.



**Do Class IV prices have to move up to catch up with Class III?** Yesterday's \$5.54 per hundredweight spread between second month Class III futures and second month Class IV futures counts as the widest since at least 2008. Previous jaunts above \$3 have not lasted long. But... the spread could narrow in two ways. Yes, Class IV could move up. Class III could also move down. Or we could see a little bit of both. Before 2020, we count only 13 weeks that ended with second nearby Class III higher than Class IV by \$3 per hundredweight or more.

- In nine cases, second nearby Class III was lower three weeks later.
- In the other four cases, Class III was higher.
- In nine cases, the Class IV price was higher three weeks later.



- Three times, the Class IV price was lower, by an average of 83 cents.
- One time, the Class IV price was no different.

So, the historical data doesn't strongly suggest whether Class III or Class IV "has to" make the move.

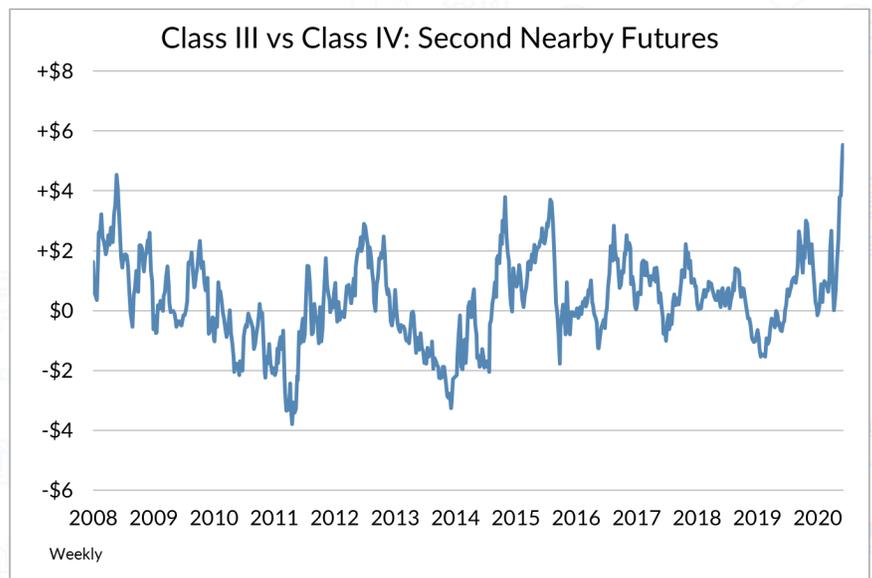


**Try a taste of this: will the COVID-19 crisis speed the path to utilitarian grocery shopping?** Last week, a fascinating story in *The Wall Street Journal* outlined evolving thinking and operations at Wegman's, an iconic, family-owned chain of grocery stores in the East. Wegman's made its reputation by "lavishly pampering its customers with cooking demonstrations, restaurants and movie nights." Now, the stores feature plexiglass barriers separating shoppers and cashiers. Chairman Danny Wegman said, "A huge part of our business has been treating customers really as guests and entertaining them. We can't do that anymore. We lost our mojo. We have to replace it." Before the pandemic, a typical Wegman's sold 52,000 items. Now, they offer 30,000. Anecdotal reports suggest other chains have or will rationalize SKUs, too. What does all of this mean for dairy product manufacturers and marketers? Will it impact overall demand prospects?



**Remember the histograms?** The graphs showing Class III milk prices at various corn, crude oil and EUR/USD levels? We cannot forget them, and feel the need to mention that those measures don't correspond with high prices. Not by a long shot.

Start with corn. Nearby futures are at about \$3.25 per bushel. Since 2000, we find 100 months featuring corn averaging between \$3.00 and \$4.00 per bushel. Class III milk topped \$17 per hundredweight in only 21 of those months. Looked at a different way, when corn is between \$3.00 and \$3.50, Class III milk averaged \$16.05 per hundredweight. That means cheese in the \$1.70 area. As of right now, we don't see corn making any big rallies. Supply



What Happens When Class III-Class IV > \$3?			
Week Ending	Second Nearby Futures Spread (Class III-Class IV)	Class III Three Weeks Later	Class IV Three Weeks Later
5-Jun-20	\$5.54		
29-May-20	\$5.11		
23-May-08	\$4.53	-\$1.20	+\$0.60
30-May-08	\$4.08	-\$1.68	+\$0.60
31-Oct-14	\$3.79	-\$2.33	-\$0.20
31-Jul-15	\$3.71	+\$0.22	+\$1.89
7-Aug-15	\$3.62	-\$0.39	+\$1.74
6-Jun-08	\$3.60	-\$2.17	\$0.00
16-May-08	\$3.55	+\$0.65	+\$0.60
9-May-08	\$3.23	+\$0.95	+\$0.10
22-Feb-08	\$3.23	-\$1.52	-\$0.35
24-Jul-15	\$3.14	+\$0.18	+\$0.32
17-Oct-14	\$3.02	-\$2.39	-\$1.93
14-Aug-15	\$3.00	-\$0.09	+\$2.64
25-Oct-19	\$3.00	-\$0.99	+\$0.43

could be phenomenal, with 93% of the crop in the ground as of May 31, up from 64% last year and 89% on average over the past five years. Demand for ethanol has cratered as Americans stay close to home and use less gasoline. Persistent tensions with China cloud export prospects. Simply put, as of right now, \$4 per bushel corn seems a long way off.

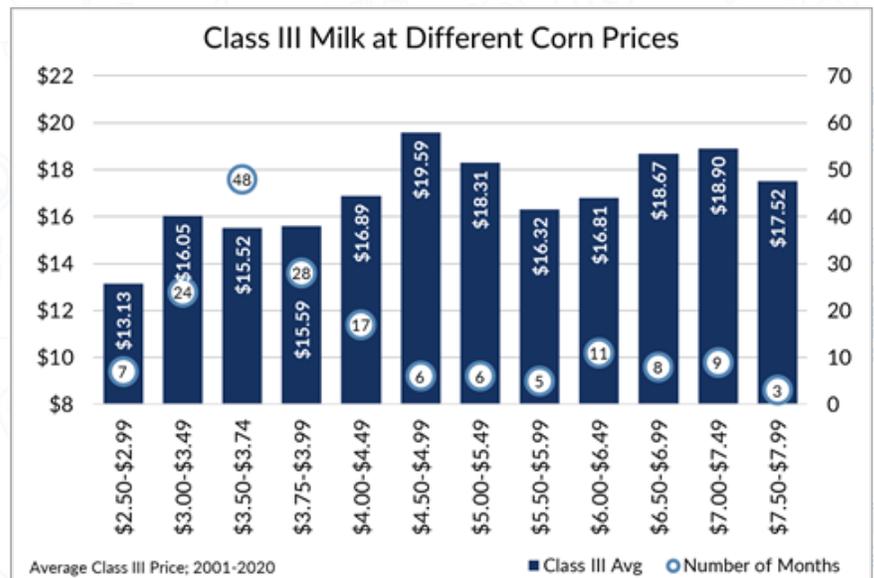
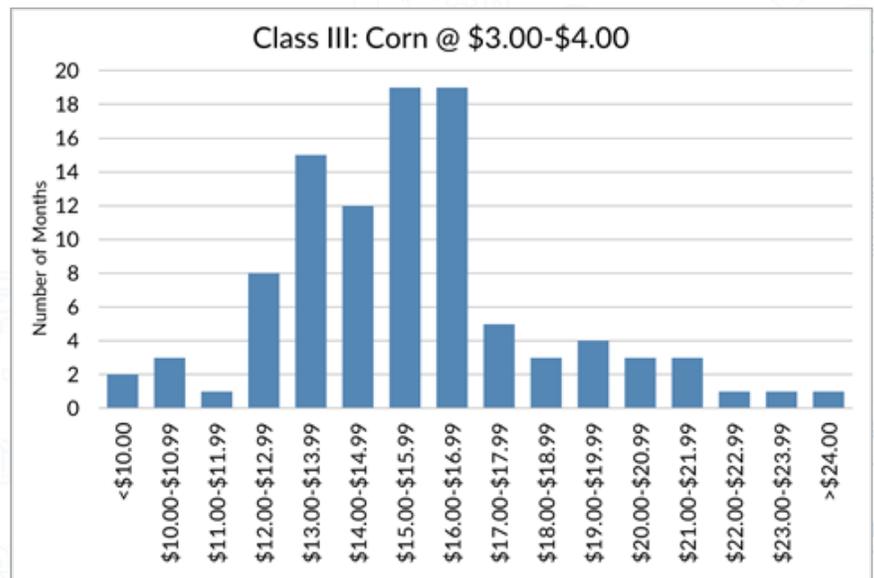
By the numbers, crude oil had a great month of May. But that's only because April was historically terrible, with nearby WTI futures prices turning negative at one point. Since 2000, when WTI crude oil is between \$20 and \$50 per barrel, we find Class III milk topping \$17 on only three occasions. Today, crude oil is trading between \$36 and \$37 per barrel. When crude is between \$30 and \$40, Class III milk averages just over \$13 per hundredweight. Will crude oil be able to bust out to the upside? Domestic producers have radically trimmed supply, with the latest Baker Hughes report showing 222 rigs drilling for oil in the US, down a whopping 67% since late February. We could struggle to keep up with any demand resurgence. At the same time, we know the capacity exists and global producers may be eager to increase volume.

The euro is rallying a little versus the US dollar, flirting with 1.12 this week. But that's still low in historical terms. Over the past 20 years, in the 76 months when the EUR/USD fell between 1.05 and 1.20, Class III milk topped \$17 in only nine months, or 12% of the time. Given massive Fed balance sheet expansion and presumptive government budget deficits, the dollar could turn weaker in the months ahead. But, remember, currency is a comparative game. US fundamentals may be weaker, but they could still be stronger than those prevailing in the EU.

Clearly, we can in fact have \$17+ milk in these circumstances. It's almost certainly going to happen in June. But, history says that we might not want to get too attached to those prices if the "outside" markets remain low.



**Here's another sample: is urbanization over?** For more than a decade, America has seen its urban centers thrive as young people embrace city life and older empty-nesters trade in

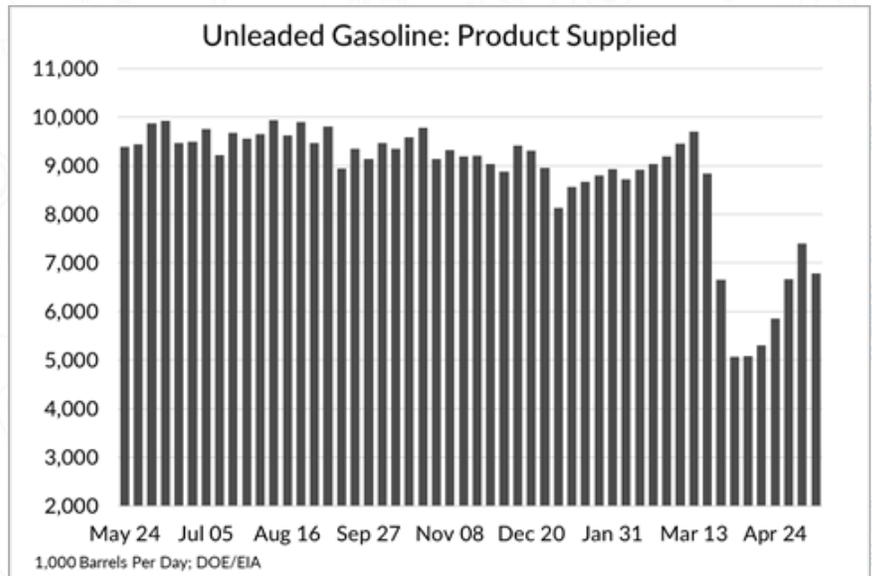
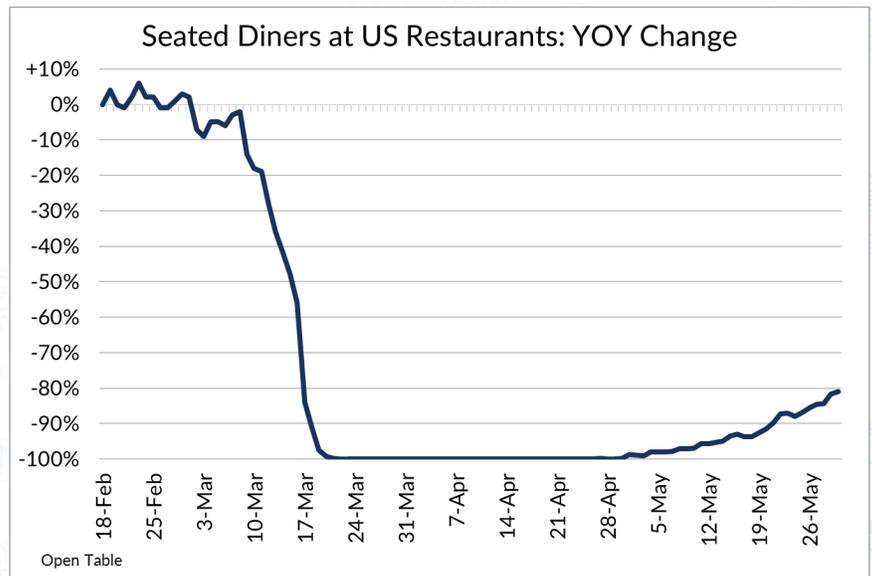


their suburban homes for downtown condos. That’s been great for restaurant business and food culture. Now, we are coming face-to-face with the reality that pandemics spread more quickly in densely populated areas. There’s some evidence that people may want out of the city...for good. In late April, according to a Harris Poll, 39% of urban dwellers said the COVID-19 crisis has prompted them to consider leaving for a less crowded place. The fact that more people may be able and willing to work from home could accelerate the dynamic – no need to worry about long commutes to downtown office centers. Real estate website Redfin reports that page views for houses in towns of less than 50,000 increased by 105% year-over-year during the week ending May 1. If people do in fact leave cities, will that permanently impact the eating out/eating in mix? Will it change the types of restaurants that do well? Are there knock-on effects for dairy demand?

**How will we be able to meaningfully monitor the economy?** As a general rule, we tend toward optimism. When it comes to the US economy, we think people tend to underestimate our resilience. And, we said as much at the beginning of the COVID-19 situation several weeks ago. The outlook today definitely seems better than in mid-March. The US government and the Federal Reserve brought the thunder with direct payments, generous unemployment benefits and multiple market backstops. All good...or at least, not as bad as it could have been.

We confess, however, to having some doubts about the prospects for speedy recovery. We have some deep holes from which to climb out. Like... At least 20 million unemployed. A hospitality sector in tatters. A gutted retail environment. Things seem to be getting better. But how long will some problems linger?

Overall economic performance matters for dairy demand. We find only one year in the past 25 in which domestic cheese consumption declined year-over-year: 2008. Butter



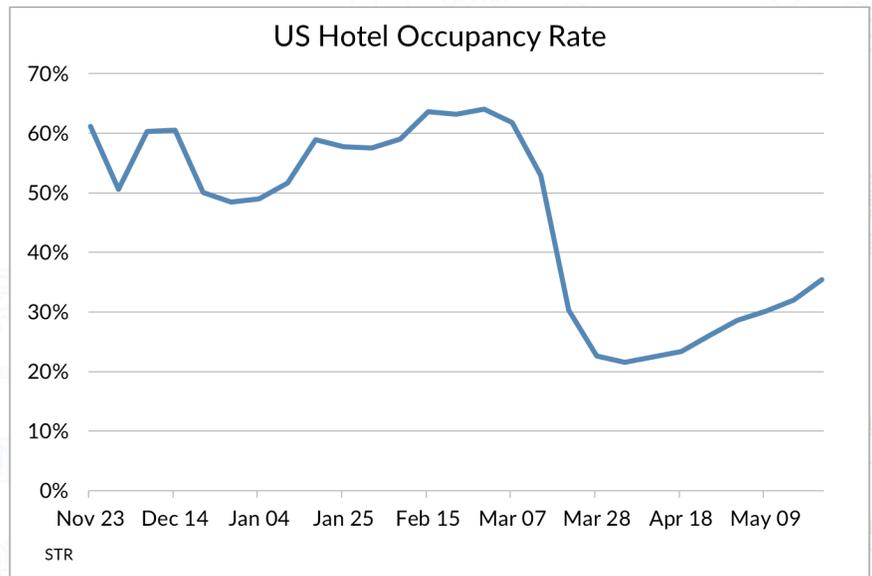
demand in 2009 and 2010 fared more poorly than in the five preceding and five subsequent years.

It's not difficult to catalog the risk areas. But, where should we look for clues about progress? We suggest focusing on one daily, three weekly and two monthly indicators. (Shameless plug: we track all of them in our popular *Key Indicators* publication. Sign up for a free trial at [www.dairy.com/blimling-intelligence](http://www.dairy.com/blimling-intelligence).)

- **Daily Indicator One: Open Table Dining Room Statistics** Open Table is publishing daily data on the number of customers seated in restaurant dining rooms. Over the last 10 days of February, across the US, the number was running at 1% above year-prior levels. From March 22 to April 30, traffic was at -100% every day. With restrictions lifting in many areas, restaurants are seeing “only” 80% fewer diners. Various restrictions in effect in many areas will make it difficult for the national number to get to much better than -50% anytime soon. But a quick run to that level would demonstrate that Americans are feeling more footloose and fancy free than they thought they would be a few weeks ago (as measured by numerous surveys).

- **Weekly Indicator One: Gasoline Product Supplied** The more we move around – be it for work, shopping trips or vacation – the more gasoline we use. The US Department of Energy’s “product supplied” figures offer a good proxy for demand. In early April, it was down by 48% on a year-over-year basis. Demand has strengthened the past few weeks, with the latest reading at -23%. But that’s still a long way from good.

- **Weekly Indicator Two: Hotel Occupancy** Flush times bring full hotels. US hotels have been decidedly un-full over the past 10 weeks or so. Data tracked by STR showed occupancy at between 22% and 23% for three weeks beginning in late March. It’s bounced back, but to only 35% for the week ending May 23. The average room rate was \$81, with revenue per available room at \$29. Contrast that with June last year: occupancy at more than 75%, average room rates at nearly \$135 and revenue per available room at about \$101. We don’t need to get all the way back there to see peo-



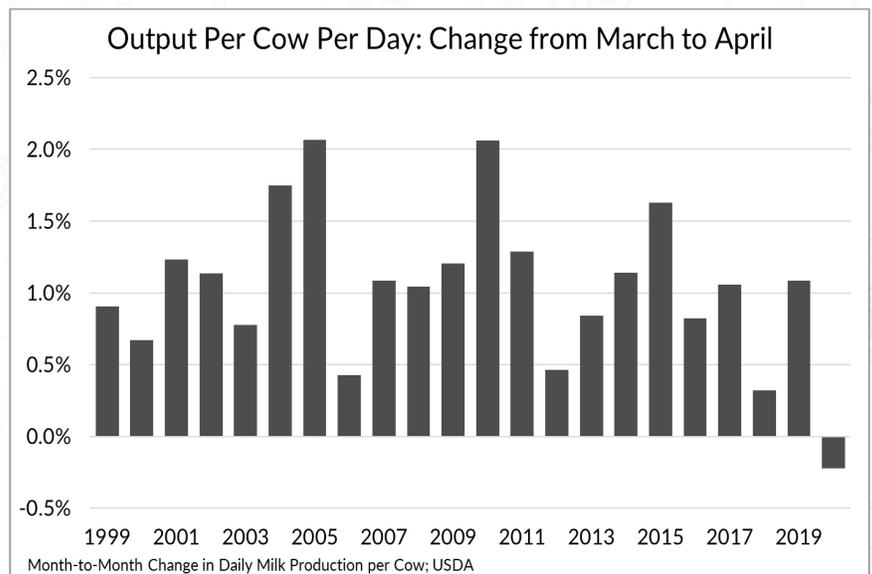
ple go back to work in the industry, but 35% occupancy won't get the job done.

- **Weekly Indicator Three: Continuing Claims** Every Thursday morning, the US Department of Labor publishes its weekly jobless claims data. Initial claims command a lot of attention. Those numbers have reached astronomical levels, totaling nearly 41 million over the last 10 weeks. But that figure does not capture the total number of people receiving benefits in any given week. The “insured unemployment” number – referred to as “continuing claims” – offers a better picture. It represents the number of people who qualify for unemployment receiving benefits. So an initial filer who qualified last week but gets called back to work next week falls off the roster. For now, continuing claims peaked at near 25 million during the week ending May 9. It was down to 21 million two weeks later – that last data point in hand. By contrast, continuing claims averaged about 1.7 million in the 52 weeks ahead of the COVID-19 crisis.
- **Monthly Indicator One: Retail Sales** US retail sales in April suffered the biggest month-over-month and year-over-year setbacks since at least 1993: -16% and -22% respectively. Food service took a beating, but some segments fared even worse. Take clothing stores. Sales totaled only \$2.4 billion, down 79% from March and down 89% year-over-year. Electronics and furniture stores didn't do much better. Those outlets won't be bringing workers back in a hurry unless sales really get going again.
- **Monthly Indicator Two: Job Openings** Remember when the number of job openings topped the number of technically unemployed persons? Those were the good old days in February, when openings exceeded people by 1.2 million. In March, the number of openings slipped to 6.2 million, the fewest since late 2017. The April number is likely to be much lower yet. In July 2009, during the last financial crisis, job openings dropped to as low as 2.2 million in a month with 14.6 million unemployed persons.



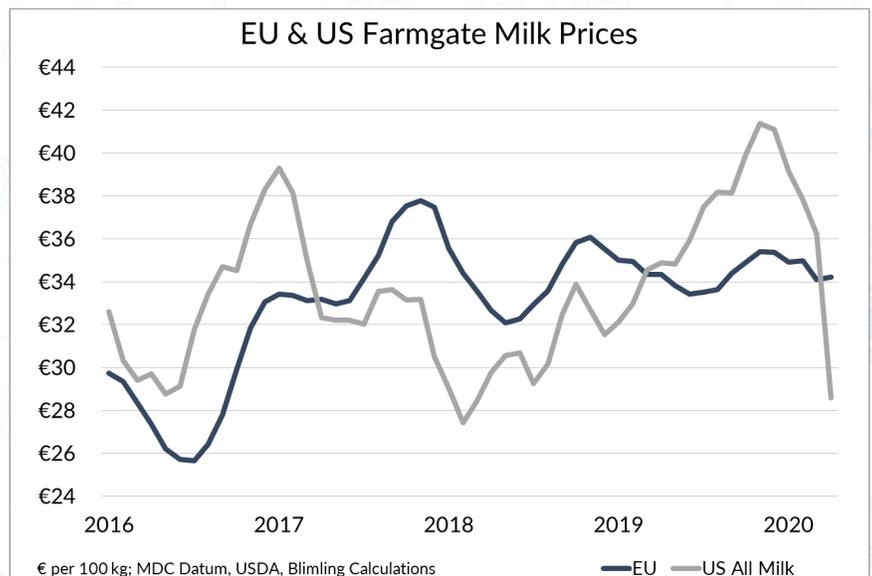
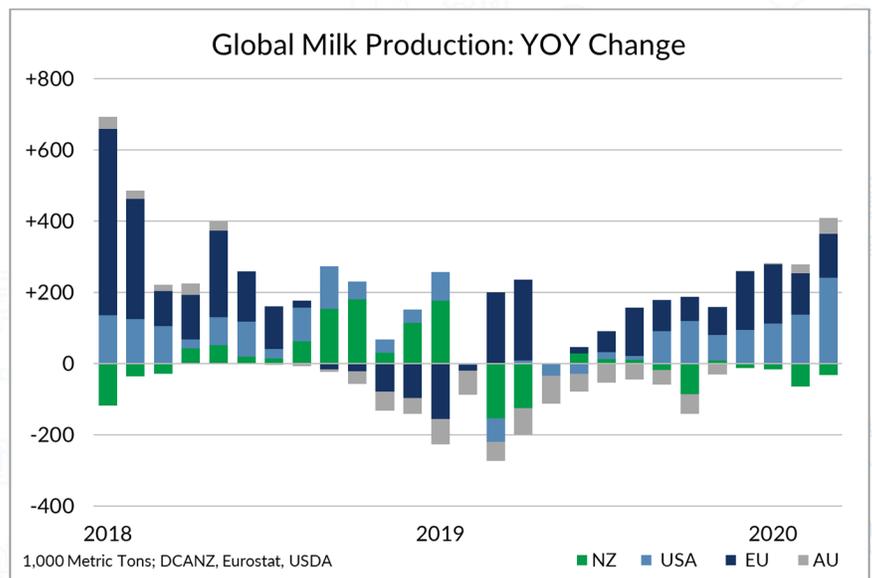
### Milk Production

- **Two months ago, we were trying to figure out how fast milk production could slow in the face of plummeting demand.** The answer: surprisingly quick when co-ops roll out stiff penalties for over production. April milk production came in at +1.4% year-over-year, down from +2.8% in March. Much of the pullback happened at the productivity level, with milk production per cow per day dropping 0.2% between March and April – the first decline between the two months in at least 20 years. Still, the pullback was not enough. USDA data implies that more than 300 million pounds of milk may have been dumped during April, accounting for roughly 2% of US milk supply.
- **But that was two months ago.**



Now, we are asking: how quickly will producers turn milk back on? Futures markets clearly send a signal to expand supply, with June Class III prices flirting with \$20.00 and second half contracts trading above \$17.00 on average. It's easy to add concentrates back to the ration and retool milking schedules. For the most part, the cows are there, too. At the end of April, cow numbers were still trending 49,000 head above prior year levels. And with meat plants still running with skeleton crews, slaughter rates over the past four weeks only increased 1% year-over-year. Direct payments from the government will almost certainly lend encouragement, as well.

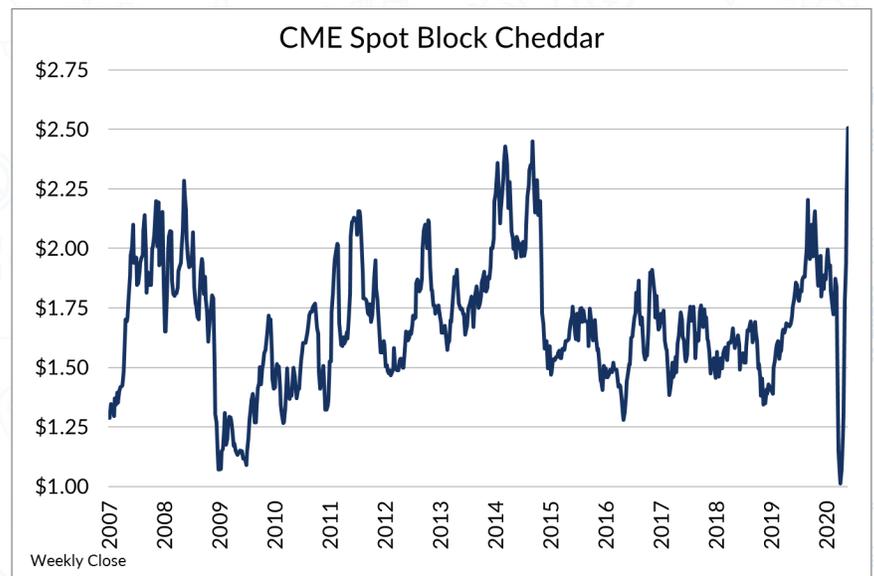
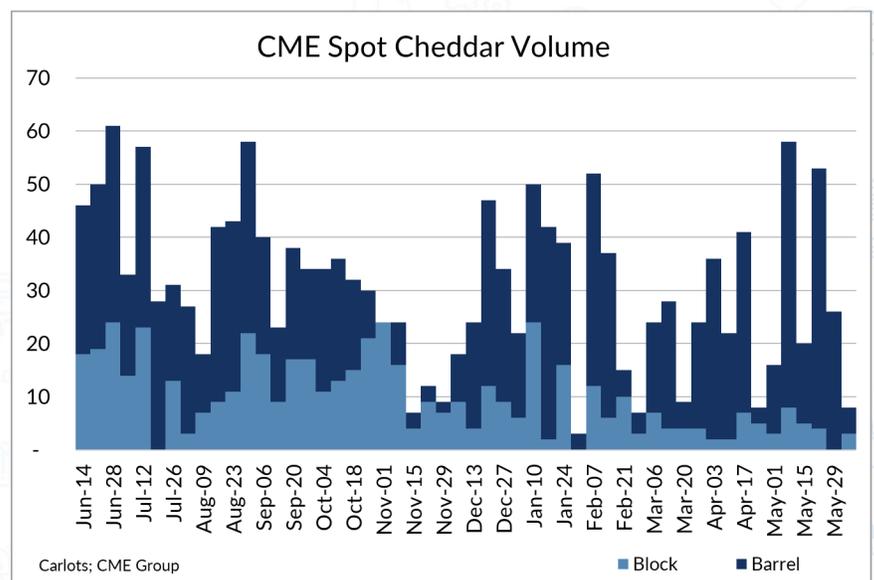
- **But it's not going to be as easy as flipping a switch.** It takes time for cows to respond to changing feed rations, and reports suggest that there are not many heifers available to add on cow power. Plus, in many regions, cooperatives have yet to remove base programs. Some are set to run through July 31, others are indefinite. That could yield inconsistent growth from region-to-region, with the West likely in the best position to quickly rebound, while the East could trail. Still, our model is calling for US output to grow by 1.0% for the second half of 2020.
- **Rain. Who's got it and who doesn't?** Sounds like shop talk for farmers, but rainfall dynamics are figuring prominently in the global milk market. Europe is on the verge on not having enough. Again this year, fields are dry across parts of Europe. Though reports suggest conditions have not yet hurt production, the trend bears watching. Production in the first quarter increased by 1.0% year-over-year, but early data out of France and Germany point to some slippage in production growth during April and May.
- **Milk prices in the EU for April held at around €34 per 100 kilograms, at parity with last year as cooperatives softened the blow of low commodity prices.** As a result, EU prices will likely remain weaker longer as cooperatives recoup margin on the way back up. Overall, the EU Commission is calling for 0.4% growth in milk supply during 2020 - consistent with prior year gains.
- **New Zealand is just finishing up its 2019/2020 season.** Despite dry conditions across the North



Island for several months, milksolids production is expected to land somewhere around +0.5% for the season. Consistent rainfall in the North Island appears to be replenishing soil moisture regionally, but farmers are not doing a victory dance just yet. The three-month climate outlook forecasts potential for below-average rainfall in many of the key supply regions. Still, milk production forecasters are optimistic about prospects for the 2020/2021 season with early estimates calling for 2.5% growth in milk flows. Elevated milk prices should help provide a boost – analysts expect the current season payout to land at a six-year high of NZ\$7.20 per kilogram of milksolids. Plus, the country’s largest cooperative forecasts milk prices at around NZ\$6.15 on average for the upcoming season, still coming in above the five-year average.

**Cheese**

- **Seven weeks, a \$1.50 swing, and a new record high in the CME spot block market.** As the pandemic first unfolded, we figured the market would get squirrely as stay-at-home orders lifted and life returned to “normal.”
- **To put the rally in simple terms: four to 30-day old cheddar cheese – the currency in Chicago – is tight.** Numerous buyers have all been trying to squeeze through the same small door at the same time. Retail orders remain strong with weekly volume growth consistently tracking around +20% year-over-year. Food service demand is picking up – due to both improving demand and pantry restocking. USDA is buying. By our count, so far USDA has committed to buying roughly 185 truckloads of cheese for third quarter delivery – not including what is being packed into “Food Boxes.” And more USDA money is likely on the way. That would be enough to stress the market in a normal year, but strong export sales booked in April for second quarter delivery are further restricting fresh supplies.
- **In a nutshell, strong demand is bullish, but the rally is likely near the apex.** The forward curve is inverted, screaming for cheese to make its way to Chicago. Already

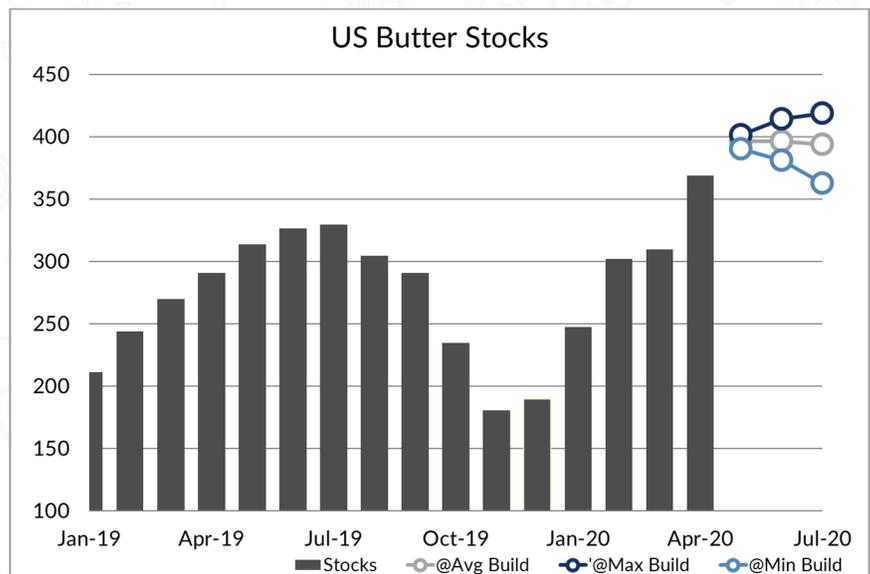
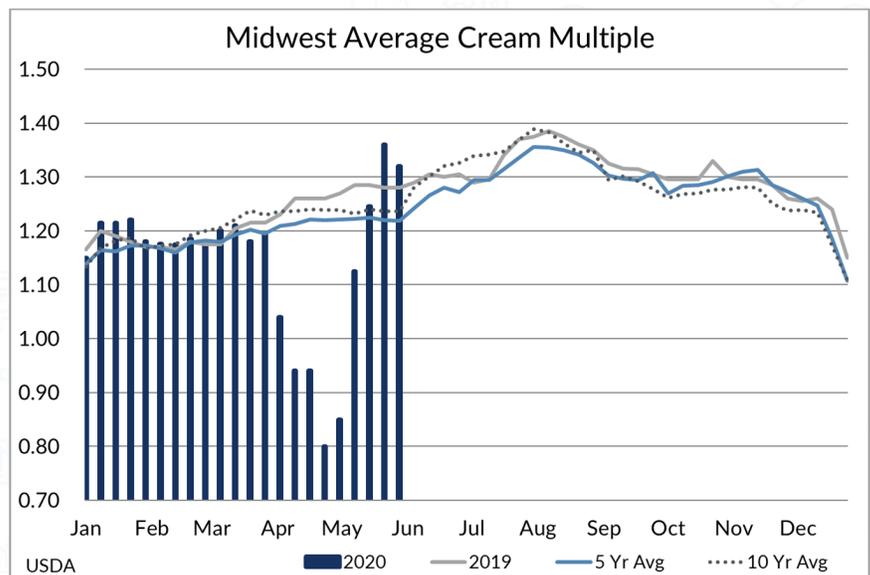


a few more loads are moving in that direction and we suspect that the flow will pick up in the coming weeks. Buyers – particularly those proactively trying to refill restaurant pipelines – will start to pull back orders due to higher price dynamics. Plus, those short-term export orders will start to dry up. That should free up some cheese.

- **Our forecast reflects swift movement lower in the coming weeks.** It’s not unusual to see rapid declines followed by additional choppiness. In 2008, prices reached \$2.2850 on May 23. Two weeks later, prices dropped to \$2.1600. A month later, prices were down to \$1.9400. October 2012: A \$2.1200 peak, a 20-cent drop within two weeks, another 10-cents lost by two weeks later. A similar dynamic played out on more than one occasion in 2014. To lean on old wisdom: “High prices cure high prices.”
- **The push to record high prices will likely have longer-term ramifications on the market.** Today, producers are looking at a healthy recovery in milk prices. That will likely yield greater-than-expected milk supplies, potentially putting further pressure on prices into year-end.

**Butter**

- **From sloppy to tight in a matter of weeks.** In mid-April, cream was being poured down the drain for lack of buyers. Now, manufacturers are reportedly scrambling to get their hands on more. USDA implied Class II Midwest multiples are sitting above 130 and anecdotal reports point to higher spot transactions in the mix.
- **Demand for butterfat is firing on all cylinders.** Retail ice cream demand has been up 10% to 15% year-over-year for several weeks. And, with heat spreading across the country, soft-serve demand is picking up. Ice cream plants are running full tilt to keep up. Reports point to continued strong demand for cream cheese, too, keeping those plants in the market for cream. Butter churns are reportedly selling off cream where they can, but heavy demand for print butter is creating some interesting choices. Printed reports say retail demand remains deep-into-double-digits strong. Plus, rebounding food service demand

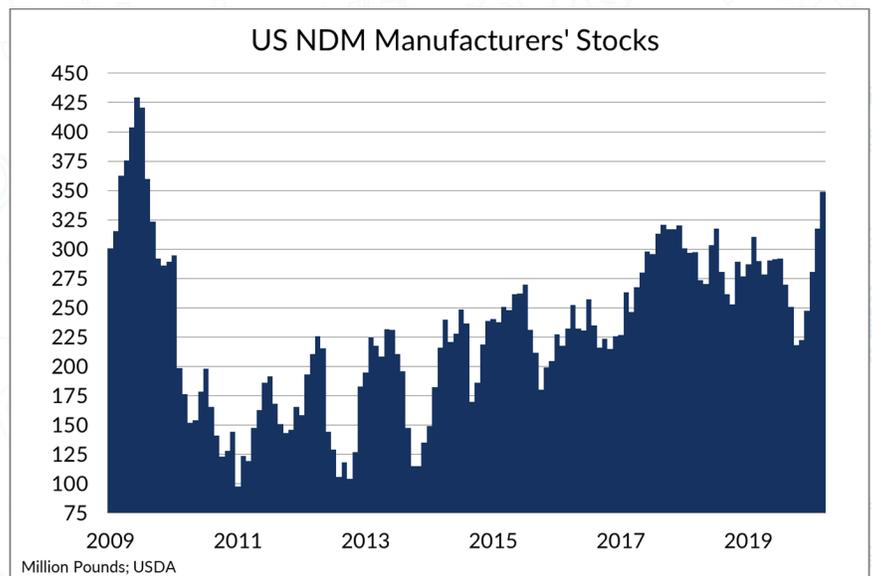
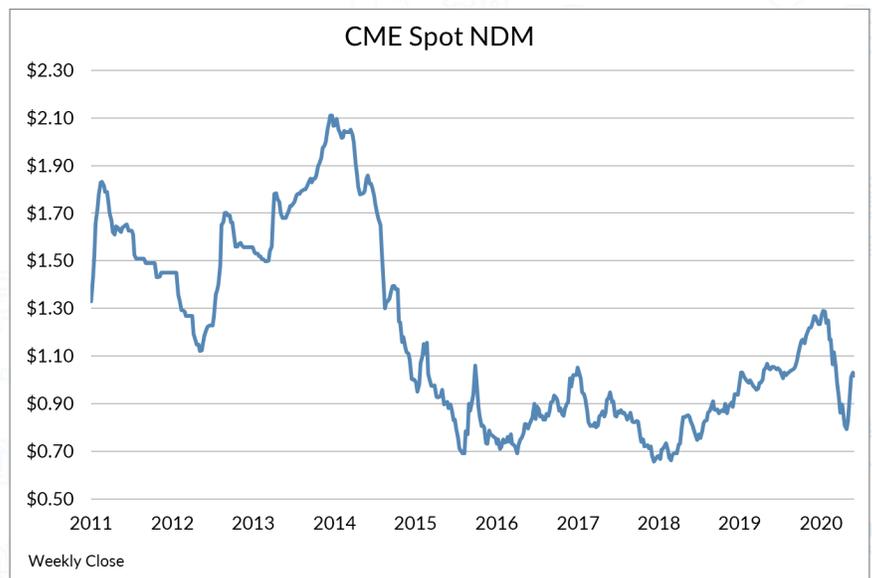


has been keeping order books full.

- **But there's lots of butter in the coolers as a backstop, right? Maybe.** At the end of April, the USDA *Cold Storage* report showed 369 million pounds of butter in the warehouse – up 27% (78 million pounds) from 2019. Over the past five years, stocks increased by 27 million pounds from April to the May peak. But 2020 is no typical year. Reports suggest that manufacturers are now increasingly pulling bulk out of storage to meet demand – an unusual move for this time of year.
- **Though our forecast contemplates choppy conditions in the near term, there's upside risk on the table as the end of the year nears – particularly if manufacturers struggle to hold on to inventory in the coming months.**

**Nonfat Dry Milk**

- **You have to feed the bull every day.** That's the old trading adage. Today, the NDM market seems to be running low on bullish fodder. A few weeks ago, the buy-side was hopping to get its hands on comparatively cheap US product. Southeast Asia was in the mix in a big way. Mexico came in off the sidelines. Now, with CME spot NDM prices up more than 25% over the course of just four weeks and trading near parity with European values, will buyers stop to reassess?
- **Strong demand for cheese vat fortification is keeping product moving in the domestic market.** That could help to chew through some supply, but probably not enough to propel a big rally.
- **Less milk made its way into the dryers in May, yet no one seems desperately short.** Looking back at March 31 data, manufacturers' inventories sat at 349 million pounds – up 21% from 2019 and the largest volume in storage since August 2009. It seems unlikely that the NDM market has shifted from well-supplied to flame-fanning short since then. Though this week's *Dairy Products* report will reveal April 30 manufacturers' holdings, given the excess milk on the market during the month, USDA will likely show



an uptick from March. History says that inventories typically climb by 4 million pounds between March and May, even an increase along the five-year average rate would take stocks to 253 million pounds.

- **Our forecast contemplates choppiness around \$1.05 in the near-to-medium term but we believe there's significant risk to the upside.**

**Dry Whey**

- **The domestic whey market has been a calm oasis in a sea of dairy market upheaval.** Whey prices are back into the low 30-cent range, dampened by increased output, largely due to rebounding cheese production. Soft WPC and WPI prices are adding to the weaker price dynamics. Rising lactose prices could be a near to medium term wild card, though, boosting margins for high protein whey production and pulling solids away from dry whey.
- **Export demand remains firm.** Though China is reportedly still struggling to fully control African Swine Fever, reports point to some recovery in the country's hog population. China imports of whey bumped up to 86 million pounds in April, rising 15% from 2019. Nearly 45% of imported volume came from the US, up from 40% the year before. With European prices holding at uncompetitive price points, the US should continue to see favorable traction across the international market. One key watch factor: deteriorating US-China trade relations.
- **Our forecast reflects continued choppiness around 35-cents, but continually changing market dynamics around the whey complex could keep this market on its toes.**

