Economic, Construction & Cement Outlook: Cyclical & Structural Changes Resulting From COVID-19

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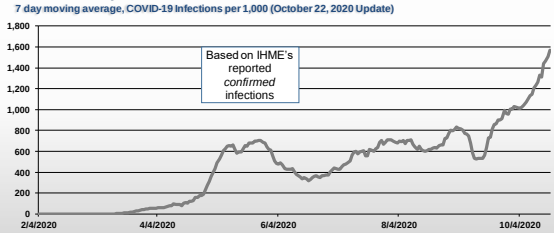
November 2020

Presentation Focus

1. Macroeconomic & COVID-19 Data
2. Construction, & Cement Outlook By Sector
3. Longer Term Considerations

IHME Daily Infection - Minnesota

7 day moving average, COVID-19 Infections per 1,000 (October 22, 2020 Update)



Source: IHME

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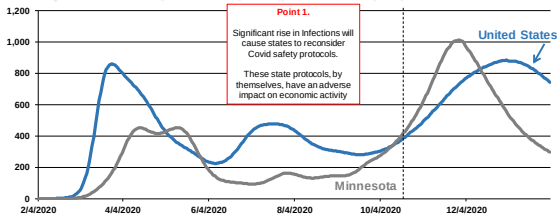
IHME Projected Daily Infection Rates --Per Capita

New Daily COVID-19 Infections per Million of Population (October 22, 2020 Update)

Based on IHME's estimated infections which include those not tested as well as asymptomatic



Point 1.

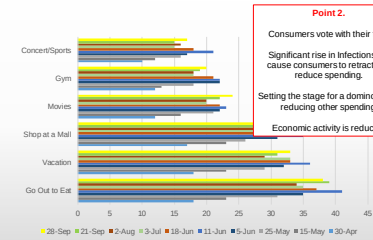
Significant rise in Infections will cause states to reconsider Covid safety protocols.

These state protocols, by themselves, have an adverse impact on economic activity

Source: IHME, Census, PCA

4

Are you Comfortable Going to…..



Point 2.

Consumers vote with their feet.

Significant rise in Infections will cause consumers to retract and reduce spending.

Setting the stage for a domino effect reducing other spending.

Economic activity is reduced.

- As Covid infections increase, consumer confidence in returning to their "normal" spending activity reverses.
- Recent months showed a stabilization from early August levels – neither improving nor worsening.
- When consumers return to "normal" spending activity will play a key role in the speed at which the economy recovers.
- Consumer spending accounts for 70% of overall economic activity. The slower return to "normal" suggests slower than expected interim growth.

Source: Morning Consult

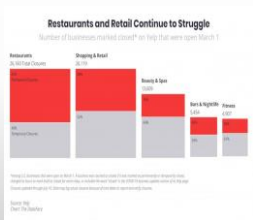
Scarring: Business Closures

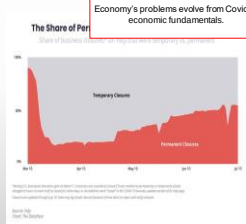
Point 3.

The recovery is proceeding.

The longer sub-normal conditions remain in place, more scarring occurs.

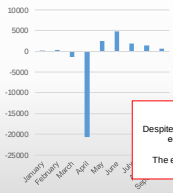
Economy's problems evolve from Covid to economic fundamentals.





Economic Crossroads: An Inflection Point

Change In Employment
- Millions



Consumer Confidence
Composite Conference Board

Point 4.

Despite the highly touted gains in economic activity….

The economy is not healthy.

- By any measure, economic activity crashed during the second half of March through April. GDP suffered a 32% decline. 20 million jobs were lost overnight.
- With the states re-opening business, the economy has shown significant growth. That growth is becoming less robust over the past several months.
- September's job report reinforced this trend. Sector re-openings (hospitality & retail) played key role in the improvement but can not be counted as a longer term driver of jobs.
- Government shed 216,000 jobs. A trend that could grow larger.
- The economy may be at a crossroads.
- With the gradual expiration of the CARES act, in the context of weak economic conditions – risks exist that the recent momentum of the recovery could be lost.

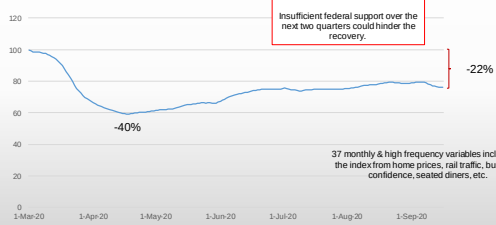
Back to Normal Index

Moody's-CNN Survey 100=March 1st

Point 5.

Federal Support has been spectacularly successful in preventing a deeper and more prolonged decline.

Insufficient federal support over the next two quarters could hinder the recovery.



37 monthly & high frequency variables included in the index from home prices, rail traffic, business confidence, seated diners, etc.

Economic Outlook

The Alphabets of Recovery

U A Sharp deep decline, followed by a period of slow recovery.

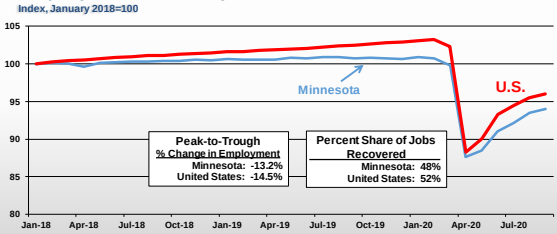
- Some scarring.
- Many business foreclosures. Consumer spending is hurt by debt, and lacks confidence .
- Economic growth is enhanced by relaxation of state policies aimed at restraining the spread of the virus.
- After initial reopening phase, jobs come back slowly reflecting modest growth.
- Fourth quarter increase in Covid (IHME Base Case) – 2,278 daily death rate February 1st compared to 693 October 1st.
- Federal Support continues. $1.5 trillion additional funding. $500 billion to states.
- Consumer confidence slowly improves as Covid deaths ebb throughout 2021.
- Growth slows/pauses in 4th quarter. A slow process of gradual & sustained recovery thereafter.

W A Sharp deep decline, followed by a slow recovery and a slide back into recession due to a significant rise in infections, limited Federal support & pause in state re-openings

- More scarring, particularly in 2021.
- More business foreclosures. More building space is vented into the market. Consumer spending is hurt. Consumers lacks confidence .
- Initially, economic growth is initially enhanced by relaxation of state policies aimed at restraining the spread of the virus.
- Consumer fear and uncertainty re-appear.
- Substantial fourth quarter increase in Covid (IHME High Case) – 5,554 daily death rate February 1st.
- Some state re-opening retrenchment. Some state pausing of re-opening schedule.
- Federal Support continues, but at a lower level. $1 trillion added in further support in early 2021. $333 billion to states.
- The slow shallow process of recovery is interrupted, followed by a two quarter retrenchment in 1st half 2021 GDP growth.

Employment Recovery

Index, January 2018=100



Source: BLS, PCA

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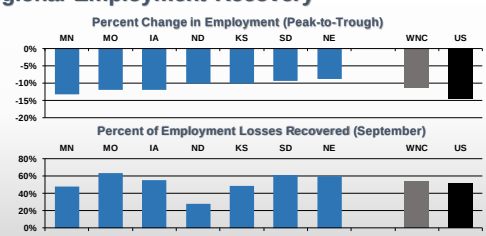
Regional Employment Recovery



Source: BLS, PCA

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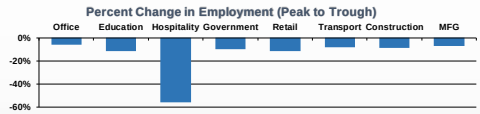
Employment Recovery: Minnesota



Source: BLS, PCA

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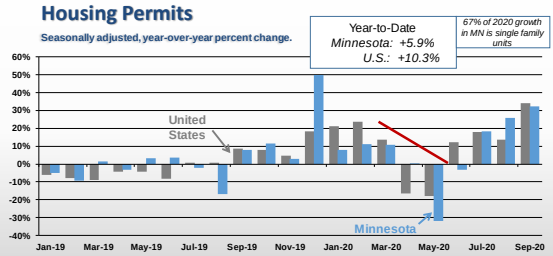
Residential Outlook

Housing Permits

Seasonally adjusted, year-over-year percent change.



Source: PCA

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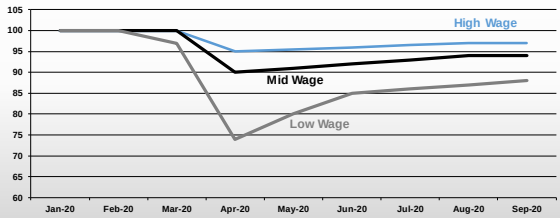
Low Income Households Slowest to Heal in Jobs Recovery

Employment by Income, January 2020=100



Source: BLS, PCA

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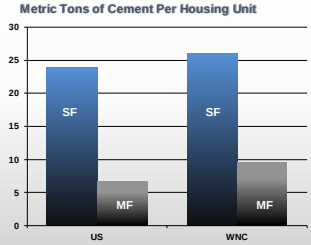
Potential Shift in Homebuyer Preferences?

Metric Tons of Cement Per Housing Unit



- 21% of agents reported buyers seeking the benefits of new homes, such as office space or backyards. (Source: NAR Research Group Survey)
- Potential for intrastate moves from urban to suburban/exurban locations.
- Home ownership rates have returned to a level not seen since 2008 (Minnesota 2005).

Source: PCA, NAR

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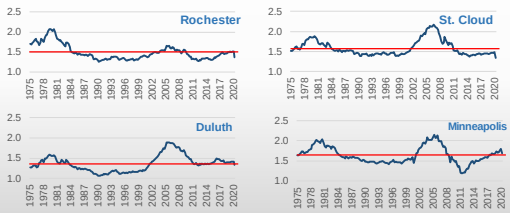
Affordability Conditions

	2006	2018	2021
New Home Price	$243K	$333K	$336K
Mortgage Rate	6.41%	4.56%	2.95%
Monthly Payment	$1,688	$1, 701	$1,409
Median Monthly HH Income	$4,479	$5,479	$5,725
Mo. Pay/Mo. Income	37.7%	31.0%	24.6%

Favorable Regional Home Affordability will Provide Support

Home Price-to-Household Income, SA



Source: NAR, BEA, BOC, Moody's

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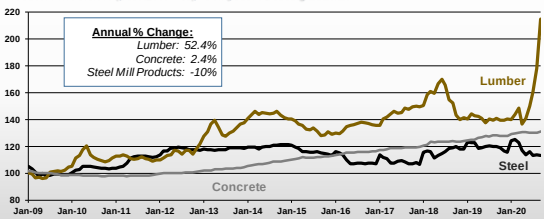
Lumber Cost Increases Could Hamper Housing Surge

Producer Price Indices (Base:2009=100)– Competitive Building Materials



Source: BLS, PCA

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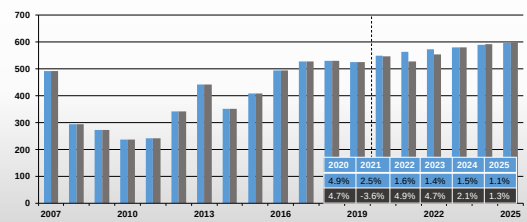
Residential Cement Consumption: Minnesota

Metric Tons (000s)



2020	2021	2022	2023	2024	2025
4.9%	2.5%	1.6%	1.4%	1.5%	1.1%
4.7%	-3.6%	4.9%	4.7%	2.1%	1.3%

Source: PCA

Baseline Scenario

'W' Scenario

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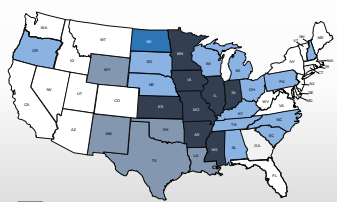
Nonresidential Outlook

Manufacturing, Energy, and Agriculture Exposure



Manufacturing | Energy | Energy & Agriculture | Manufacturing & Agriculture

Source: PCA

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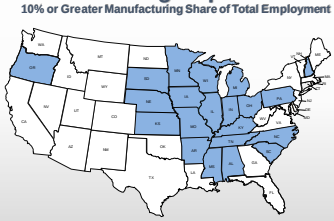
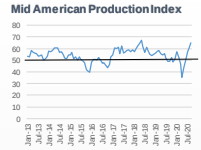
Manufacturing Exposure

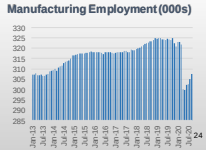
10% or Greater Manufacturing Share of Total Employment



Mid American Production Index



Manufacturing Employment (000s)



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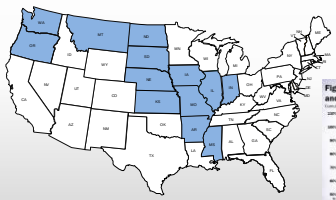
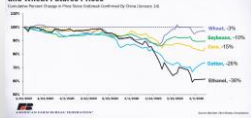
Agriculture Exposure

Crop Cash Receipts 10% or Greater Share of Gross State Product



- Closures of schools, restaurants, corporate cafeterias…have deeply unsettled agriculture futures markets.
- Additionally, reduced demand for ethanol in light of lower gasoline consumption continues to weigh on the market.
- Meat processing plant closures have created a bottlenecks and subsequent end-market price increase which has lowered demand.

Figure 1. Impact of COVID-19 on Corn, Cotton, Ethanol, Soybean and Wheat Futures Prices



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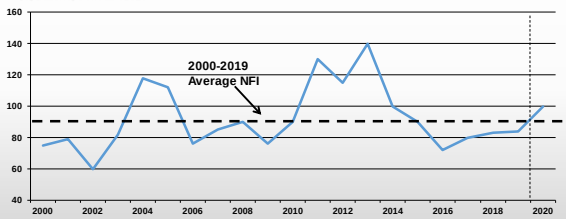
Net Farm Income

$s, Billions, Constant 2020



Source: USDA

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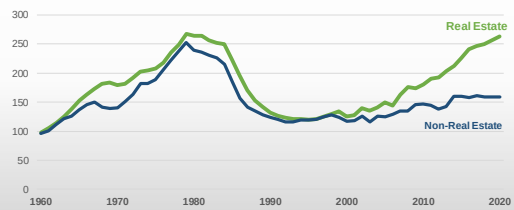
U.S. Farm Debt

Real 2019 $s, billions



Source: U.S. Department of Agriculture (USDA): Farm Income and Wealth Statistics

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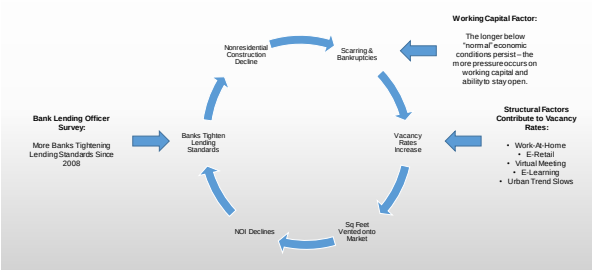
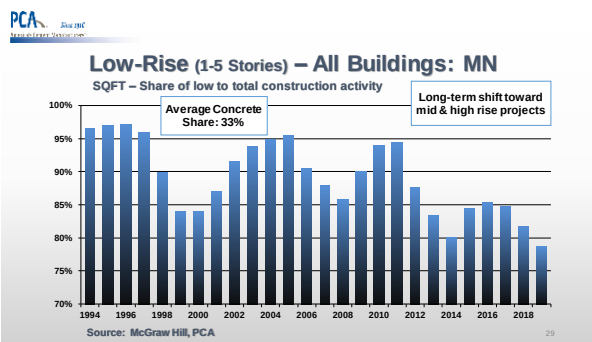
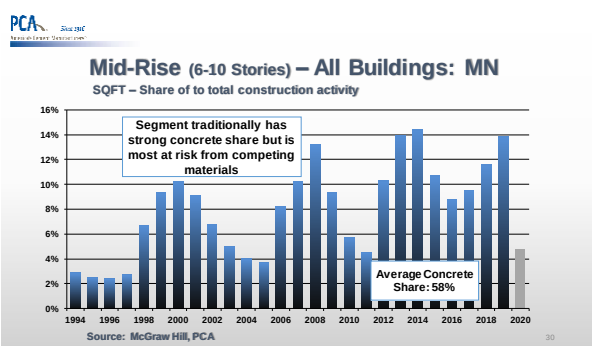
Nonresidential: A Long Recovery

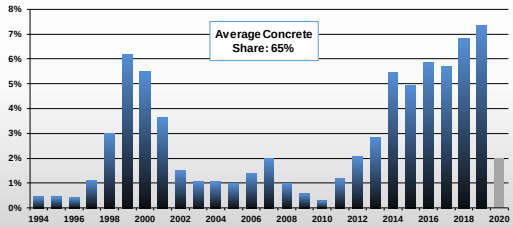






High-Rise (11+ Stories) – All Buildings: MN

SQFT – Share of to total construction activity



Source: McGraw Hill, PCA

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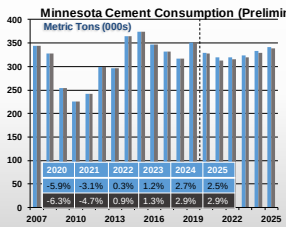
Nonresidential Sector

Minnesota Cement Consumption (Preliminary)



2020	2021	2022	2023	2024	2025
-5.9%	-3.1%	0.3%	1.2%	2.7%	2.5%
-6.3%	-4.7%	0.9%	1.3%	2.9%	2.9%

Baseline Scenario

'W' Scenario

Nonresidential Construction Spending

Category	YTD	Trend
Total	-6.8%	↓
Amusement	-31.9%	↓
Commercial/Retail	-19.6%	↓
Education	-20.9%	--
Hospitals	28.9%	--
Industrial	16.8%	↓
Lodging	-12.1%	↓
Office	10.7%	↓
Religious	4.5%	--
Utilities	20.8%	--

Source: PCA

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Public Outlook

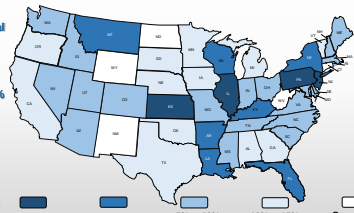
PCA

State Rainy Day Funding – FY2020

Rainy day balances as share of general fund expenditures

Current National Average: 7.6%

Prior to Great Recession: 4.5%



Kansas and Illinois effectively have $0 balances, Pennsylvania and New Jersey are roughly 1%

Oil revenue reliant states of New Mexico, North Dakota and Wyoming have respective balances of 27%, 30% and 109%

1% or less | 2% to 5% | 5% to 10% | 10% to 15% | Greater than 15%

Source: NASBO Fall 2019 Fiscal Survey of the States

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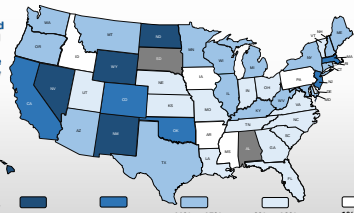
PCA

State Funding – FY2021

Percent Declines in General Fund Tax Revenues from Pre-COVID Levels (Preliminary)

On a state weighted basis, 2021 general fund revenues are expected to decline 13% as reported by state agencies



States with high exposure to oil & tourism revenues are at most risk

Last updated August 24th from reports ranging between April through August.

No Data | 21% to 26% | 16% to 20% | 11% to 15% | 6% to 10% | 1% to 5%

Source: Center on Budget and Policy Priorities: Data compiled from various state agencies

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PCA

Consumers Once Again Showing Apprehension:

Minnesota: Percentage change from baseline visits—Retail & Recreation

Source: Google Mobility Report, PCA

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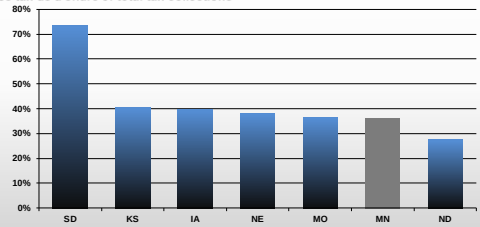
States with High Sales Tax Exposure at Risk

Sales tax as a share of total tax collections



Source: Census State Government Tax Collections Report, PCA

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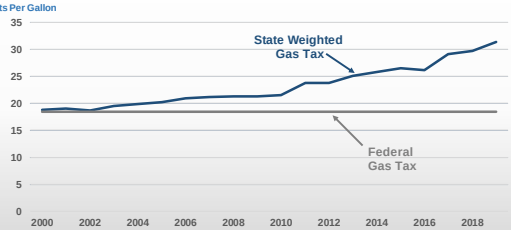
States Have Been Increasingly Less Reliant on Federal Funds

Cents Per Gallon



Source: Federal Tax Administrators, FHWA, PCA

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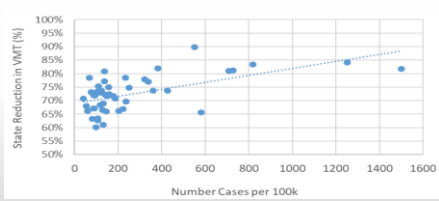
Reduction in Vehicle Miles Traveled Relative to COVID-19 Cases

Percent change in VMT the second week of April vs. first week of March



Source: University of California, Davis

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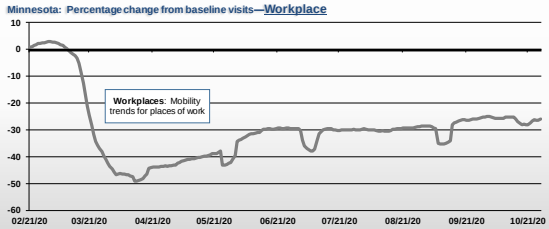
Many employees continue to work remotely

Minnesota: Percentage change from baseline visits—Workplace



Source: Google Mobility Report, PCA

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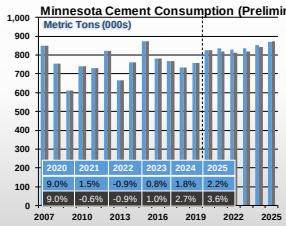
Public Sector



Public Construction Spending

Category	YTD	Trend
Total	21.9%	--
Public Buildings	25.1%	↓
Conservation	13.3%	↓
Highway	19.7%	↑
Sewer	28.9%	↑
Public Water	38.8%	↑

Source: PCA

Baseline Scenario

'W' Scenario

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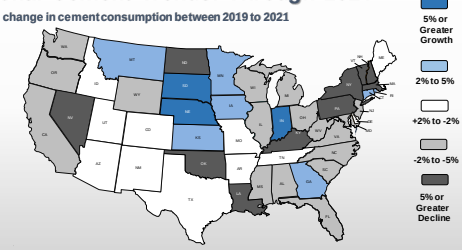
Regional Cement Trends: Through 2021

Based on change in cement consumption between 2019 to 2021



Source: PCA 2020 Summer State Forecast

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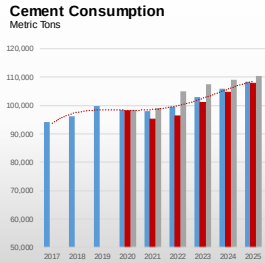
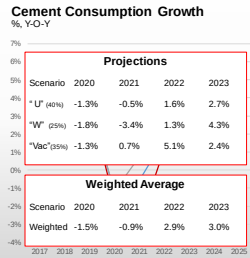
U.S. Cement Consumption– "U, W & Vaccine" Scenarios





Projections

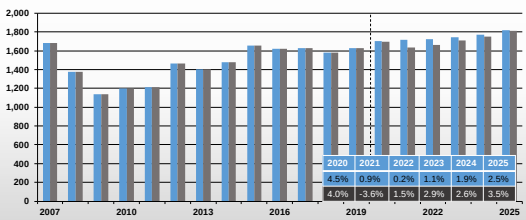
Scenario	2020	2021	2022	2023
" U" (40%)	-1.3%	-0.5%	1.6%	2.7%
"W" (25%)	-1.8%	-3.4%	1.3%	4.3%
"Vac"(35%)	-1.3%	0.7%	5.1%	2.4%

Weighted Average

Scenario	2020	2021	2022	2023
Weighted	-1.5%	-0.9%	2.9%	3.0%

Total Cement Consumption: Minnesota

Metric Tons (000s) Preliminary



2020	2021	2022	2023	2024	2025
4.5%	0.9%	0.2%	1.1%	1.9%	2.5%
4.0%	-3.6%	1.5%	2.9%	2.6%	3.5%

Source: PCA

Baseline Scenario

'W' Scenario

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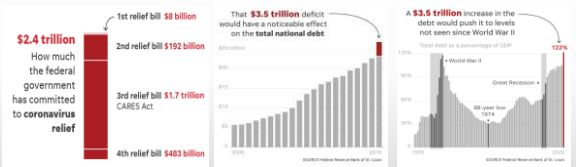
Long-Term Considerations

Debt Likely to Shape Future Federal Infrastructure Plans



Election Impacts

Trump With Senate

Federal Reserve Position

- Monetary Policy continues to facilitate recovery with low interest rates.

Infrastructure

- PCA forecast contains a holding place for an infrastructure program beyond FAST. The assumption is $250 billion over 10 years. First pour 2nd half of 2022.
- May be more "traditional" definition of infrastructure. More cement intensive.

Housing

- No policy identified that directly benefits housing.

Taxes

- Favors corporate.

Regulation

- Continued emphasis against adding to business, emission and climate change regulations.

Biden With Senate

Federal Reserve Position

- Monetary Policy continues to facilitate recovery with low interest rates.

Infrastructure

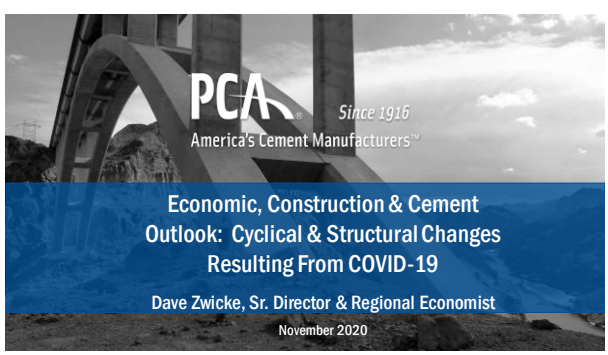
- PCA forecast contains a holding place for an infrastructure program beyond FAST. The assumption is $250 billion over 10 years. First pour 2nd half of 2022.
- May be less "traditional" definition of infrastructure with more emphasis on broadband, transit, etc. carrying lower cement intensities.

Housing

- 200,000 low income housing construction over 10 years.

Taxes

- Favors lower income runs less favorable corporate.

Regulation

- Renewed emphasis against adding to business, emission and climate change regulations.