“Evolving Risks”

- Economic Fundamentals
- Coronavirus
- Elections
Economic Fundamentals
Job creation remains robust but the rate of new jobs added declines as the recovery ages.
Inflation Rates

Labor Costs
Quarterly Growth

Value of the Dollar
Composite
Interest Rates

Inflation Rate
CPUI, Annual % Change

Interest Rates
Monthly Mortgage Rates
Strength & Duration of U.S. Recoveries

Real GDP Percentage Growth From Previous Trough

Note: Australia’s economy has been expanding for 27 years
• Currently, 50% of all Major Metro Areas are now in Late Cycle Stage.

• The last two downturns occurred roughly 12 months after at least 60% of the Major Metro area reached Late Cycle Stage.

• As Late Cycle Stage takes hold, the local economies typically have less momentum to stave off relatively minor economic adversities.
Real GDP Growth Outlook: 1st Cut

Growth Anchored on “Main Street”
Fundamentals:
Consumer Spending & Labor Market

Growth Rates Ebb:
Late cycle in recovery, economy more vulnerable.
Coronavirus Short-Run Impact
Coronavirus in Perspective

Influenza: US

- Deaths: 61,000
- Hospitalizations: 810,000
- Infections: 45,000,000

Coronavirus: Worldwide

- Deaths: 3,038
- Hospitalizations: 16,000
- Infections: 88,000
Why Coronavirus is Disruptive to Economy

Economic Impacts are different than the typical Flu because of the fear generated by the high mortality rate & the method of containment – quarantine is disruptive to the demand and supply side of the economy.

- **Mortality Rates:**
  - Influenza: 0.1%
  - Coronavirus: 2.2%

- **Containment:**
  - Influenza: Vaccine
  - Coronavirus: Quarantine
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?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Less likely</th>
<th>More likely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use public transit</td>
<td>38%</td>
<td>12%</td>
</tr>
<tr>
<td>Go to an amusement park</td>
<td>35%</td>
<td>12%</td>
</tr>
<tr>
<td>Go to a concert</td>
<td>34%</td>
<td>11%</td>
</tr>
<tr>
<td>Go to a political rally</td>
<td>34%</td>
<td>10%</td>
</tr>
<tr>
<td>Go to sporting events</td>
<td>33%</td>
<td>10%</td>
</tr>
<tr>
<td>Go to a theater performance</td>
<td>31%</td>
<td>10%</td>
</tr>
<tr>
<td>Take a vacation</td>
<td>31%</td>
<td>9%</td>
</tr>
<tr>
<td>Go to the gym</td>
<td>30%</td>
<td>9%</td>
</tr>
<tr>
<td>Use a ride-hailing service</td>
<td>30%</td>
<td>8%</td>
</tr>
<tr>
<td>Go to a museum</td>
<td>29%</td>
<td>8%</td>
</tr>
<tr>
<td>Go to a movie theater</td>
<td>29%</td>
<td>8%</td>
</tr>
<tr>
<td>Go to a shopping mall</td>
<td>27%</td>
<td>8%</td>
</tr>
<tr>
<td>Go to a party or social event</td>
<td>26%</td>
<td>7%</td>
</tr>
<tr>
<td>Go to a work conference</td>
<td>25%</td>
<td>7%</td>
</tr>
<tr>
<td>Go to a religious gathering or meeting</td>
<td>24%</td>
<td>6%</td>
</tr>
<tr>
<td>Invest in the stock market</td>
<td>24%</td>
<td>5%</td>
</tr>
<tr>
<td>Go out to eat in a restaurant or café</td>
<td>19%</td>
<td>5%</td>
</tr>
<tr>
<td>Vote in a political election</td>
<td>13%</td>
<td>4%</td>
</tr>
<tr>
<td>Go to the grocery store</td>
<td>11%</td>
<td>3%</td>
</tr>
</tbody>
</table>

Poll conducted Feb. 28-March 1, 2020, among 2,200 U.S. adults, with a margin of error of 4.7%. Figures may not add up to 100% due to rounding.

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?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Less likely</th>
<th>More likely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Go to a concert</td>
<td>63%</td>
<td>23%</td>
</tr>
<tr>
<td>Use public transit</td>
<td>63%</td>
<td>21%</td>
</tr>
<tr>
<td>Go to a movie theater</td>
<td>62%</td>
<td>20%</td>
</tr>
<tr>
<td>Go to an amusement park</td>
<td>62%</td>
<td>19%</td>
</tr>
<tr>
<td>Go to a theater performance</td>
<td>62%</td>
<td>17%</td>
</tr>
<tr>
<td>Go to sporting events</td>
<td>61%</td>
<td>16%</td>
</tr>
<tr>
<td>Go to a museum</td>
<td>61%</td>
<td>15%</td>
</tr>
<tr>
<td>Go to a shopping mall</td>
<td>60%</td>
<td>14%</td>
</tr>
<tr>
<td>Go to a party or social event</td>
<td>59%</td>
<td>13%</td>
</tr>
<tr>
<td>Go to the gym</td>
<td>59%</td>
<td>12%</td>
</tr>
<tr>
<td>Go to a political rally</td>
<td>58%</td>
<td>12%</td>
</tr>
<tr>
<td>Use a ride-hailing service</td>
<td>57%</td>
<td>10%</td>
</tr>
<tr>
<td>Go out to eat in a restaurant or café</td>
<td>56%</td>
<td>9%</td>
</tr>
<tr>
<td>Take a vacation</td>
<td>56%</td>
<td>8%</td>
</tr>
<tr>
<td>Go to a work conference</td>
<td>51%</td>
<td>7%</td>
</tr>
<tr>
<td>Go to a religious gathering or meeting</td>
<td>51%</td>
<td>7%</td>
</tr>
<tr>
<td>Go to the grocery store</td>
<td>50%</td>
<td>6%</td>
</tr>
<tr>
<td>Vote in a political election</td>
<td>40%</td>
<td>5%</td>
</tr>
</tbody>
</table>

Poll conducted Feb. 28-March 1, 2020, among 2,200 U.S. adults, with a margin of error of 4.7%. Figures may not add up to 100% due to rounding.
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.
Real GDP Growth Outlook: US Contained Coronavirus Impact

Percent Change, %

- **Critical Assumption:** Some US exposure but virus and fear is largely contained.
- Panic & fear contained in USA.
- US exports hurt, supply chains disrupted, tourism decline.
- Some imported construction materials delayed.
- Consumer reduces buying pace. Travel, dining out, services reduced. Some stockpiling.
- Fed cuts rates. All interest rates lower. But, tighter lending standards.
- Oil prices lower (baseline reflects EIA projection of a 15.7% reduction in WTI).
Real GDP Growth Outlook: US Exposed Coronavirus Impact

Percent Change, %

- Critical Assumption: The virus is not contained. No anti-virus. Focus on quarantine.
- Fear spreads. Outright panic. Consumer spending is impacted.
- Consumers stay home. Business & personal travel declines severely.
- Federal government support in form of paid sick leave and bridge loans.

Partial analysis
• **Critical Assumption:** The virus is not contained. No anti-virus. Focus on quarantine.

• Fear spreads Consumer spending is impacted.

• Consumers stay home. Business & personal travel declines severely.

• Business failures increase. Banks tighten lending standards. Investment spending recedes.

• Virus induced recession ensues.

• **Partial analysis**

This scenario also assumes that the virus does not dissipate mid-year
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.

Report: China

7 Weeks Ago: 4,000 new cases daily.

Today: 40 new cases.

Closing 12/14 field hospitals due to declining need.
Economic Considerations & the Electoral College
Economic Growth and Presidential Elections

When GDP Growth is less than 1%, incumbent party lost 5 of 6 elections.

When GDP Growth declines 200 basis points, incumbent party lost 6 of last 6 elections.

GDP is above 1%, GDP Growth has declined 120 basis points.
Electoral College Votes Last Five Presidential Elections

- **Electoral College:** 270 Electoral College Votes Required for Election.
  - 196 “blue or typically democrat”.
  - 180 “red or typically republican”.
  - 164 “purple of battleground”.

- 13 states that include 3 Western states, 1 New England state, 2 Mid-Atlantic State, 1 Southern State and 6 Great Lake States.

- **US population changes**, over the years, has been supplemented by outmigration from northern (democratic) states to southern (red/purple) states. From California (blue) to surrounding states (red/purple).

- These trends partially explain the shift in politics in securing a majority in the electoral college.
Electoral College Votes Last Three Presidential Elections

Electoral College: 270 Electoral College Votes Required for Election.
- 233 “blue or typically democrat”.
- 180 “red or typically republican”.
- 125 “purple of battleground”.

Great Lakes Region may hold more importance in the election. And accounts for 81 purple electoral votes (seven states) (15%).
- These are generally older communities and hubs states are characterized by:
  - Slow Growth or a deterioration in population.
  - Manufacturing & agriculture play important roles in economic growth.
  - Slower economic growth rates.
  - Witnesses a decades shift in economic power from manufacturing to high tech.
Issues other than economics play a role in the presidential election that may weigh more heavily in the outcome.
## Basic Policy Assumptions By Party

### Republican Win
- Less likely national climate change initiative.
  - Blue state-by-Blue state initiatives.
- Possible tax cuts similar to 2017.
- Regulatory roll-backs continue.
- Potential of “Significant” new infrastructure program integrating private funds.
- Confrontational trade policies pursued.
- Debt addressed via entitlement reform.
- Tight immigration policies continued

### Democrat Win
- More likely aggressive national climate change initiative.
  - Diffuses state initiatives.
- Possible tax increases on wealthy & estates.
- Regulatory agencies renewed power.
- Potential of “Significant” new infrastructure program.
- More delicate approach toward trade policies.
- Debt addressed via taxes on wealthy.
- More lax immigration policies.
General Forecast Risks

Whoever Wins

- Nothing much will likely impact the economy in 2021.
  - Allowing for policy "gestation" near term economy will perform moderately well through 2021, and absent policy impacts.
- Climate change initiatives will continue.
  - Either at National level, or state-by-blue state.
- Infrastructure supplement ($100 million 5 year) to FAST funding likely to materialize after the election with first pours occurring in 2022.
- National debt continues to expand at an alarming rate. Potential of sequestration renewal.

PCA Outlook Does Not Include

- Unidentified tax or spending programs. Allowing for gestation, this represents risk in 2022 and beyond.
Real GDP Growth Outlook: Coronavirus Impact

Percent Change, %

- Aging recovery but fundamentals solid.
- Baseline Virus impact incorporated.
- Increased vulnerability to threats.
- While “Main Street” usually dictates economic growth, disruptions on “Wall Street” could impact economy via wealth effect and consumer fear.
US Near Term Forecast

**Construction**
Million Real $

**Cement Consumption**
Thousand Metric Tons

### Construction
Million Real $

- 2000: 1,000
- 2005: 1,200
- 2010: 1,400
- 2015: 1,600
- 2020: 1,800

**Cement Consumption**

- 2019: 100,000
- 2020: 120,000
- 2021: 140,000
- 2022: 160,000
- 2023: 180,000
- 2024: 200,000

### US Near Term Forecast

#### Construction

- 2019: -1.9%
- 2020: 1.6%
- 2021: 1.1%
- 2022: 1.7%
- 2023: 2.1%
- 2024: 2.1%

#### Cement Consumption

- 2019: 3.4%
- 2020: 2.4%
- 2021: 1.4%
- 2022: 1.8%
- 2023: 2.5%
- 2024: 2.7%

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**Notes:**

- The data for both construction and cement consumption shows a general upward trend from 2019 to 2024.
- The construction data indicates a slight decline in 2019, followed by a steady increase.
- The cement consumption data shows a significant growth from 2019 to 2024.

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**Source:**

- [PCA](https://www.pcausa.com) - America's Cement Manufacturers™
Residential
Federal Reserve Rate cut will lower already low mortgage rates.

Even in context of low mortgage rates areas of affordability pressures exist.

Millennials and Gen X more important as a share of home buying population.

Student debt

Forecast remains more than 40% below past peak.

Relatively modest upward adjustment adds more than one million tons to cement consumption.

Source: PCA
Multifamily Housing Starts

Units

• Home affordability issues add to rental and condo.

• Trend toward urbanization.

• Federal tax changes on S&L deductibility.

• Strong dollar favors foreign investment.

• Aging baby boomers move to condos.

• Vacancy rates low, despite marginally worsening mortgage-to-rent ratios.

• Household formation remains strong.

Relatively modest upward adjustment adds roughly 200K tons to cement consumption.

Source: PCA
Residential Home Improvements

- Government data unreliable and volatile.
- Favorable economic conditions.
- Rising home prices (existing homes).
- Low interest rates for home equity loans.
- Stock of homes continue to rise at a modest rate.
- All suggest a bullish outlook for this sector.
- PCA discounts the PIP data.

Source: Census, Freddie Mac, PCA
Nonresidential
• Job market strength supports cyclical portions of segment.

• Minor adverse coronavirus impact. Nonres decisions tend to be longer term investments.

• Retail vulnerability partially offset by warehousing.

• Late stage recovery in some markets. Cyclical peak nearing or already reached in most markets.

• Modest growth/declines for cyclical portions of the segment.

• Election could impact construction of outpatient facilities.
Retail Construction
Dodge Contract Awards, Constant $

- Ecommerce is growing at an accelerating pace.
- Big box stores are threatened by the new consumer dynamic.
- Store contract awards has declined 24% in last three years.
- To feed ecommerce new warehouses are being constructed and awards are up 14% in last three years.
- Store construction has a higher intensity than warehouses – representing a drag.
- PCA expects these trends will continue.

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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Stores/Restaurants/Shopping</td>
<td>3.7%</td>
<td>4.7%</td>
<td>5.8%</td>
<td>7.3%</td>
<td>9.0%</td>
<td>11.1%</td>
</tr>
<tr>
<td>Warehouses/Terminals</td>
<td>3.7%</td>
<td>4.7%</td>
<td>5.8%</td>
<td>7.3%</td>
<td>9.0%</td>
<td>11.1%</td>
</tr>
</tbody>
</table>
Without knowing the extent of the pandemic, estimates are highly speculative.

EIA: Oil prices drop 15.7% through the second quarter of 2020.

By itself and if sustained, consumer spending increases +28 BP, GDP +20 BP. Offsets manufacturing decline.

Update: WTI -31% today. Adds to consumer spending, if sustained & by itself, adds 35 BP.

Adds to global growth.

Coronavirus scenarios speculate that oil markets return to normalcy in second half of 2020.

Significant downside risk as high as a 900K MT decline – taking or roughly 100BP from the growth rate.
Public
S: 2301 America Transportation Infrastructure Act

Federal-Aid Highway Authorizations

Averages 13% More Annually 2022-2024

Street & Highway Cement Consumption

Averages 2 Million MT More Annually 2023-2024
S: 2301 America Transportation Infrastructure Act

Federal-Aid Highway Authorizations
Averages 13% More Annually 2022-2024

Street & Highway Cement Consumption
Averages 2 Million MT More Annually 2023-2024
State Funding Dynamics

State Medicaid Payments
$ Million

State Gas Tax Increases
2013-2020, Incremental Gain, $ Million
The Regional Outlook
Regional Cement Trends: Through 2021
Based on year-over-year % Growth

Source: PCA 2020 Winter State Forecast
Weather Impacts on Regional Performance
Markets With Severe Labor Shortages- 2019 (91%)

Total Construction Spending (2009$) relative # of unemployed workers

2018 (84%)
2017 (64%)

Source: PCA
Key Assessments

- Fundamentals of the economy are sound.

- The economy is in the late stages of the business cycle and growth rates are expected to edge down.

- Aside from external shock, the potential of a recession is 1 in 5.

- The Coronavirus could have considerable adverse impact on growth, or just result in adjustments to the timing of economic activity.

- 2019 fourth quarter momentum in housing continues in 2020 and is amplified by the recent cut in interest rates.

- Oil prices are expected to decline during the first half of 2020 and recovery in second half – cutting oil well cement consumption and adding money to consumers pockets.

- The decline in retail construction is expected to continue.

- Continuing resolutions of FAST, and pro-active state government funding initiatives are expected to characterize the highway spending environment.

- Labor shortages will remain in place throughout much of the forecast horizon.

- PCA has positioned its longer term assumptions such that only modest adjustments to the forecast will be necessary depending on the outcome of elections.

- Cement consumption is expected to grow 2.4% in 2020 and 1.7% in 2021.

- Growth will favor the Southwest and the South Atlantic.
Cement Outlook
Ed Sullivan, SVP & Chief Economist
March 2020 | Las Vegas, Nevada