

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 in a registered trademark symbol (®).

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Briefing: Coronavirus Impacts on the US Cement Industry

Ed Sullivan, SVP & Chief Economist
March 26, 2020

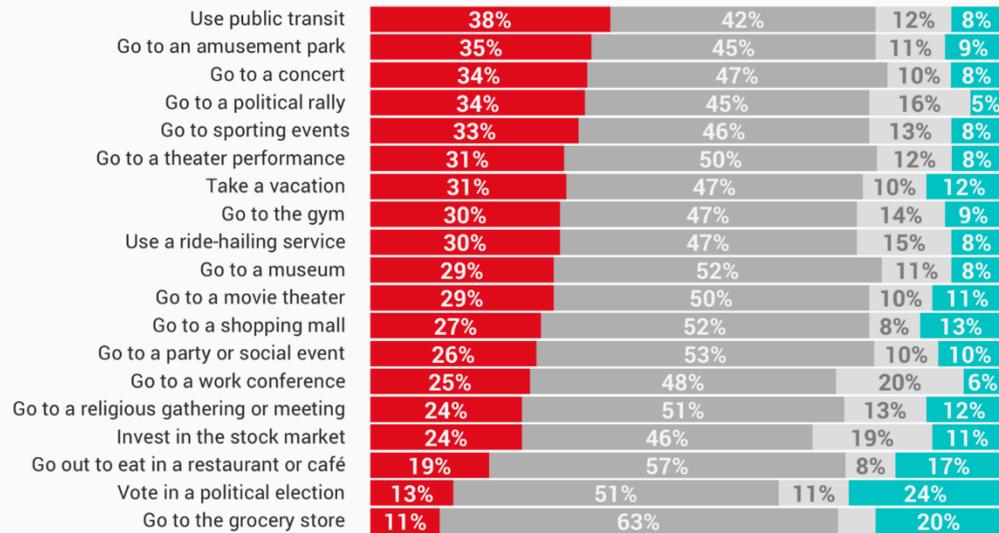
Macroeconomic Conditions

Risk, Fear & Consumer Reaction

Amid Coronavirus's Spread, One-Third of Adults Less Likely to Attend Concerts, Sporting Events

Based on what you know about the coronavirus, are you currently more or less likely to do the following?

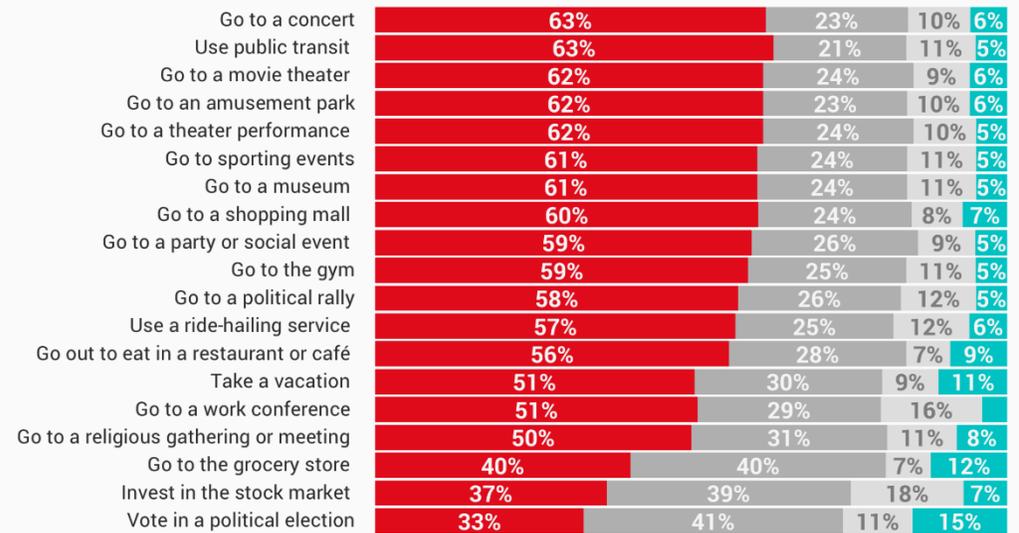
■ Less likely ■ Neither more nor less likely ■ Don't know/No opinion ■ More likely



If Coronavirus Hits Closer to Home, Majorities Would Opt Out of Movies, Shopping and Eating Out

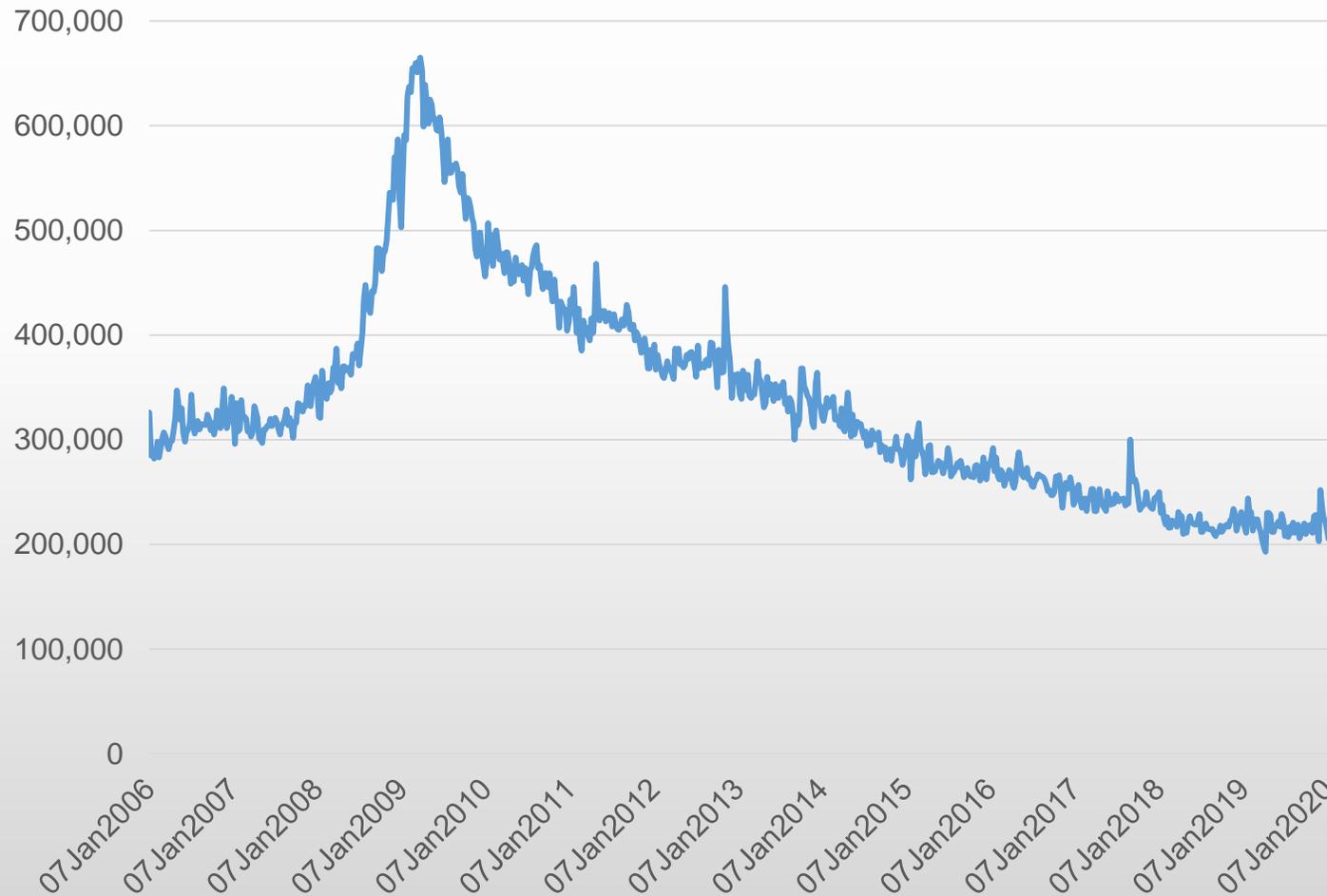
If coronavirus were to spread to your community, would you be more or less likely to do the following?

■ Less likely ■ Neither more nor less likely ■ Don't know/No opinion ■ More likely



Weekly Unemployment Claims

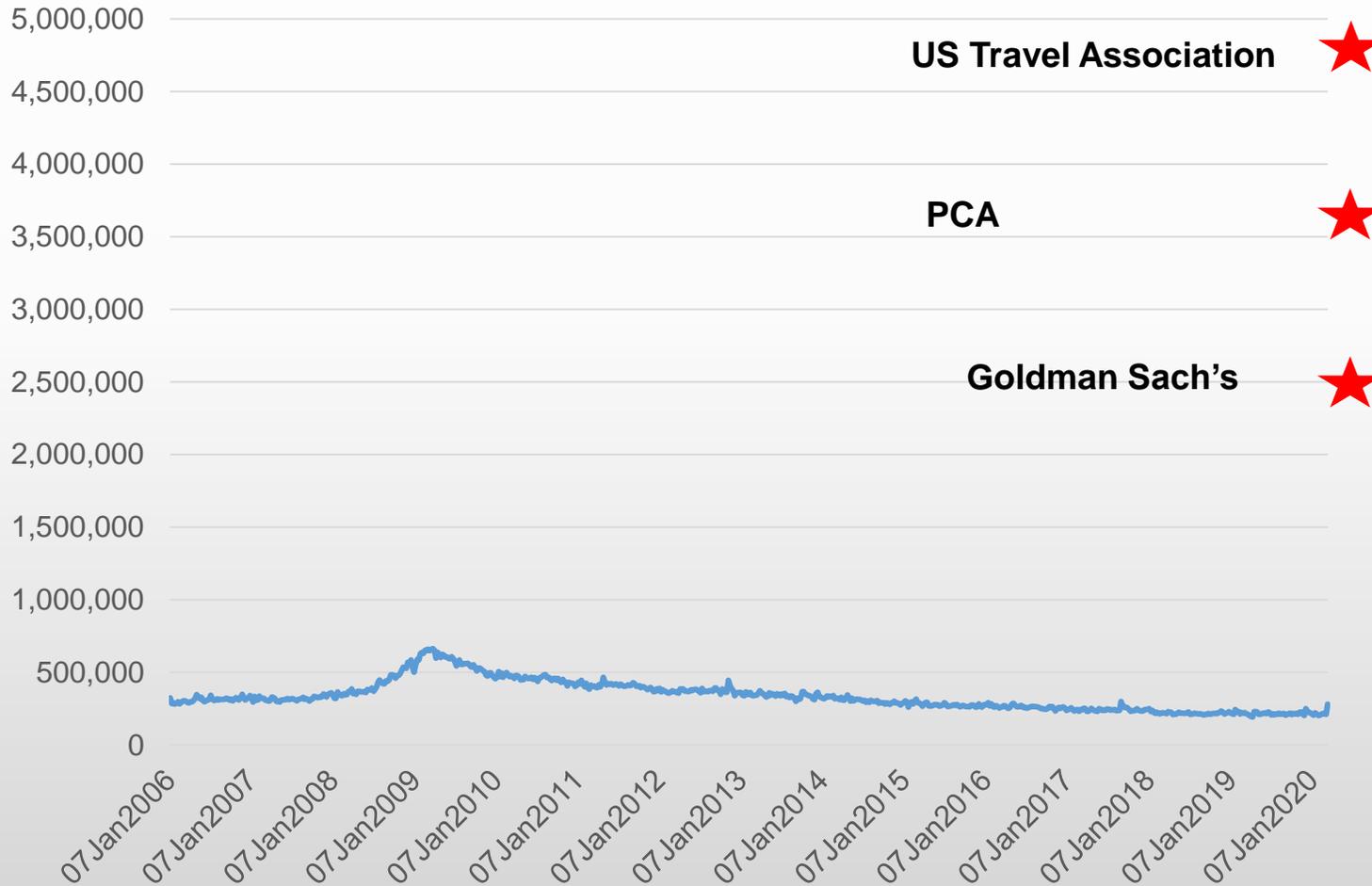
Number of new claims



- During the great recession weekly new unemployment claims reached a peak at roughly 650,000 new claims.
- With the recovery, new unemployment claims settled to a range of 210,000 to 220,000 – all consistent with a very healthy economy.
- For the week ending March 14th, claims increased 33% to 281,000. Under normal times this would be disconcerting.
- PCA is expecting the weekly unemployment claims data over the next few weeks could exceed 3 million – or five times the rate at the height of the great recession.
- The disruption to the labor market in such a short period of time is unparalleled in US history.

Weekly Unemployment Claims

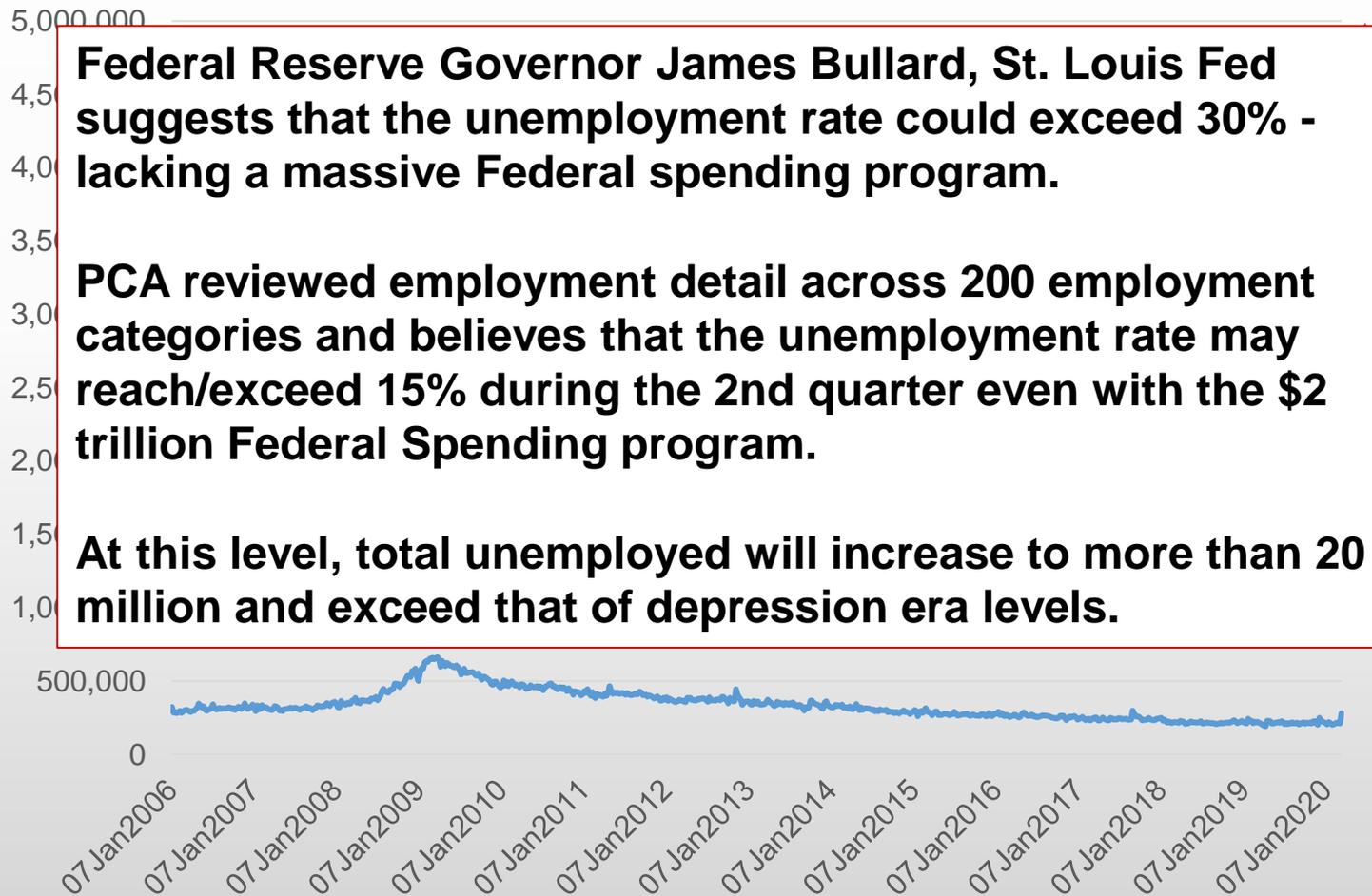
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- The disruption to the labor market in such a short period of time is unparalleled in US history.
- Federal rescue programs could also reduce the disruption.
- Even with Federal help, PCA is expecting the weekly unemployment claims data over the next few weeks could exceed 3 million – or five times the rate at the height of the great recession.
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Weekly Unemployment Claims

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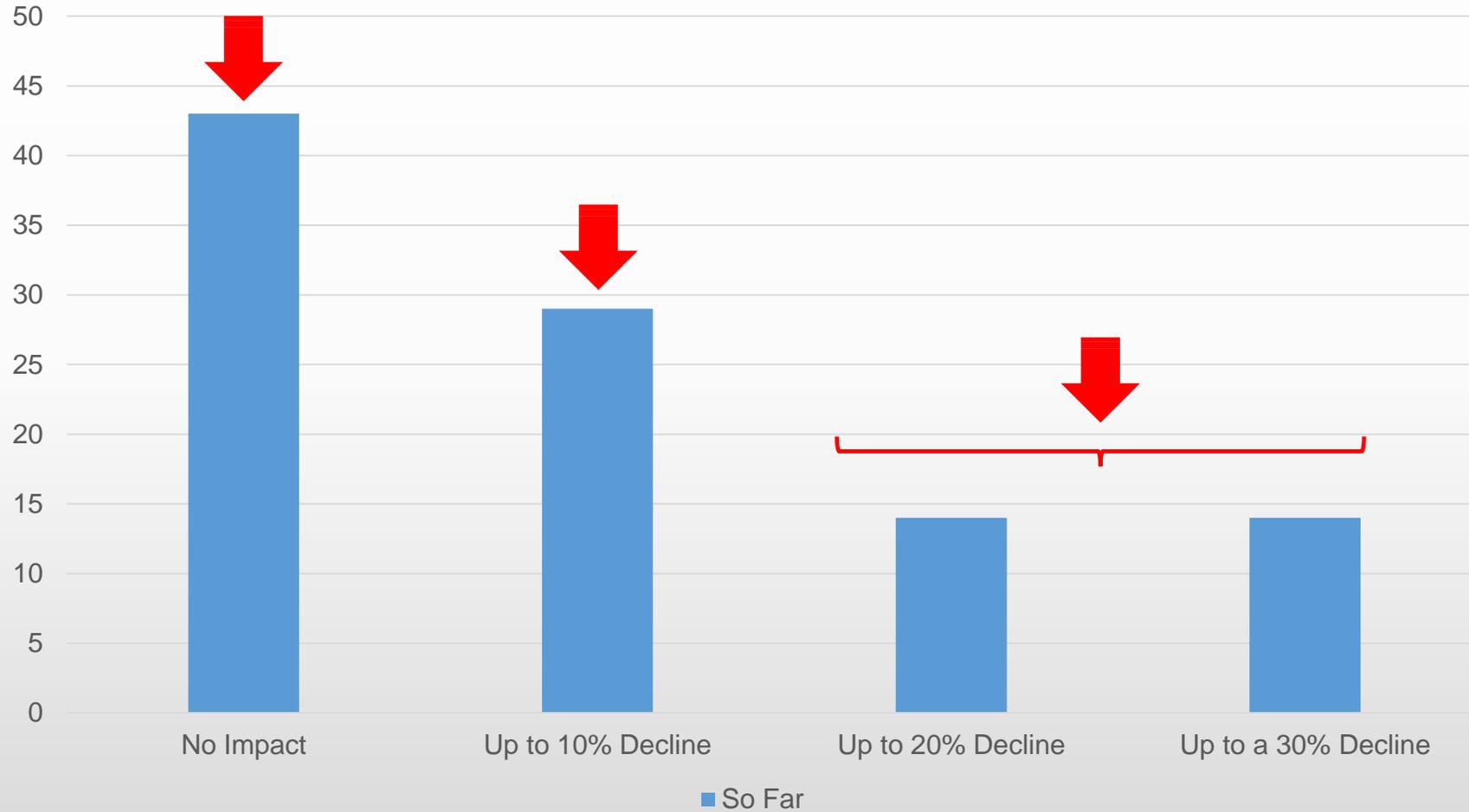


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Industry Pulse

Survey of Cement CEOs

“To what extent have you experienced shipment declines as a result of the coronavirus disruption”



CEO Survey

- Little or no disruption in raw materials experienced thus far. The disruptions that have occurred relate to equipment deliveries, face masks, and sanitizers.
- No plant has been shut down. No layoffs have been reported. A small number reported a reduction in shifts.
- The environment is dynamic and more data and clarity is needed to make decisions regarding future decisions.

Fiscal & Monetary Policies

Federal “Stimulus” Programs

The \$2 Trillion “Stimulus” program is designed as a bridge for the most economically vulnerable to make it through to mid-year. It is not to be confused with the “Stimulus” program initiated during the great recession which was aimed at jump starting economic growth.

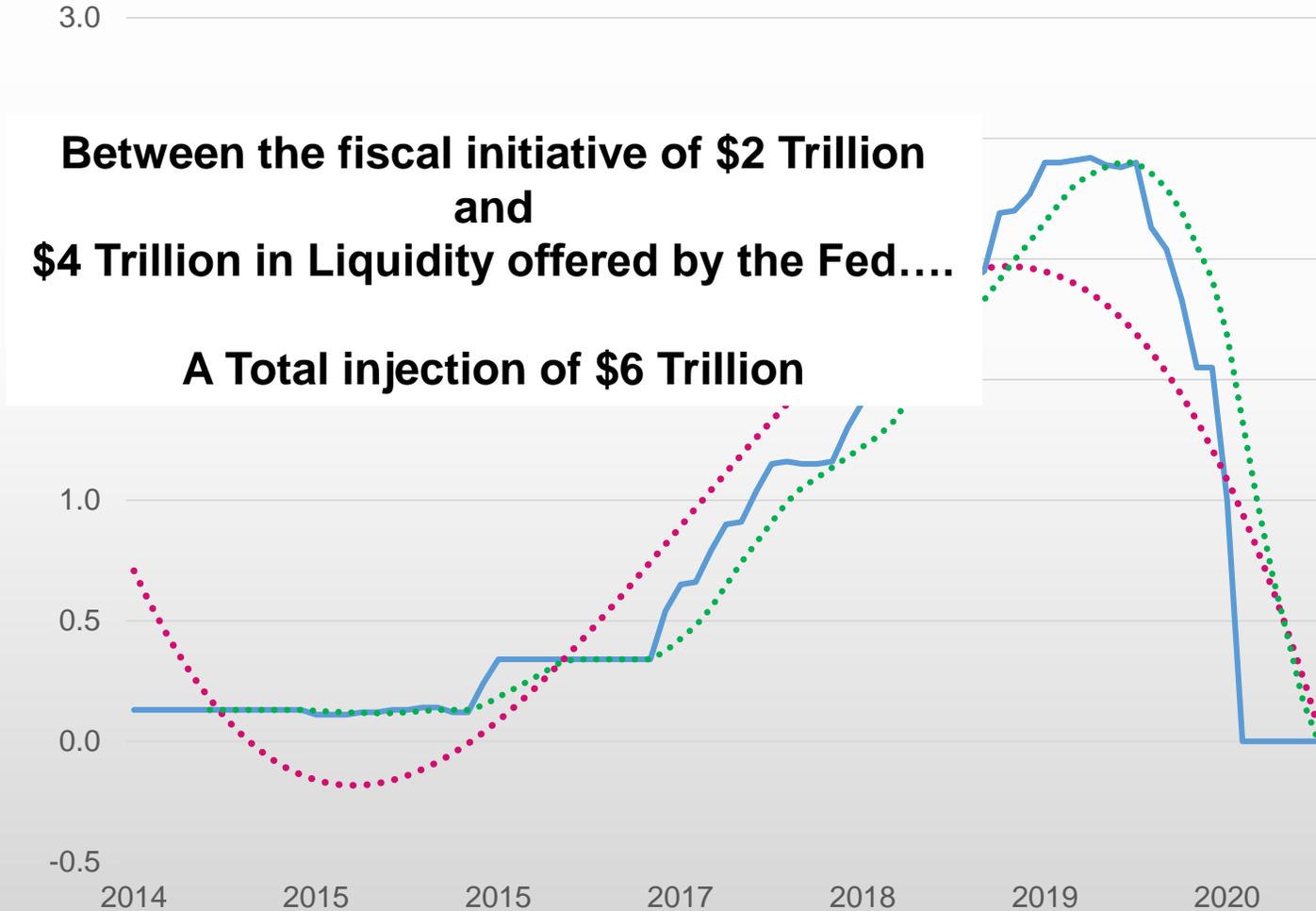
Unlike the “Stimulus” program of the great recession (that contained an accent on infrastructure), the current “Stimulus” program has NO direct impact on cement consumption.

The new program will keep the most vulnerable in the game. It will place a floor on how devastating this impact on the economy, communities and humanity.

It will not lead directly to a significant increase in cement consumption.

Interest Rates

Monthly Mortgage Rates



- Fed cut FF rate to zero.
- By buying financial assets the Fed aims to add liquidity and working capital borrowing. (up to \$4 Trillion). Sustenance borrowing.
- As the virus' impact dissipates, eyes focus on the recovery.
- Not a typical recession recovery. Policy uncertainty will likely prevail even as the recovery materializes.
- Even in context of healing, Fed likely to keep rates at zero to insure recovery.
- This may support a vibrant recovery once the virus is in-check.
- Other actions

Quick & Dirty Near Term Cement Consumption Estimates

State Stay-In-Place Impacts on Construction

PCA's MI reviewed potential impacts on cement consumption on a county-by-county basis assessed the impact of the covid-19 virus' impact in areas under stay-in-place orders (State/City/County edicts), stay-in-place with construction exempt, and areas that are not currently covered by a stay-in-place order.

- Currently, 884 counties of a total 3,071 are under stay-in-place orders (28.8%).
- Totalling each county's historical cement consumption, this impacts 47.6% of the US cement market.
- Most, but not all, of the Stay-In-Place edicts exempt construction.
- Disruptions to cement consumption directly attributed to Stay-In-Place orders totals 373 counties and by itself reduces cement consumption by 4.7 million metric tons on an **annual basis**, or roughly 5% of total.

State Stay-In-Place Impacts on Construction

Just because the state exempts construction activity from Stay-In-Place orders doesn't mean that construction will go on unimpeded. There are several factors to consider in adjusting construction activity where concerns are elevated in Stay-In-Place areas.

Construction activity can be displaced by:

- Cancellation of projects.
- Shortages of N95 respirator face masks.
- Shortages of building materials.
- Shortages of building inspectors.
- **Illnesses (Perhaps accelerated by “Exempt” employee status).**

The Stimulus Bills do not directly address these concerns

State Stay-In-Place Impacts on Construction

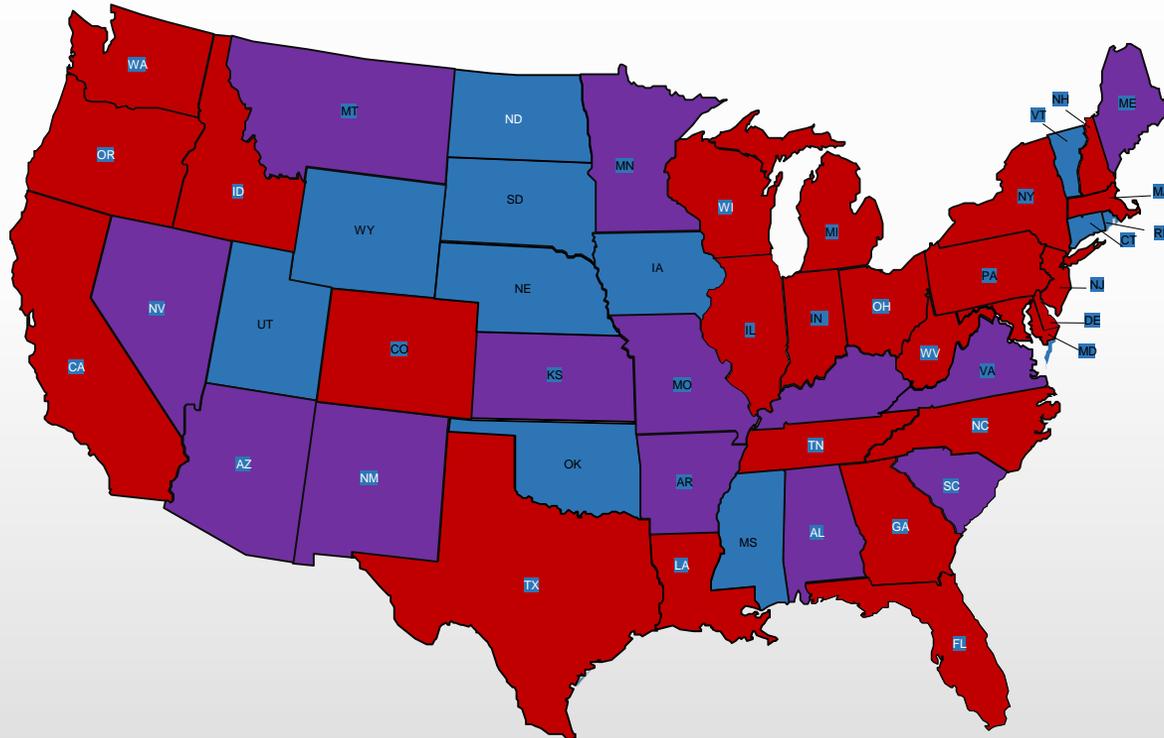
- We assume that areas that have stay-in-place orders in place are extremely vulnerable and concerned about the near term impacts of the virus. This concern is reflected not only by the local governments, but also by consumers, builders, and workers.
- On a county-by-county basis PCA adjusts cement consumption among Stay-In-Place areas. A different displacement scheme is applied to residential, nonresidential and public cement consumption.
- We apply the same displacement scheme in each Stay-In-Place region. Because of the heightened concerns about the virus, the displacement is larger in these areas.
- While a more accurate effort could be undertaken it would take considerable time modelling. We are assuming that PCA members would like to get an rough and dirty estimate today rather than a more elegant modelling wit results delivered in months.

Other Areas Impacts on Construction

- The adverse impact on construction caused by the Covid-19 virus is not restricted to just Stay-In-Place areas.
- Construction can be displaced by (1) Cancellation of projects, (2) Shortages of N95 respirator face masks, (3) Shortages of building materials, (4) Shortages of building inspectors, (5) worker illnesses.
- We assume that areas that have ***not issued*** stay-in-place orders in place are ***less vulnerable*** and concerned about the near term impacts of the virus. This concern is reflected not only by the local governments, but also by consumers, builders, and workers.
- We apply the same displacement scheme in each of the ***non*** Stay-In-Place regions. Because of the lessened concerns about the virus, the displacement is smaller in these areas.

Cement Consumption Outlook: March-June

Percent Change, Year Ago



Expected Declines

0 – 6%
Decline

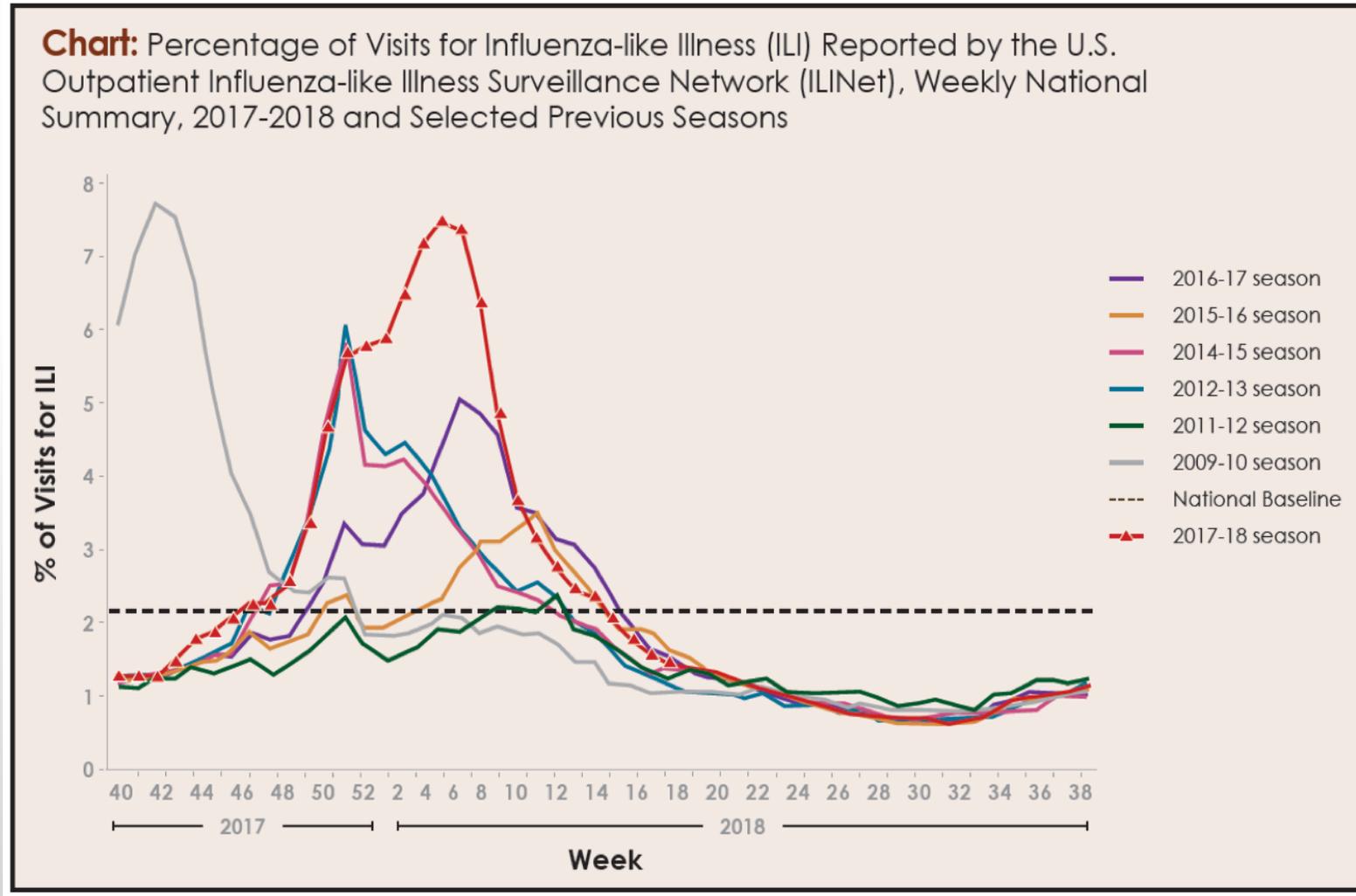
7% to 10%

11% and
Above

West North Central	-7.5%
West South Central	-10.7%
New England	-44.8%
East North Central	-17.2%
Middle Atlantic	-49.0%
South Atlantic	-15.4%
East South Central	-9.0%
Pacific	-23.9%
Mountain	-10.2%
United States	-17.4%

The Length & Depth of the Crisis

Typical Length of Influenza-Like Illnesses



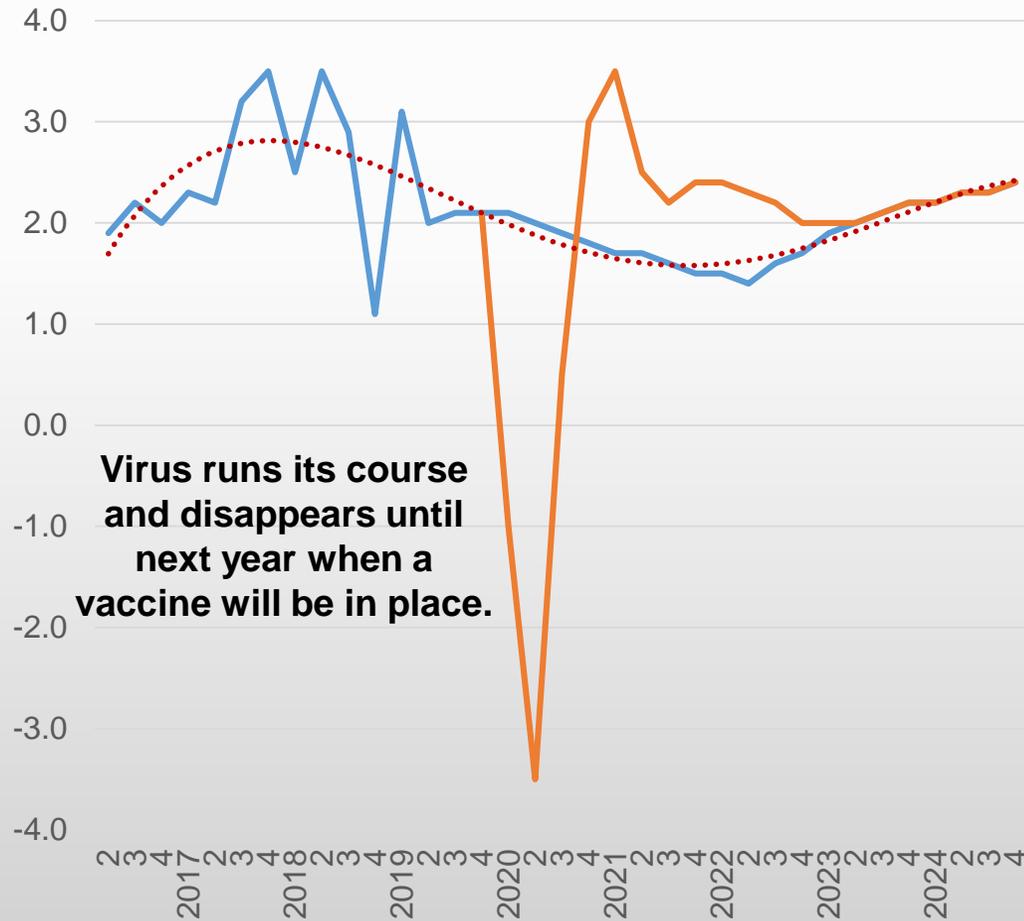
No idea of the breadth, depth and length of the virus' spread.

- Most viral influenza-like illnesses run from December through April. Coinciding with cooler temperatures.
- Beginning to Peak – 3 weeks.
- Peak to Dissipation - 3 weeks.

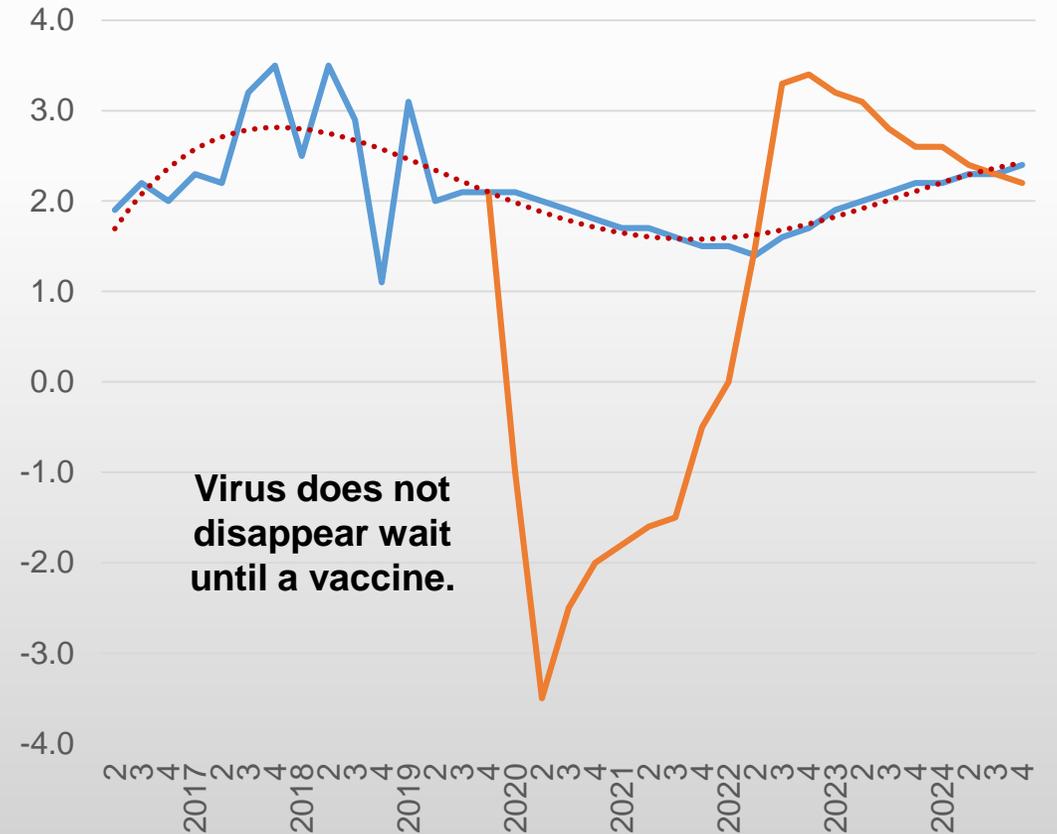
IF, coronavirus follows similar pattern, this suggests it will dissipate by the end of the first 6 months 2020.

But, what if it is a double hump? Like Hong Kong, just when the virus had passed, it re-emerged when it tried to return to normal.

Real GDP Growth Outlook: US Exposed Coronavirus Impact Percent Change, %



Real GDP Growth Outlook: US Exposed/No Dissipate Coronavirus Percent Change, %



What Does The Recovery Look Like

What Will the Recovery Look Like

- What will all this do to the Federal Debt? How will we corral this long term problem? Higher taxes? Cuts in entitlements? Lower longer term GDP growth rates?
- Will US companies/government re-examine supply chain sourcing?
- Will consumer buying habits change? Will the trend toward e-retail accelerate? Does this mean an even greater decline in retail construction activity?
- With a crisis induced reliance on “work at home” serve as a trial for companies resistant to such practices? Will this reduce typical office construction practices?
- Will home learning impact secondary education practices. Perhaps leading to less need for college classrooms and reduced tuition fees? Potentially reducing education construction and perhaps long term adding to residential construction (less student loan debt)?
- Will it result in a review of lending practices? With the Federal Reserve injection of liquidity, outstanding CLO could have dealt a tremendous blow to the financial system.

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