

The PCA logo features the letters 'PCA' in a bold, white, sans-serif font. A white swoosh underline starts under the 'A' and extends to the right, ending under the 'A' with a registered trademark symbol (®).

**PCA**®

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America's Cement Manufacturers™

## Briefing: #3

(April 30, 2020)

# Coronavirus Impacts on the US Cement Industry

Ed Sullivan, SVP & Chief Economist

# Market Intelligence's Research Focus

1. Review Current Macroeconomic Conditions.
2. Transition from Shutdown.
3. Near Term Annual Cement Consumption Outlook.
4. Risks Associated With State Re-Openings.
5. Last Word on Guidance.

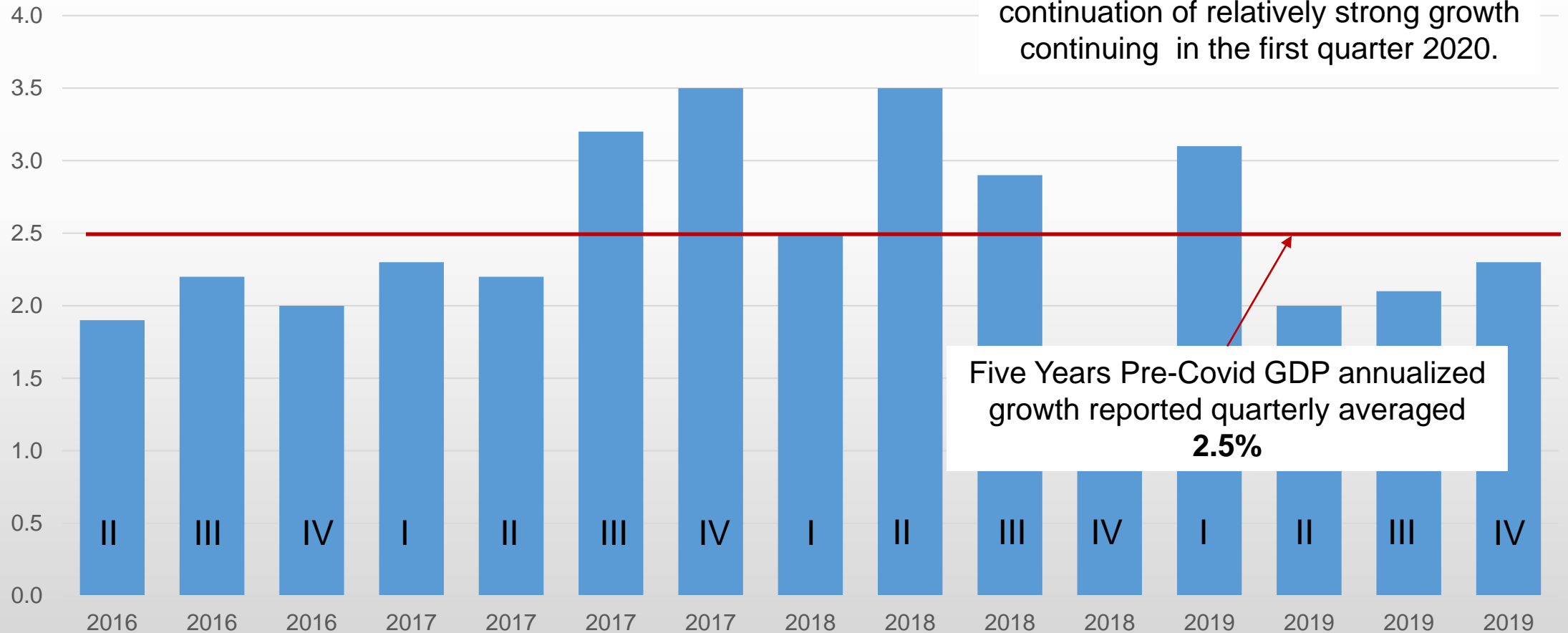
# Macroeconomic Conditions

- First Quarter GDP Estimate
- Labor Market
- Consumer Sentiment

# GDP

- Annualized Percent Change from Previous Quarter

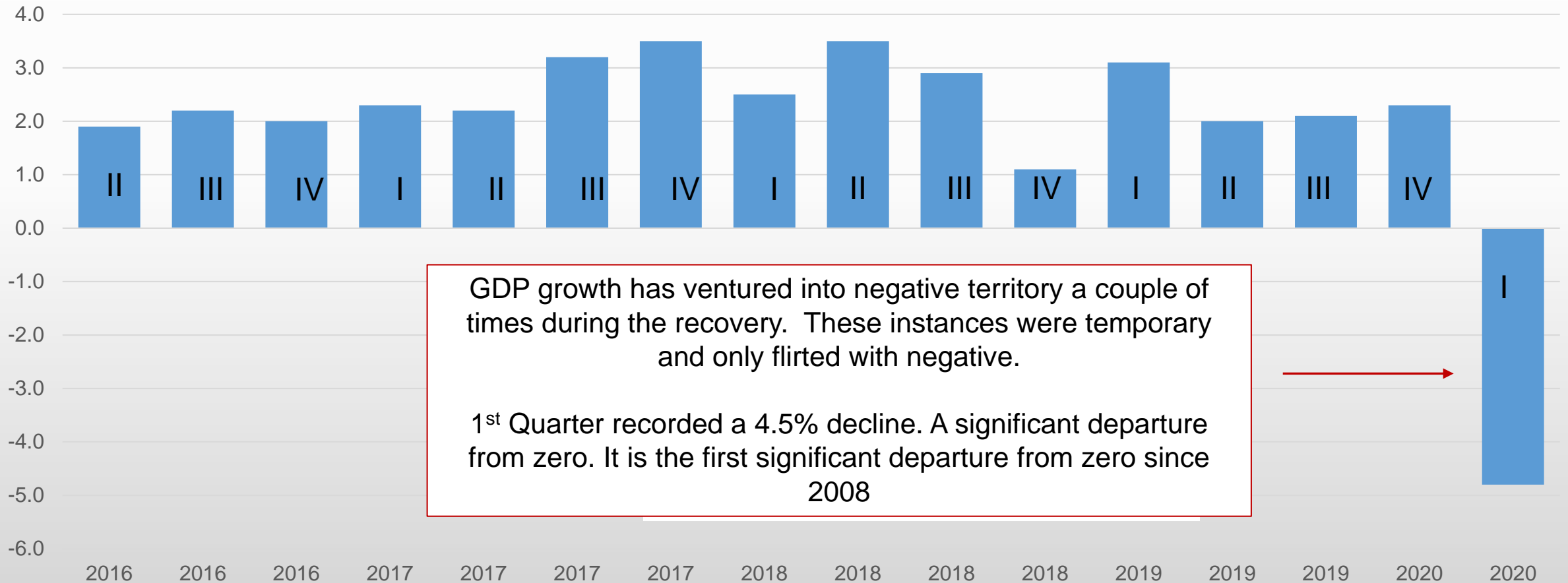
January, February and early March Federal Reserve Models suggested a continuation of relatively strong growth continuing in the first quarter 2020.



Five Years Pre-Covid GDP annualized growth reported quarterly averaged **2.5%**

# GDP

- Annualized Percent Change from Previous Quarter

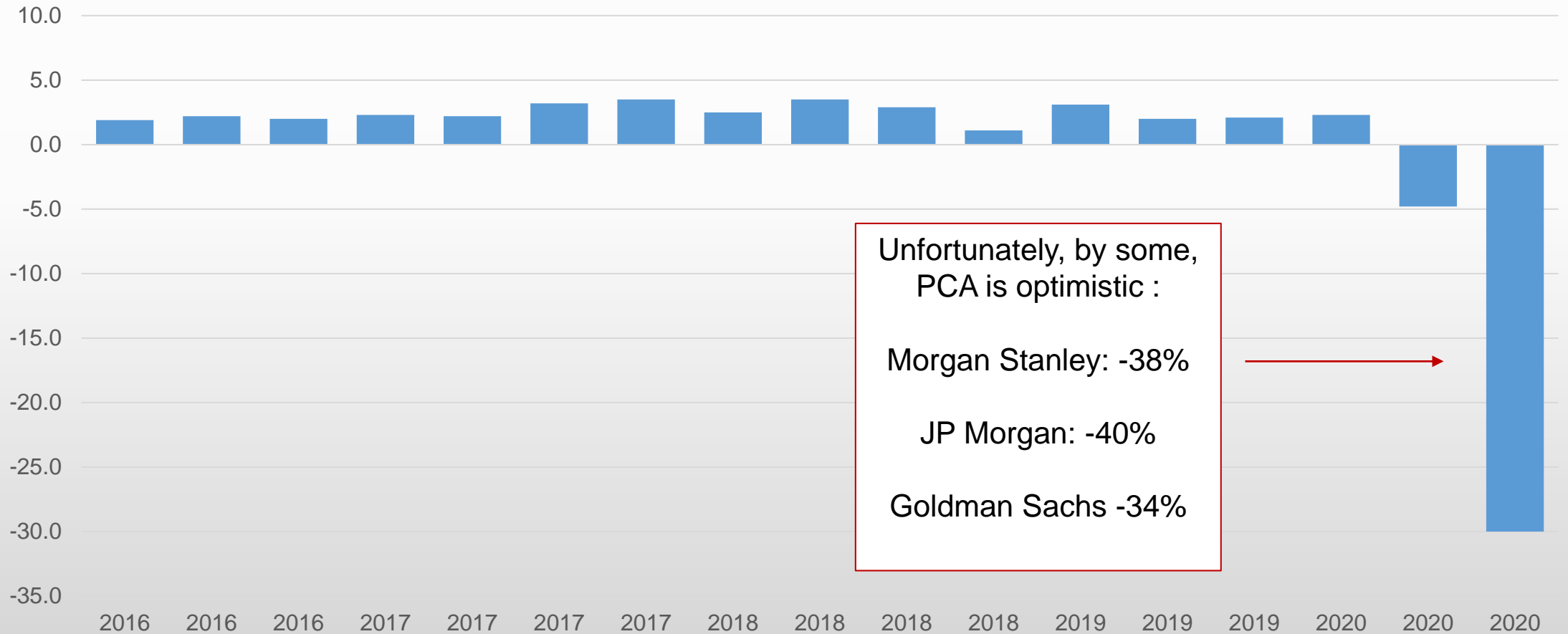


GDP growth has ventured into negative territory a couple of times during the recovery. These instances were temporary and only flirted with negative.

1<sup>st</sup> Quarter recorded a 4.5% decline. A significant departure from zero. It is the first significant departure from zero since 2008

# GDP

- Annualized Percent Change from Previous Quarter

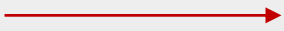


Unfortunately, by some,  
PCA is optimistic :

Morgan Stanley: -38%

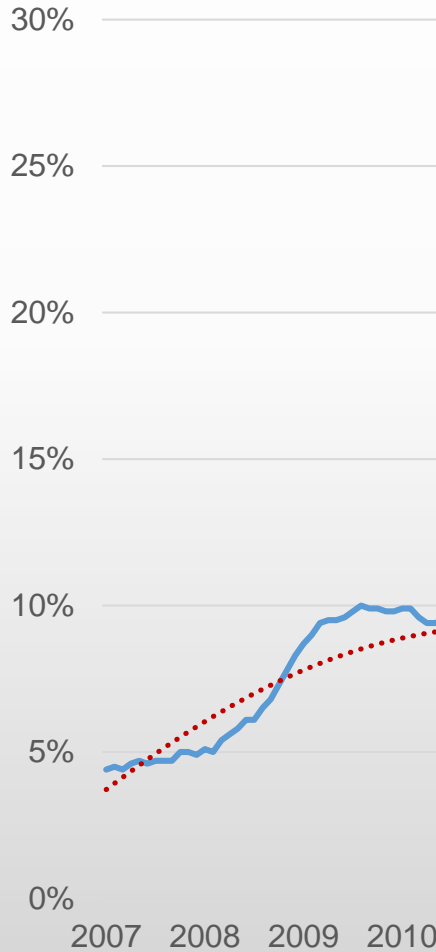
JP Morgan: -40%

Goldman Sachs -34%



# Unemployment Rate

## % Unemployed



### Today's Unemployment Claims Report Unemployment Math

Prior to Covid 5.5 million workers were unemployed.

At an Unemployment Rate of 3.5%, that implies a labor force of 164 million workers.

Every increase of 1.6 million workers boosts the unemployment rate one full point.

Today's unemployment claims report show Covid adding more than 30 million to the unemployed.

Don't forget the 5.5 million that were unemployed prior to Covid.  
Unemployment is now 21%

**The Curve:** The labor force grows – offsetting some of the increase. Some older workers, however, are increasingly opting for retirement. In net, as a result, the rate will rise quickly.

- Despite the shocking unemployment numbers that have materialized thus far more is coming.
- A lot more.

Keep in mind the unemployment reflected thus far are those largely associated with Stay-In-Place orders.

These displaced workers reflect the first round of layoffs.

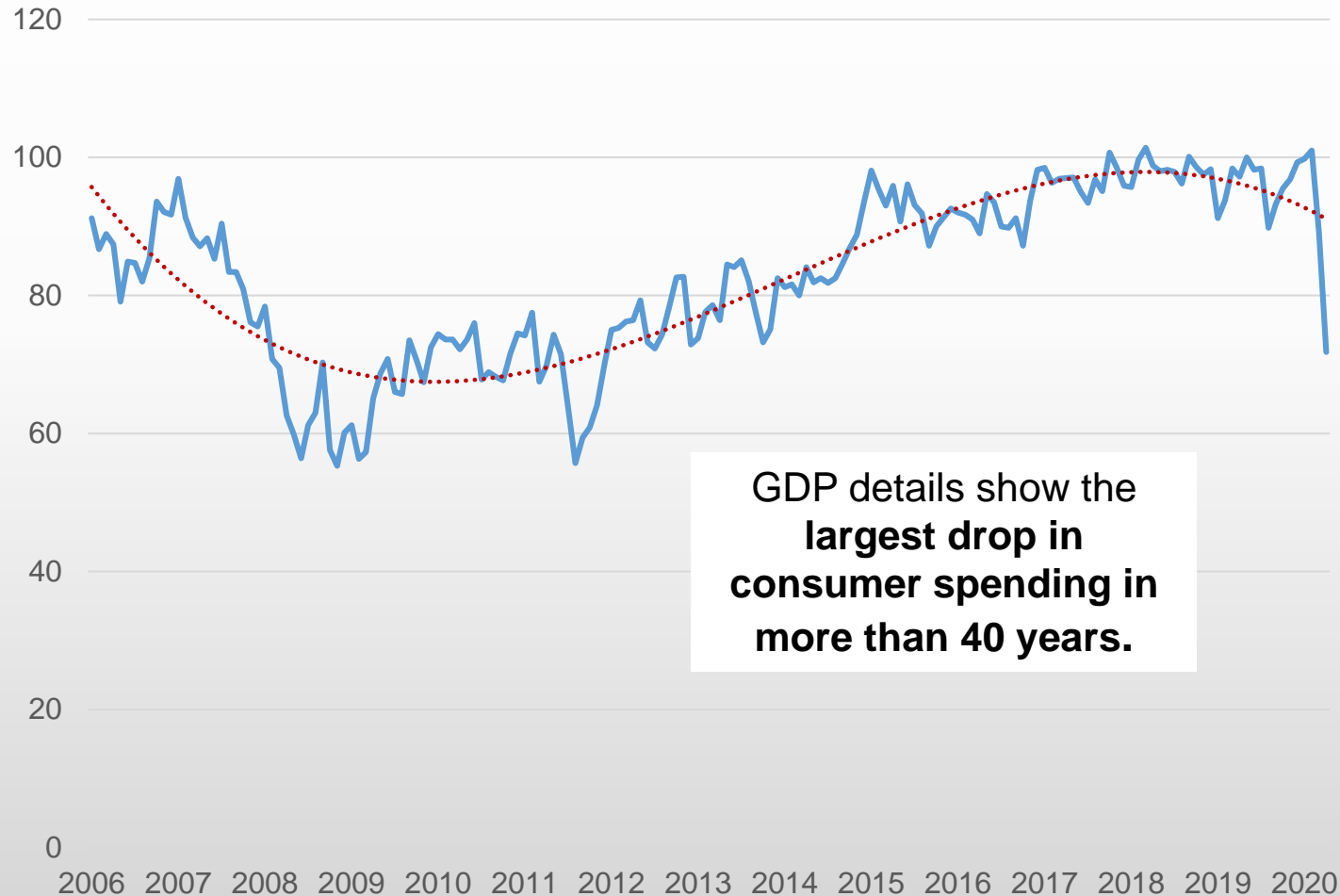
As demand decays, evaporation of working capital, and secondary businesses will increasingly join in contributing to layoffs.

This reflects the second round of layoffs. It increasingly includes white collar & management.

PCA is now expecting **unemployment will reach 26% at the depths of the layoffs.**

This disruption to the labor market in such a short period of time is unparalleled in US history.

# Consumer Sentiment Composite Index



- Consumer Sentiment is a critical ingredient in determining sales and total Consumer spending activity.
- Prior to Covid, the University of Michigan's Consumer Sentiment Index was riding a strong high. This partially supported strong consumer spending and enabled US GDP to sustain its strength.
- The largest monthly decline ever recorded in the index was March – declining 11.7% in one month.
- That record was surpassed in April – recording a 19.4% decline following the weakness of March.
- **Economic Sentiment will erode further** as unemployment continues and the financial distress becomes more intense.
- Aside from economics, **fear of the virus and infection** will increasingly dictate the growth path of the economy – regardless of mandated state openings/



# Transition from Shut Down

# State Stay-In-Place Removal Impacts on Construction

Stay-In-Place orders have had a large adverse impact on economic activity. Many states are now in the process of removing/amending these orders. This does not imply an immediate return to normal. There are significant hinderances. Construction activity may be displaced by:

- Shortages of N95 respirator face masks.
  - Shortages of building materials due to supplier shutdowns.
  - Permitting is delayed.
  - Shortages of building inspectors.
  - Illnesses
  - School closures and family obligations
  - Construction Site Protocols
- 
- Most of this reflects factors are operating in the second quarter 2020.
  - The largest impact operating in the next two quarters may be **DEMAND DECAY**.

# Macroeconomic Conditions Take Center Stage

The construction environment will change from a Stay-In-Place inconvenience to a question of decay in demand.

Once Stay-In-Place orders have been rescinded, what will happen? The key disturbance is no longer the virus and Stay-In-Place orders. Increasingly the focus is on demand and project order books.

Will order books be replenished at a level faster than they are being worked off? If so, construction and cement consumption will expand. If not, construction may recede.

During the third quarter, the issue will be the extent of demand decay and the cancelation of projects.

Compared to the second quarter, construction activity is expected to improve but remain far below pre-Covid levels. It is hard to envision a robust near term construction recovery amid double-digit unemployment and depressed GDP.

The extent of demand decay will play a critical role in Q3 construction and cement consumption estimates.

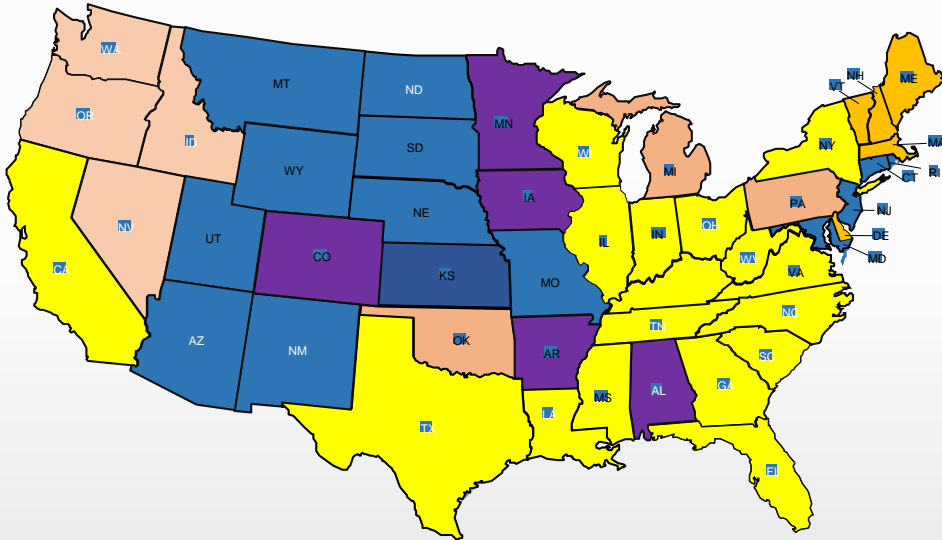
# Survey of Cement Industry Analysts

## Late April Survey of Membership (75 Responses)

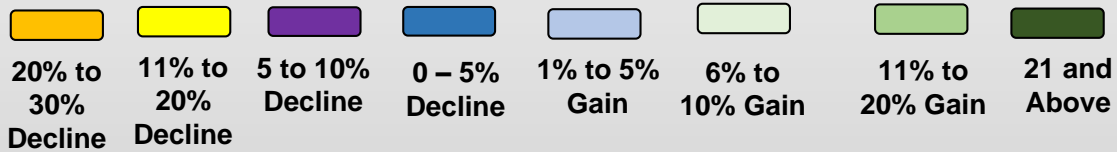
Suggests expected declines are less than expected by PCA's initial projections.

Suggests many state least hurt will also have weakest recovery.

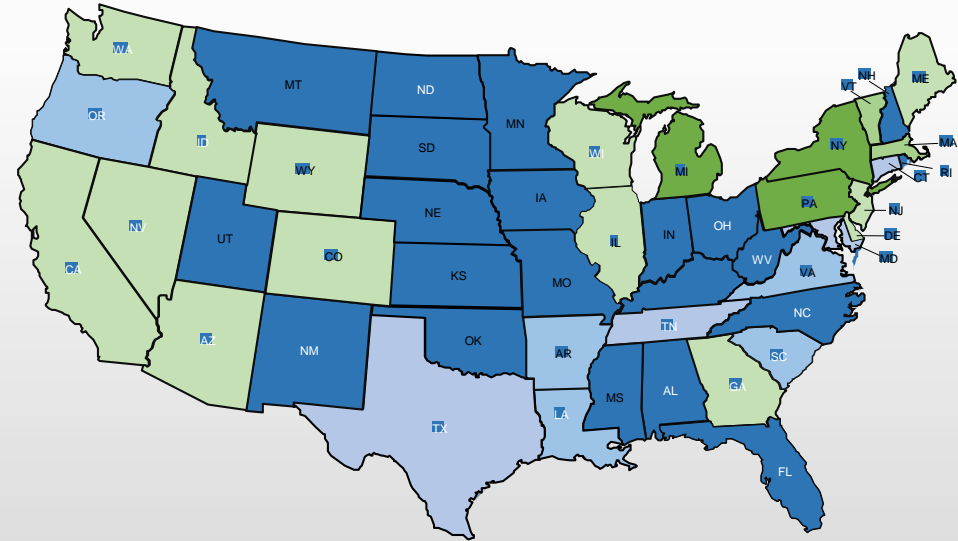
### Second Quarter



### Expected Quarterly Change

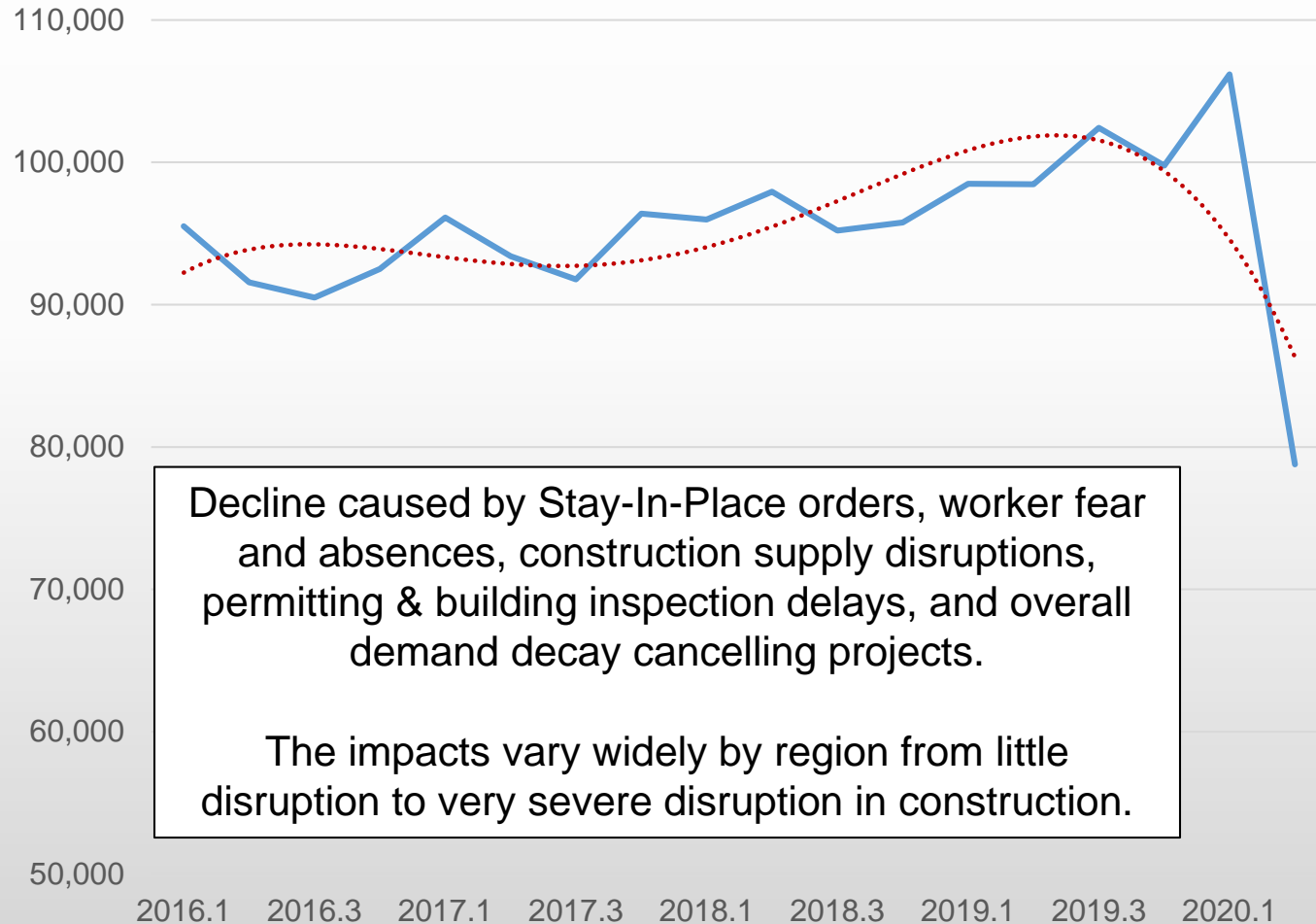


### Third Quarter



# Cement Consumption: The Decline

## Quarterly, SAAR



Decline caused by Stay-In-Place orders, worker fear and absences, construction supply disruptions, permitting & building inspection delays, and overall demand decay cancelling projects.

The impacts vary widely by region from little disruption to very severe disruption in construction.

- The supported by solid economic fundamentals and favorable weather, the US cement market was experiencing healthy growth rates during the second half of 2019.
- These same dynamics generated a strong beginning of the first quarter – with the US market running nearly 10% above year earlier levels.
- The high mortality rate, high transmissibility and lack of vaccine led to Stay-In-Place orders in 43 states. Construction was exempt from stay-at-home orders in most states.
- Despite its exempt status from Stay-In-Place, the sudden loss in economic strength, a drop in oil prices, worker fear resulting in worker shortages, supply disruptions including PPE, delays in permitting and inspections all worked together to displace construction activity.
- Following a strong first quarter, second quarter cement consumption is **expected to decline 20% nationally.**

# Near Term Cement Consumption Estimates

# Adjustments from Early April Projections

- Second quarter projections reduced from roughly 31% to 20%.
- PCA had assumed Stay-In-Place orders would remain in place through June 30 (end of second quarter).
  - Staggered re-openings now materializing – in some cases more than one month earlier than assumed.
- CDC reduced its death projections from 100,000-200,000 to 65,000 – this reduces fear.
  - Among consumers & workers.
- More data has come in. Macroeconomic data, cement industry market growth surveys, CEO surveys, member call-arounds, construction exec call arounds, peer economist call-arounds.
- Adapted and modified our assumptions and compared various approaches toward predictive modelling.
- **Note:** The following projections *do not include a medical remedy to Covid*. They also *exclude an Infrastructure Stimulus program*. While this is a possibility, it would likely take time to implement, and yield the impact cement consumption during the 2020-2021 period only minimally.

# The Alphabets of Recovery



V

A Sharp deep decline, followed by a robust recovery.

- **No scarring.**
- Jobs come back quickly.
- Business returns.
- Consumer spending and confidence returns.
- Huge Pent-up released.
- Virus does not return.



U

A Sharp deep decline, followed by a period of slow recovery, and then a more robust recovery.

- **Some Scarring.**
- Jobs come back slowly.
- Many businesses close.
- Consumer spending is hurt by debt, and lacks confidence .
- A slow shallow process of recovery.
- Virus does not return.



L

A Sharp deep decline, followed by a very lackluster recovery.

- **Deep scarring.**
- Prolonged recovery in jobs.
- Many businesses closed and are cautious in hiring..
- Consumer confidence does not recovery quickly. Spending decline prolonged.
- Virus does not return.



W

A Sharp deep decline, followed by a robust recovery and a slide back into recession.

- **Some scarring.**
- Jobs come back quickly.
- Business returns.
- Consumer spending and confidence returns.
- Huge Pent-up released.
- **Virus Returns.**



# The Scarring of the Economy

- The sheer numbers of unemployed suggest scarring.
- Contrary to the design of the program, Relief has been delayed.
- Demand destruction caused by Stay-In-Place order will be replaced by demand destruction caused by the planned disruption in the economy.
- Business working capital is worked down on a daily basis – even with relief programs. Even if these small business survive their ability to recover, rehire & respond may be scarred by the downturn.
- Consumer's will remain fearful of Covid, despite removal of Stay-In-Place orders. The combination of fear, stressed household funds suggests a tepid consumer recovery.
- Both the consumer and business have endured tremendous “scarring” and that scarring will likely continue in the months ahead.

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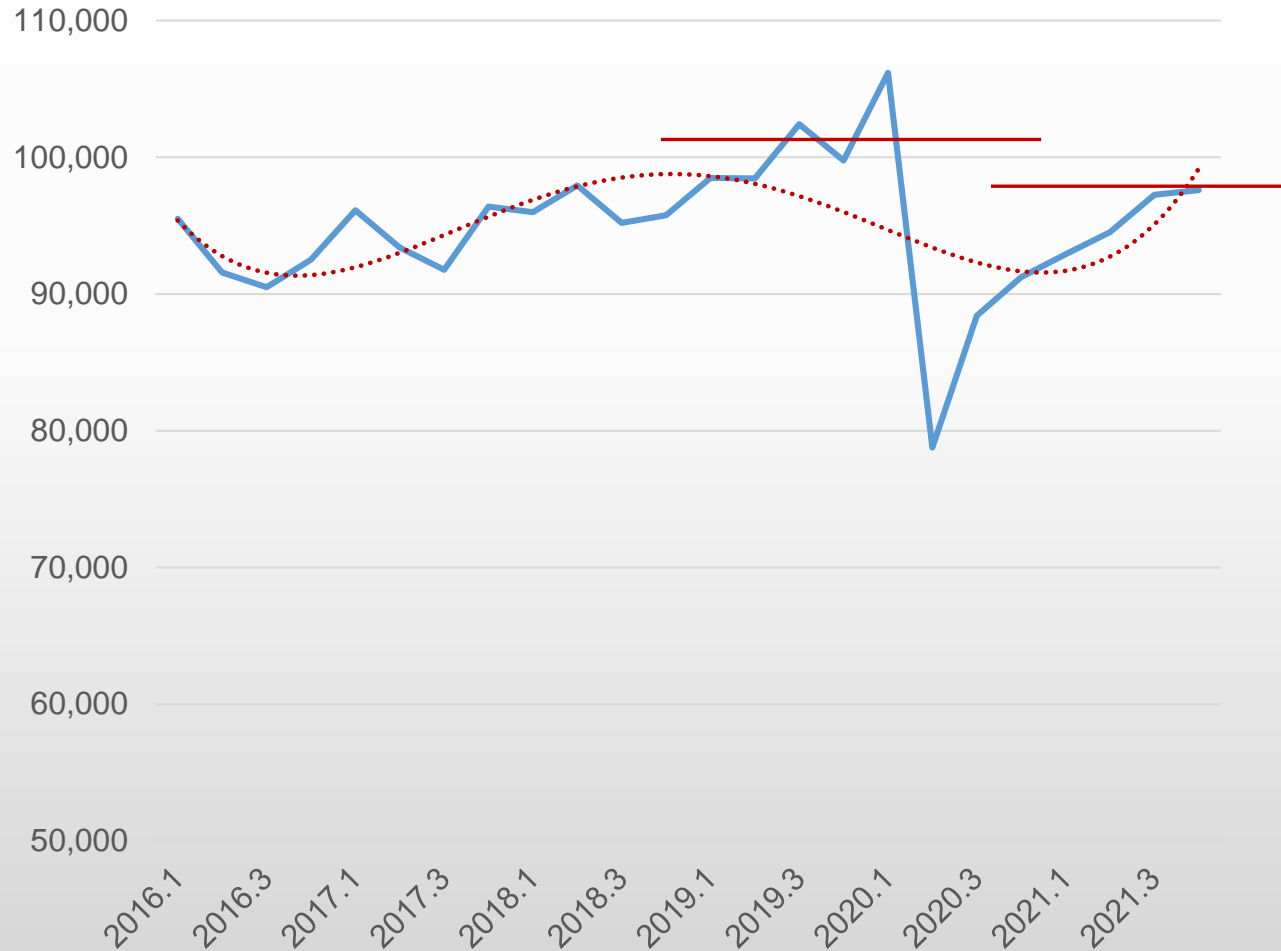
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# Cement Consumption: U Recovery

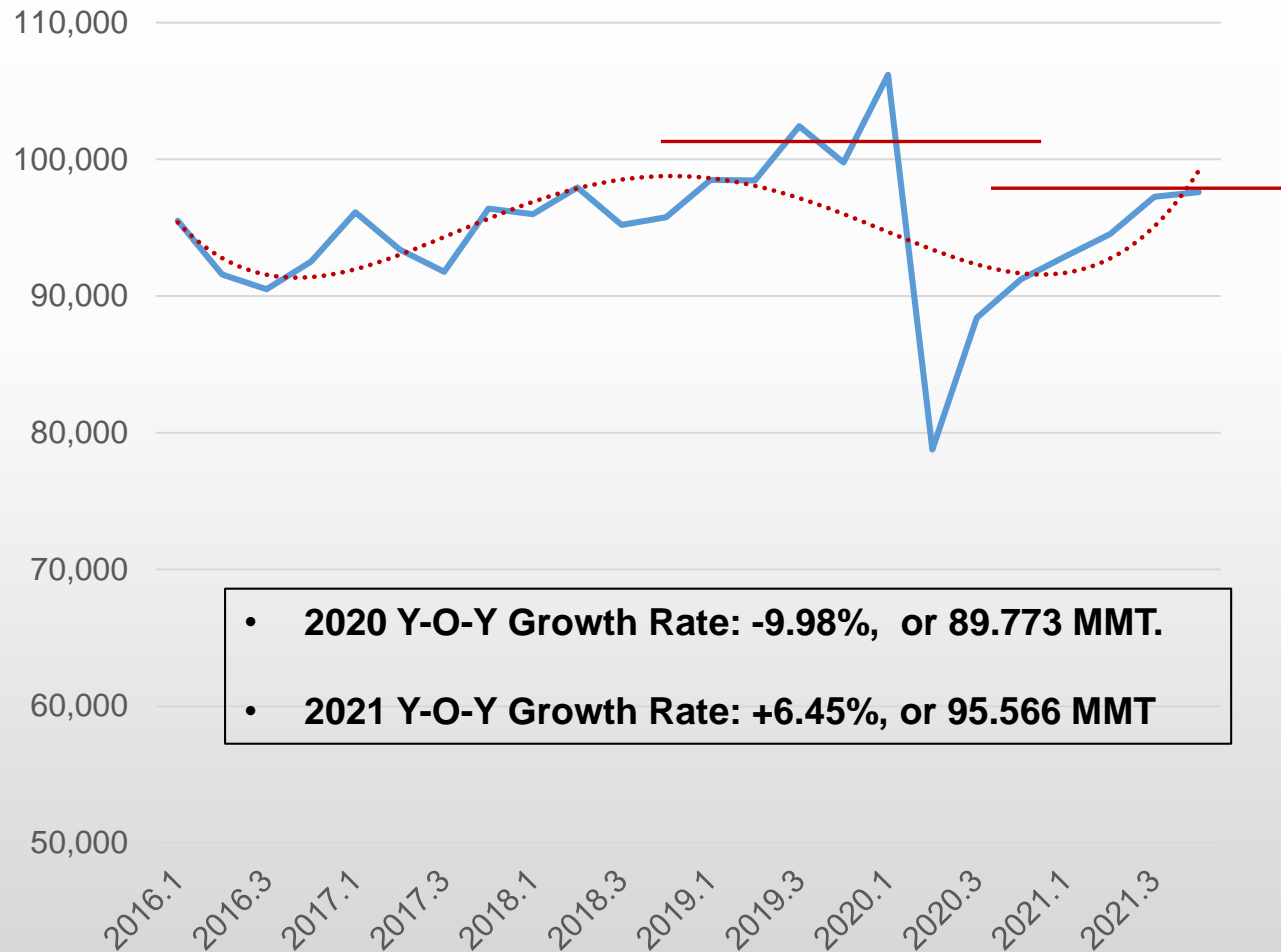
## Quarterly, SAAR



- The economy has suffered dearly. More than one million businesses could fold. Unemployment, at its depths, will likely exceed 25%. Despite Federal government support efforts, too much scarring has occurred to expect a rapid recovery.
- Federal government spending programs are not stimulus whose affect are measured in higher GDP growth rates. Rather they are a floor and measured in how much further declines in growth and recovery would have happened.
- While Stay-In-Place orders will be rescinded by the third quarter, the economy will begin to grow again. Construction project backlogs will be worked off and the pipeline of new projects is expected to be lacking.
- Consumer fear will likely linger – to the detriment of the economic recovery. Many decisions to invest in new building activity are likely to be postponed until clarity emerges – to the detriment of residential and non-residential construction activity.
- State fiscal conditions, will be in shambles – adversely impacting public construction later in the cycle.
- The collapse in oil prices will add to the decay.

# Cement Consumption: U Recovery

Quarterly, SAAR



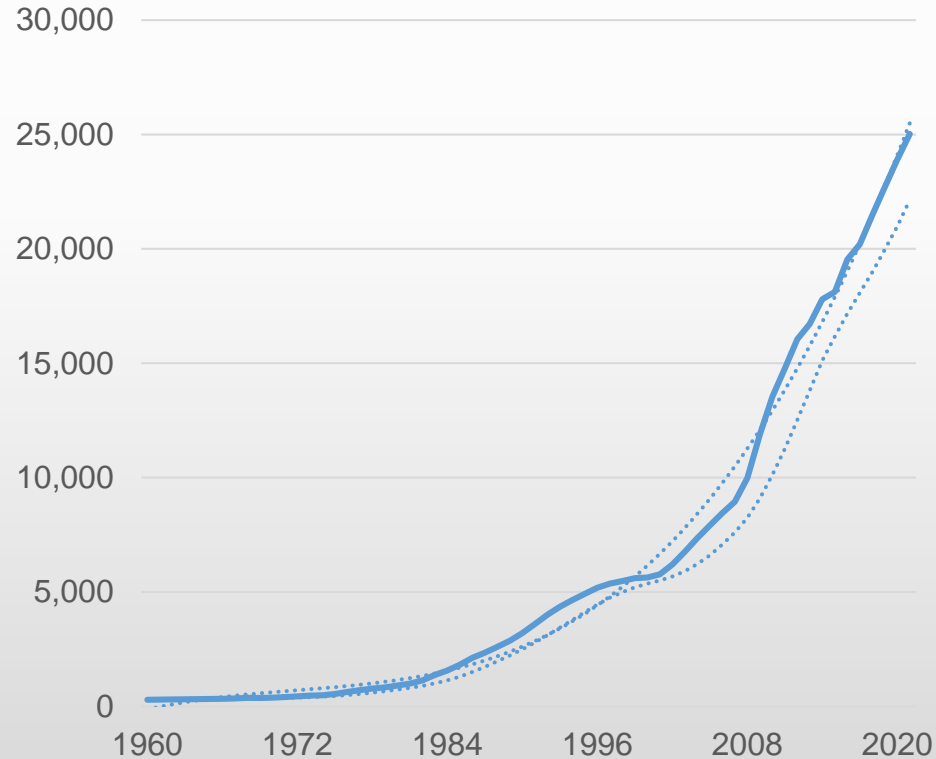
PCA has deployed displacement and recovery schemes for each state by construction category. Based on this approach, pre-Covid cement SAARs are not reached this year or next

To achieve a U recovery:

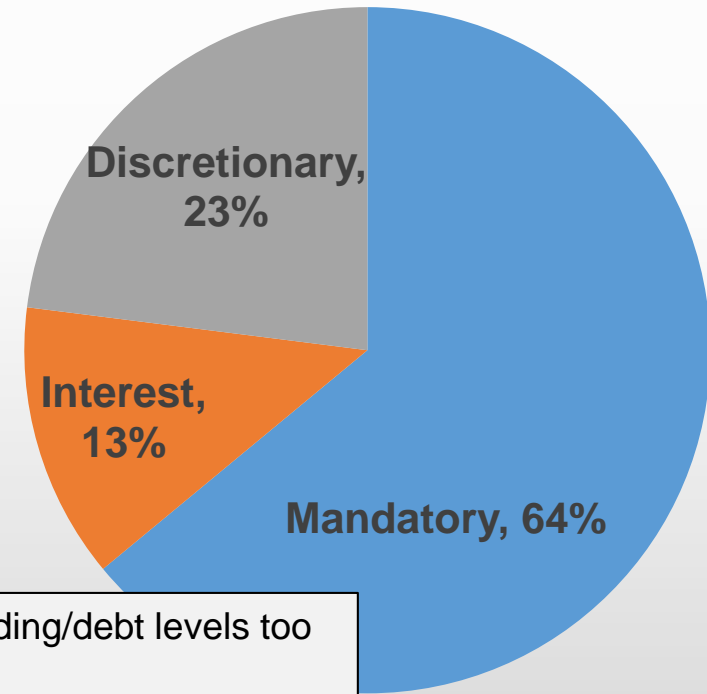
- Covid must not re-appear. This implies that states' removal of Stay-In-Place orders are timed similar to CDC projections and do not result in a re-appearance.
- Business and household financial scarring must be limited so as not to forestall a recovery.
- Consumer confidence must return amid the continued presence of Covid.
- The Federal Reserve must inject more liquidity into the economy (perhaps \$2 to \$3 trillion), **Congress must issue more safety-net spending (perhaps \$2 trillion).**
- States must be included in new safety net spending.

# Federal Debt

## Federal Debt Trillion \$



## Composition of Spending Share of Total

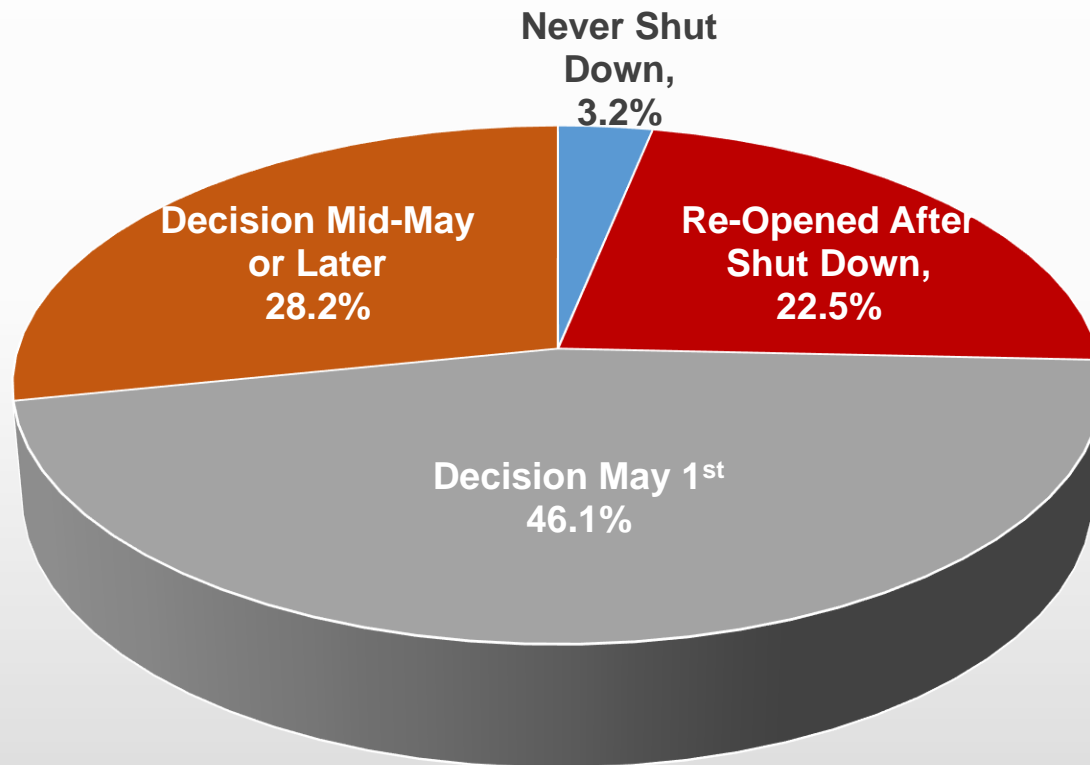


Concerns that spending/debt levels too high.

May temper further spending and size of the infrastructure program if it happens.

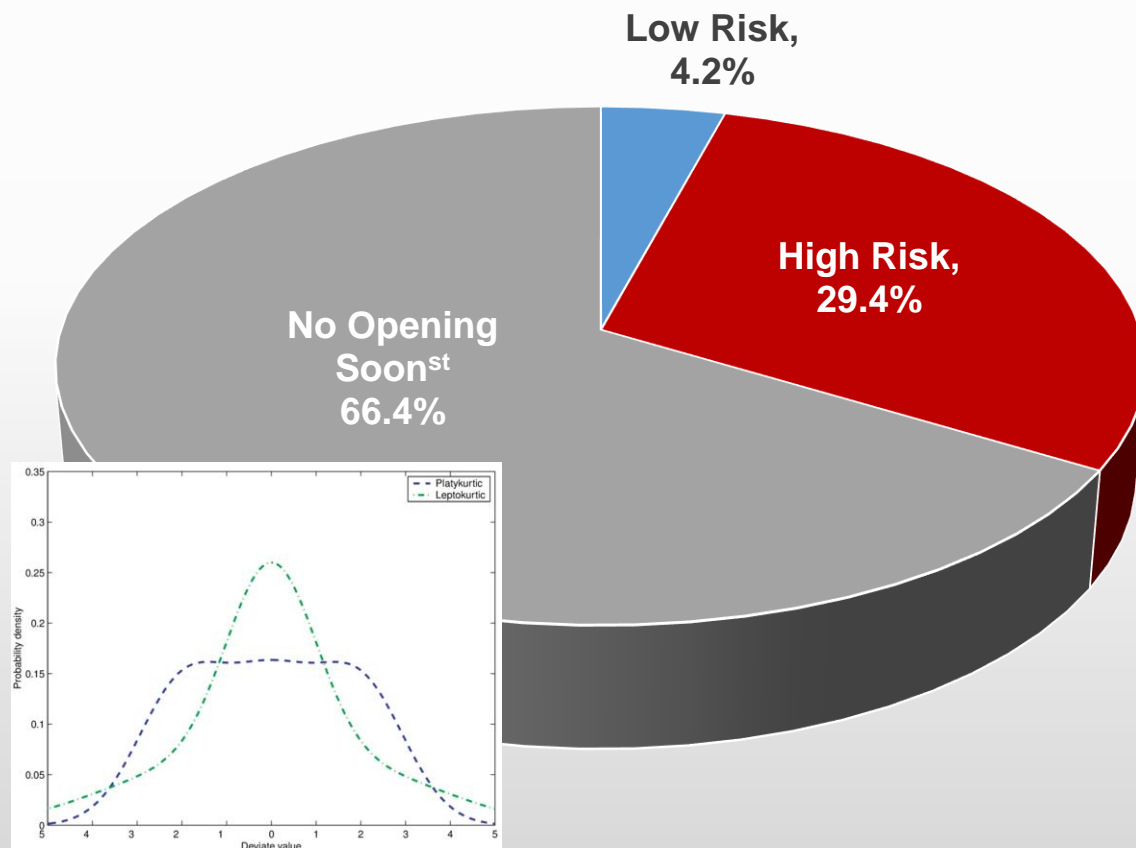
# Risks Associated With State Re-Openings

# Re-Opening the Economy



- 43 States, accounting for more than 96% of the population, had Stay-In-Place Orders in their states that severely restricted commerce.
- Re-opening the economy has significant impacts on the timing of recovery.
- Re-opening the economy has significant impacts on the risks of the virus re-appearing.
- States representing 46% of the US population will decide whether to extend or remove existing stay-in-place orders.
- The next week will have a significant impact on near term economic growth as well as the risks of the virus re-appearing.

# Re-Opening the Economy

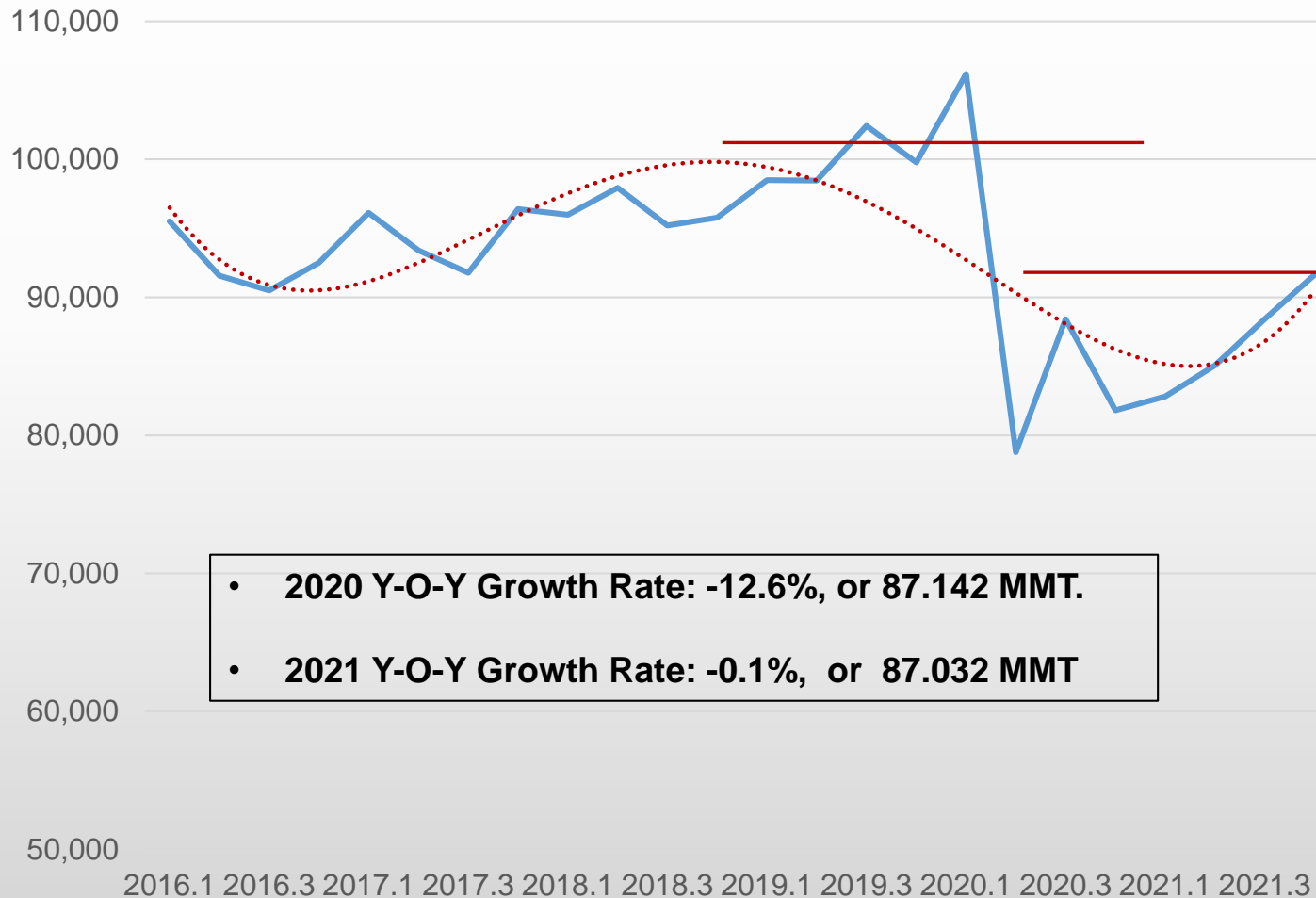


- States have announced opening dates.
- The University of Washington models that project new Covid cases daily for every state.
- PCA compared the announced re-opening dates against CDC re-opening guidelines of 14 days sustained decline in new cases.
- We categorize the re-openings between high or low risks.
  - High Risk - More than 10 days too early compared to CDC guideline.
  - Low Risk – Less than 10 days too early.
- Once states have been categorized, they are weighted by population. This represents the risk of Covid spread.



# Cement Consumption: W Recovery

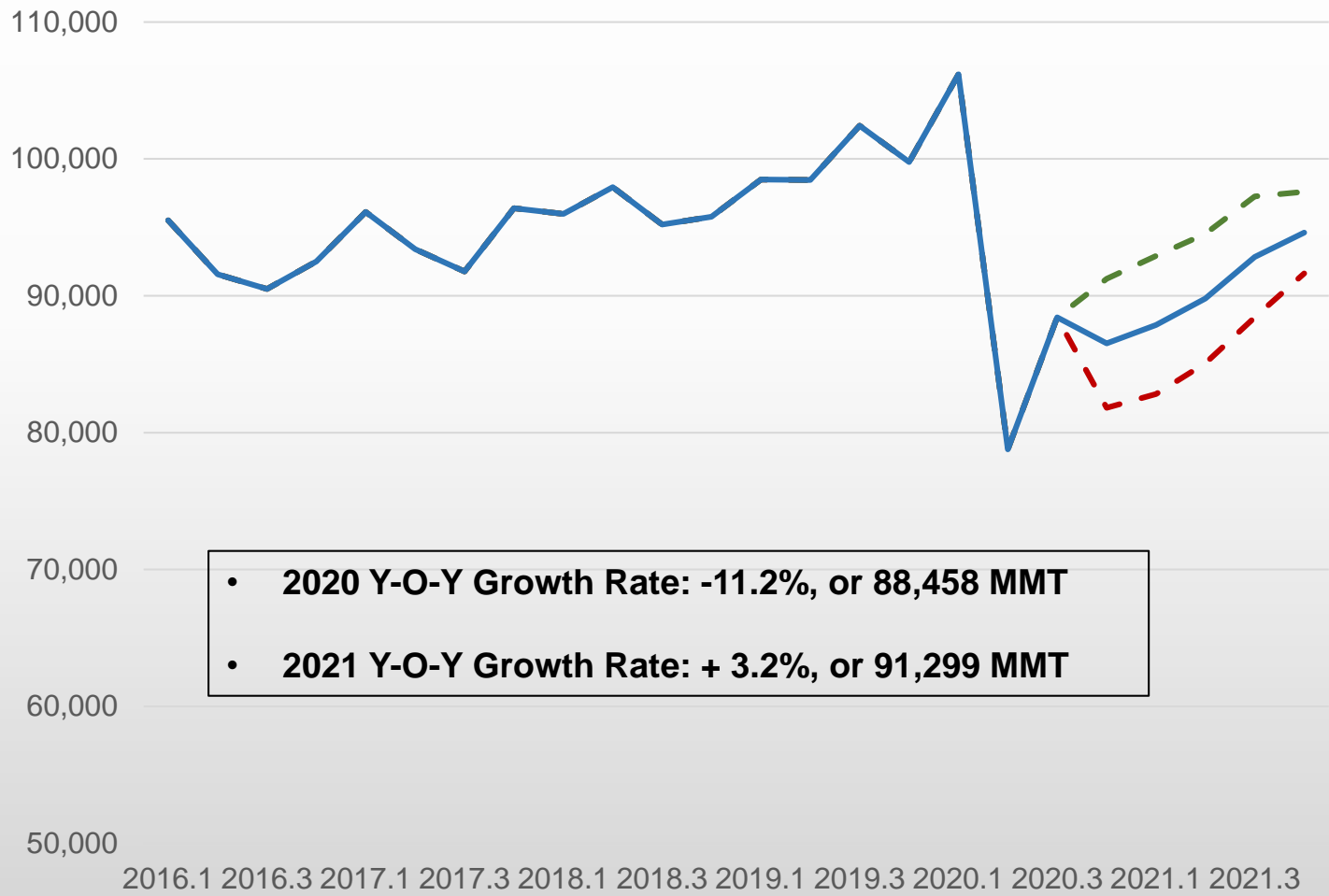
Quarterly, SAAR



- The W recovery mirrors the U until the third quarter 2020.
- Covid cases gradually build due to the relaxation of Stay-In-Place orders. Some third quarter displacement of economic activity materializes in third quarter.
- With the return of Covid strength, either states and cities enact some measures and or business/consumer retrench.
- Fear is high. A fearful consumer pushes the economy back into retreat.
- Favorable factors that were beginning to materialize in the third quarter disappear.
- The impact has more of an impact on 2021 cement consumption than 2020.
- Past Cyclical Peak Not reached until 2023. One year later than U recovery.

# Cement Consumption: Merged Scenarios

Quarterly, SAAR



- **2020 Y-O-Y Growth Rate: -11.2%, or 88,458 MMT**
- **2021 Y-O-Y Growth Rate: + 3.2%, or 91,299 MMT**

## Point Estimate

- The potential of a U recovery and an oddly shaped W have roughly equal probability. The possibility of a V or an L have equal but much lesser likelihood of materializing.
- Assigning equal 50% weighting to both the U and W scenarios results in our guidance.

## Key take-aways.

- There are tremendous risks to the forecasts.
- Assumptions made regarding the virus, and political decisions to control it, weigh heavily in the outlook.
- Business & consumer scarring reduce the likelihood of a rapid V recovery.
  -
- Either U or W, the recovery to past peak levels will take some time to materialize.
  - 2022 for the U. 2023 for the W.
- Growth rates will vary widely depending on region.

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