

AEC Industry Outlook Amidst COVID-19 Pandemic



October 2020

Framework

- Pre-COVID economic indicators and trends: how strong and diversified were states before the pandemic?
- How COVID changed what we know: what states were impacted the hardest and why?
- Which metrics matter for which industries
- Decisions you can make now

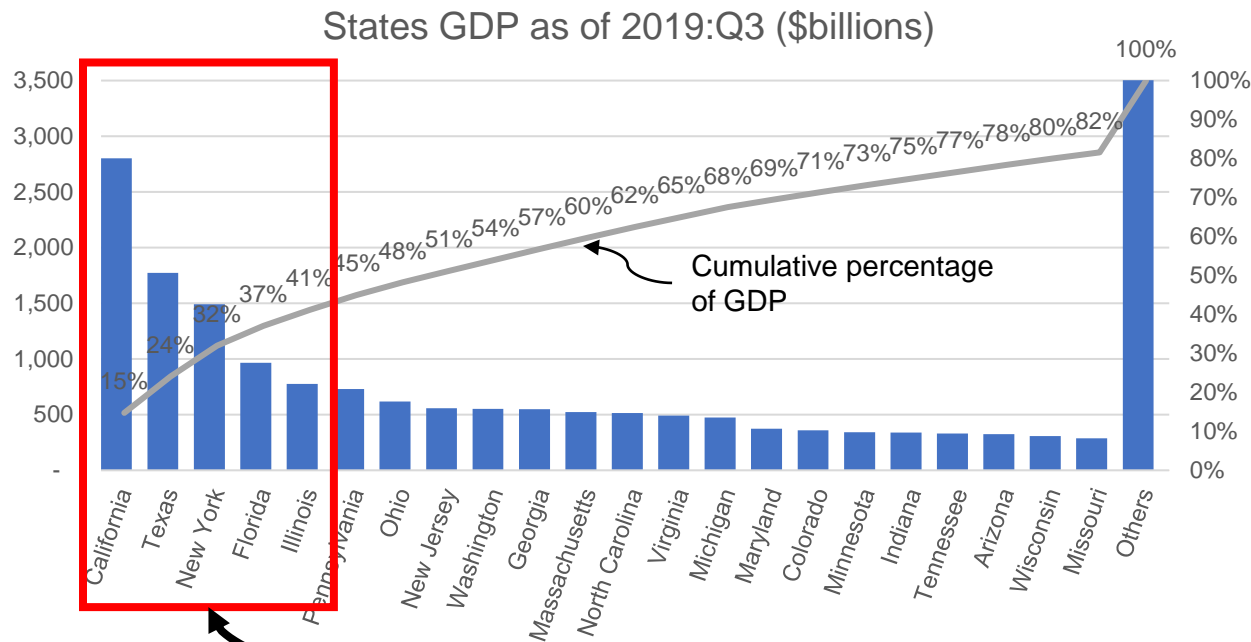
Why look at states?

- Much of the AEC public sector work is at the state and local level
 - Even federally funded projects often require state match
- COVID lockdowns were at the state or local level
 - Legally, only governors – and depending on the state, municipalities – can effect lockdown restrictions
- Travel restrictions during lockdowns restricted people movement along state lines, and therefore consumption trends, a key GDP input
- People did, however, move during the pandemic – sometimes permanently, which will mostly be visible at the state level

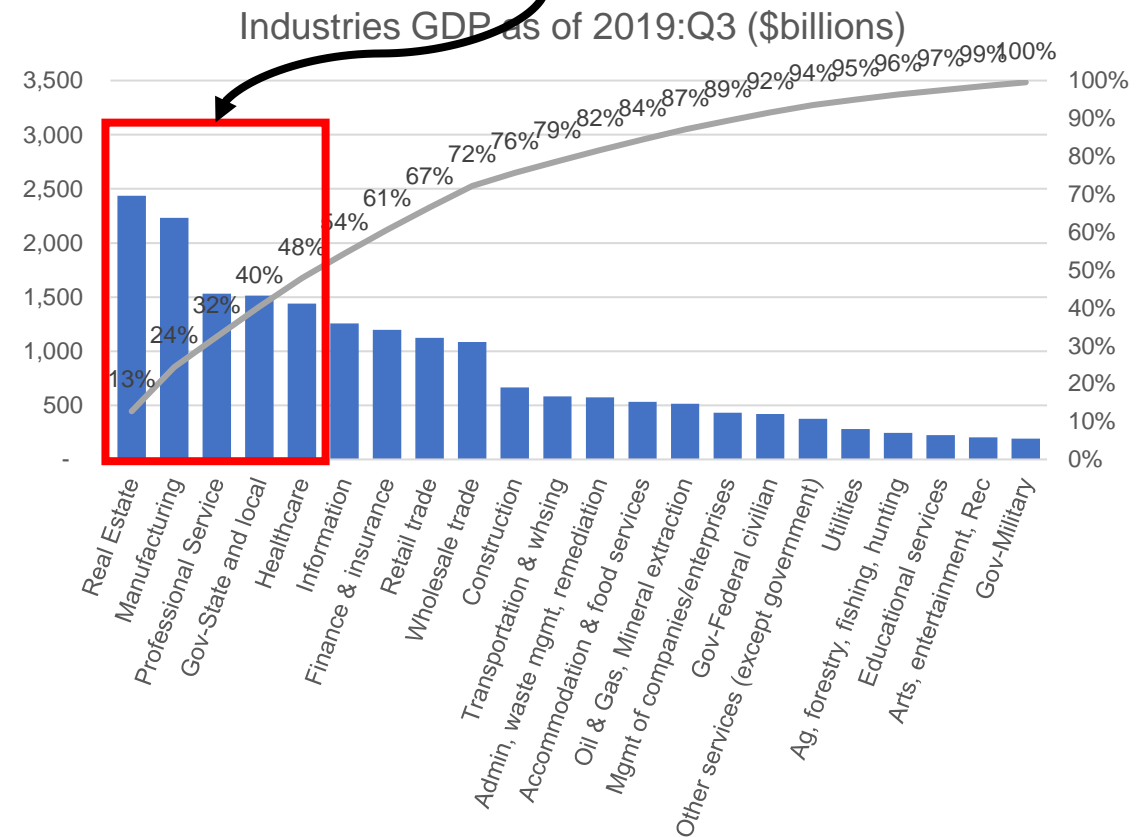
State Metrics Pre & Post COVID

...and five industries

Real Estate, Manufacturing, Professional Services, and State/Local Government and Healthcare represent nearly 50% of total US GDP



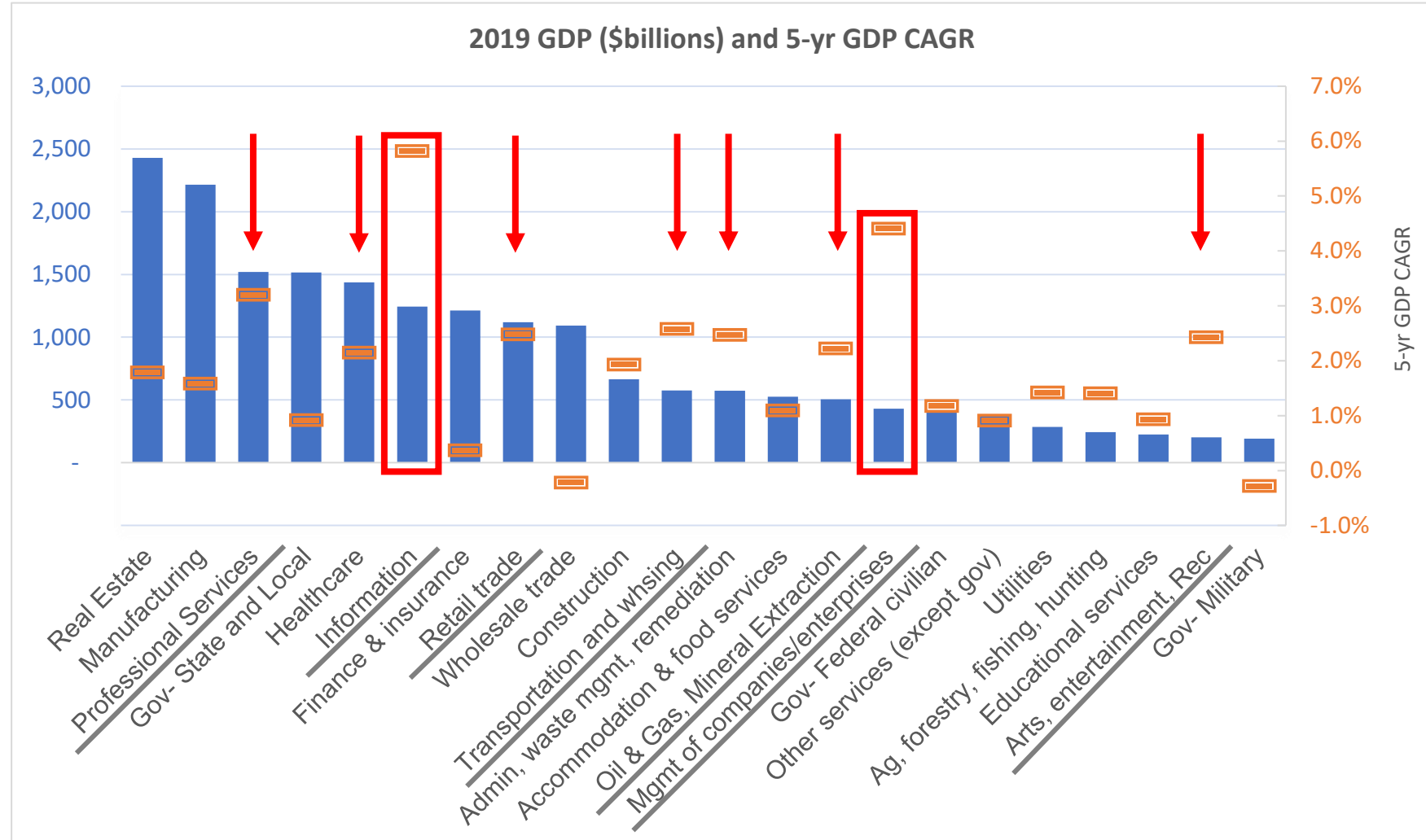
California, Texas, New York, Florida, and Illinois are responsible for over 40% of US GDP



But they were not growing the fastest pre-COVID

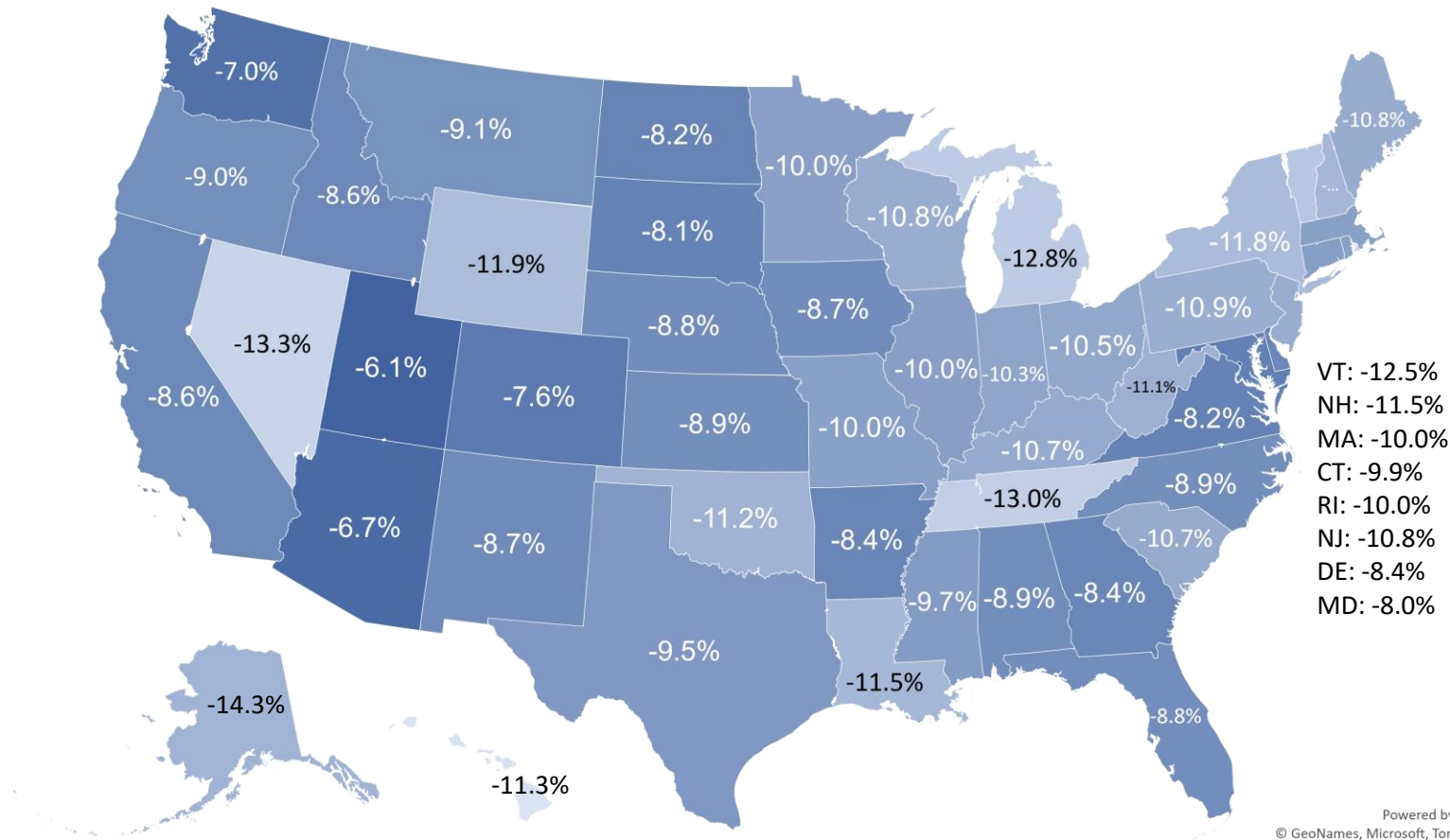
Key Takeaways

- Of those five, professional services – which includes AE – was growing the fastest pre-COVID, followed by healthcare
 - AE industry grew over 3%
- Outpacing them both, however, were information services and company management (e.g., holding companies)
- The five next fastest growing – experiencing between 2 and 3% growth – were:
 - Retail
 - Transportation & Warehousing
 - Environmental
 - Oil & Gas
 - Entertainment



Then the pandemic hit

GDP by State 2020:Q2 vs 2019:Q3



2020:Q2 vs 2019:Q3

-14.3% -5.2%

Key Takeaways

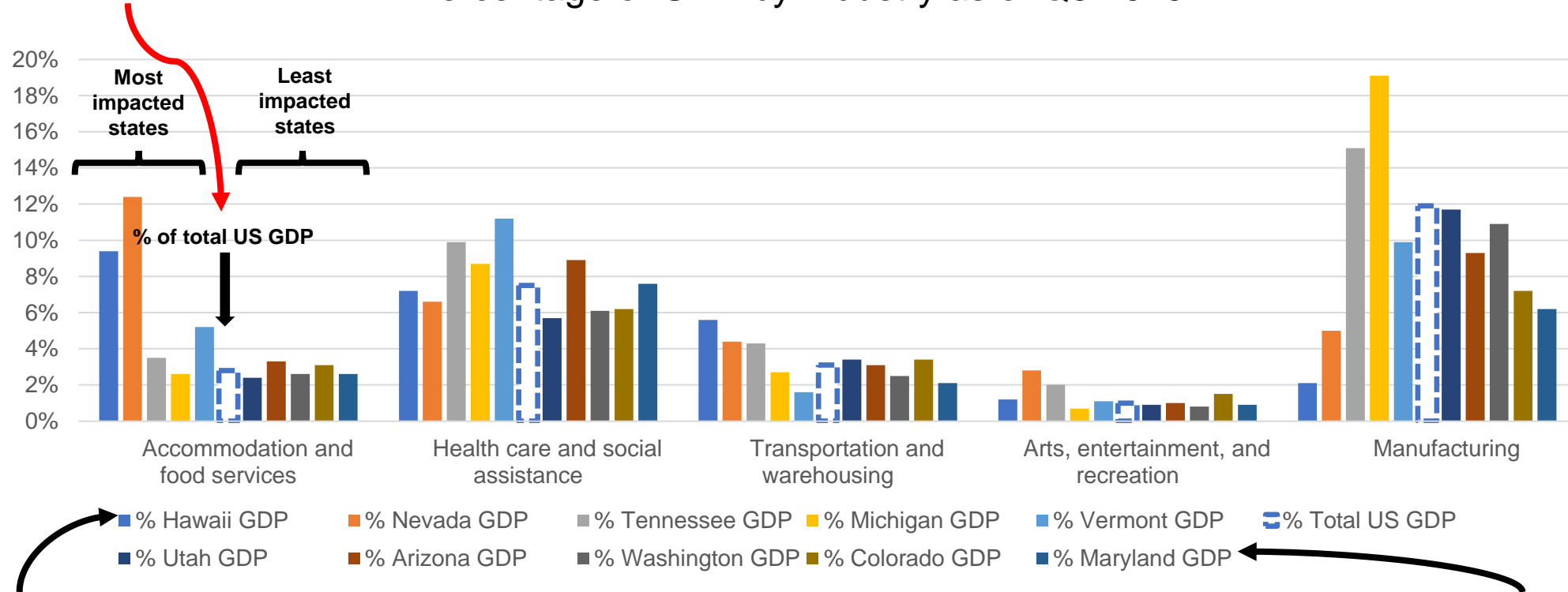
- Least impacted states saw only 6-8% contractions in their GDP:
 - Utah
 - Arizona
 - Washington
 - Colorado
 - Maryland
- Most impacted states saw 13%+ contractions in their GDP:
 - Hawaii
 - Nevada
 - Tennessee
 - Michigan
 - Vermont

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Most impacted states had concentrations of the most impacted industries

Most impacted states' industry GDP composition also tended to be higher than the US average

Percentage of GDP by Industry as of Q3:2019



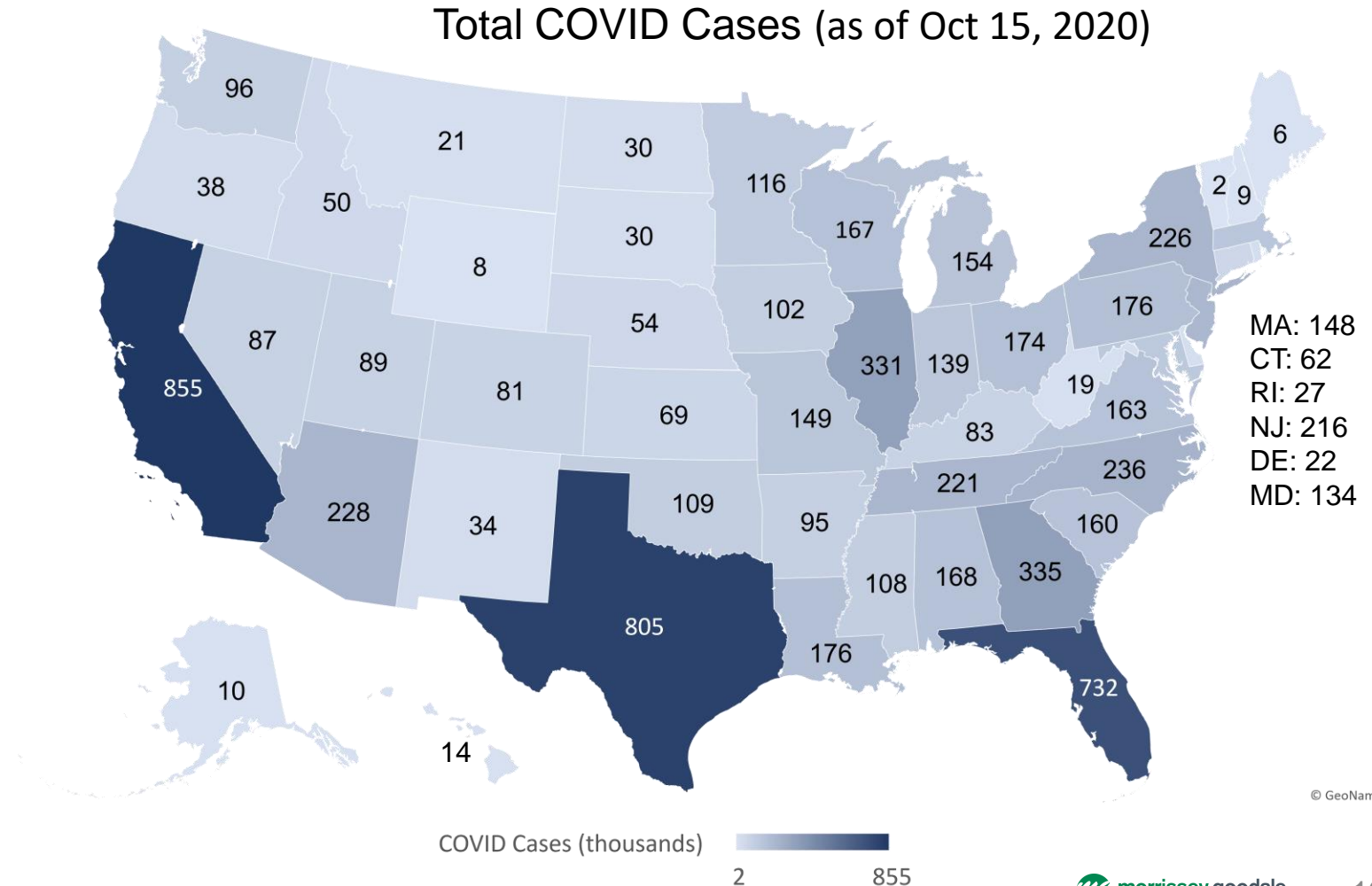
Most impacted states

Least impacted states

The number of COVID cases matters too, but not as much as you'd think

Key Takeaways

- States with higher case rates saw larger strain on healthcare resources
- Not necessarily correlated to length of lockdown, which is a better predictor of economic impact
- Four of the five largest states – CA, TX, FL, and NY – also had the highest COVID cases
- Georgia, which only makes up 2.9% of GDP, slightly edged out IL as the fifth highest case rate
- None of the most economically impacted states were in the top 5 states by COVID cases

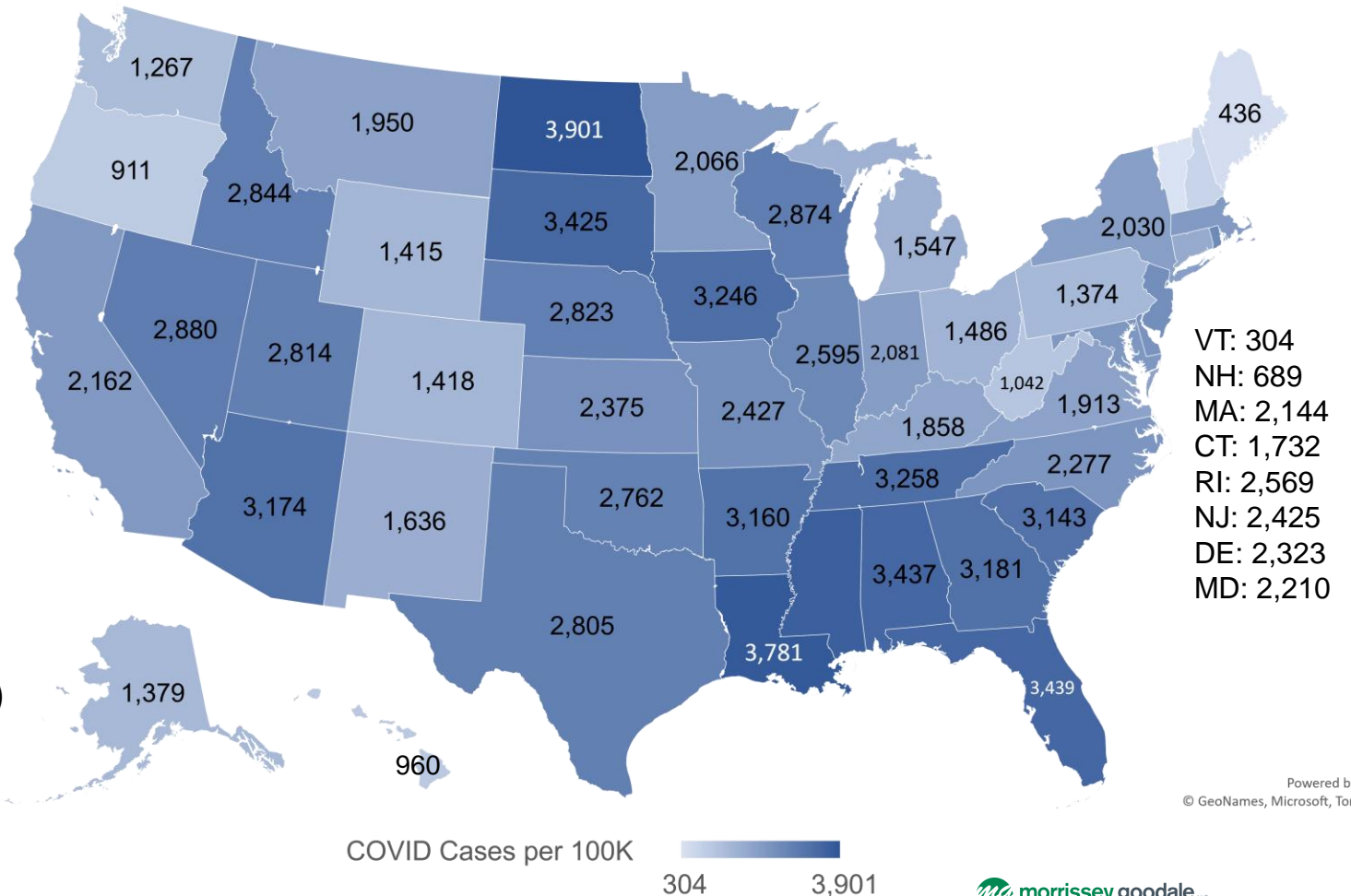


Normalized for population size, only one of the top 5 was heavily impacted economically

Key Takeaways

- When normalized for population size, the most impacted states were:
 - North Dakota
 - Louisiana
 - Mississippi
 - Florida
 - Alabama
- Of these, only LA had a >10% drop in GDP between Q3 2019 and Q2 2020 (-11.5%)
- TN was in the top 10 for COVID cases per 100K – and was one of the most economically impacted (-13.0%)
- No obvious relationship between COVID cases per 100K and YoY GDP loss

Cumulative COVID Cases per 100K (as of Oct 15, 2020)

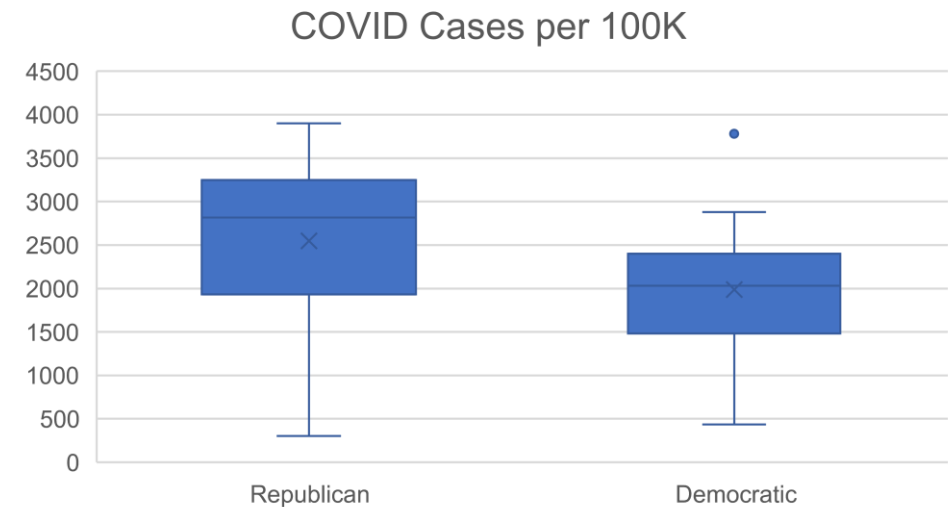
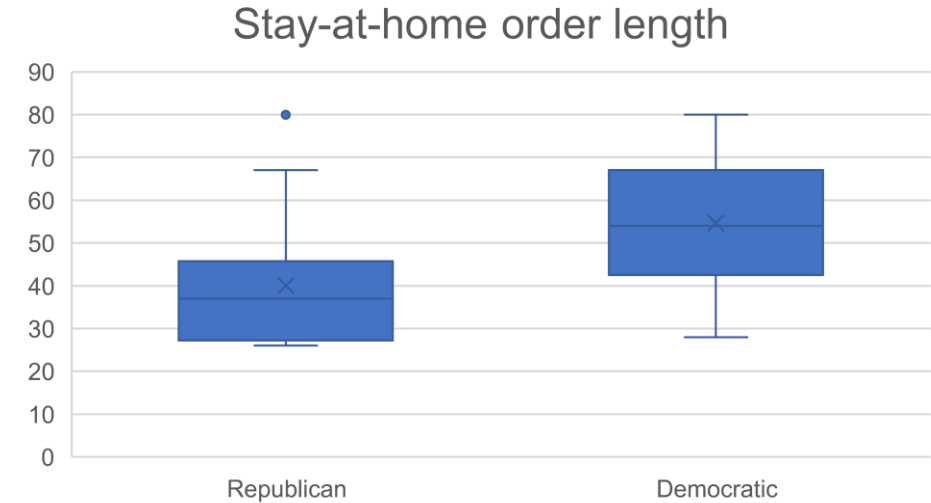
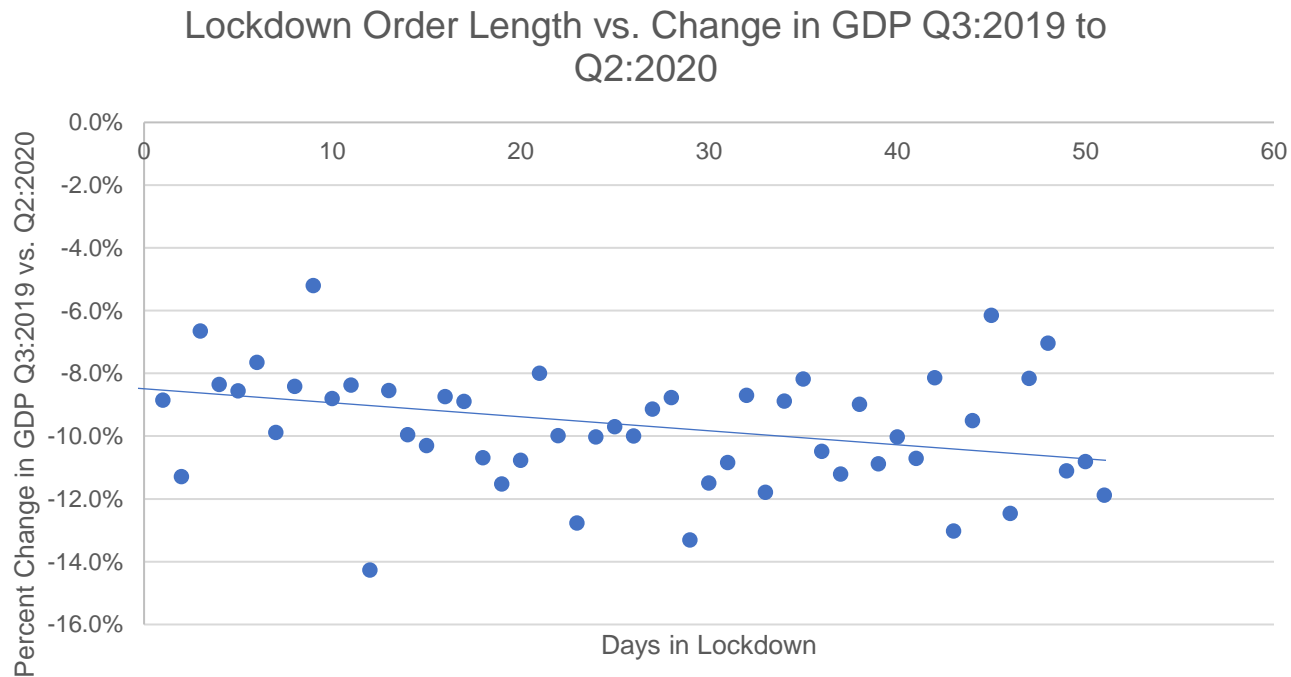


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Length of the lockdown was more important

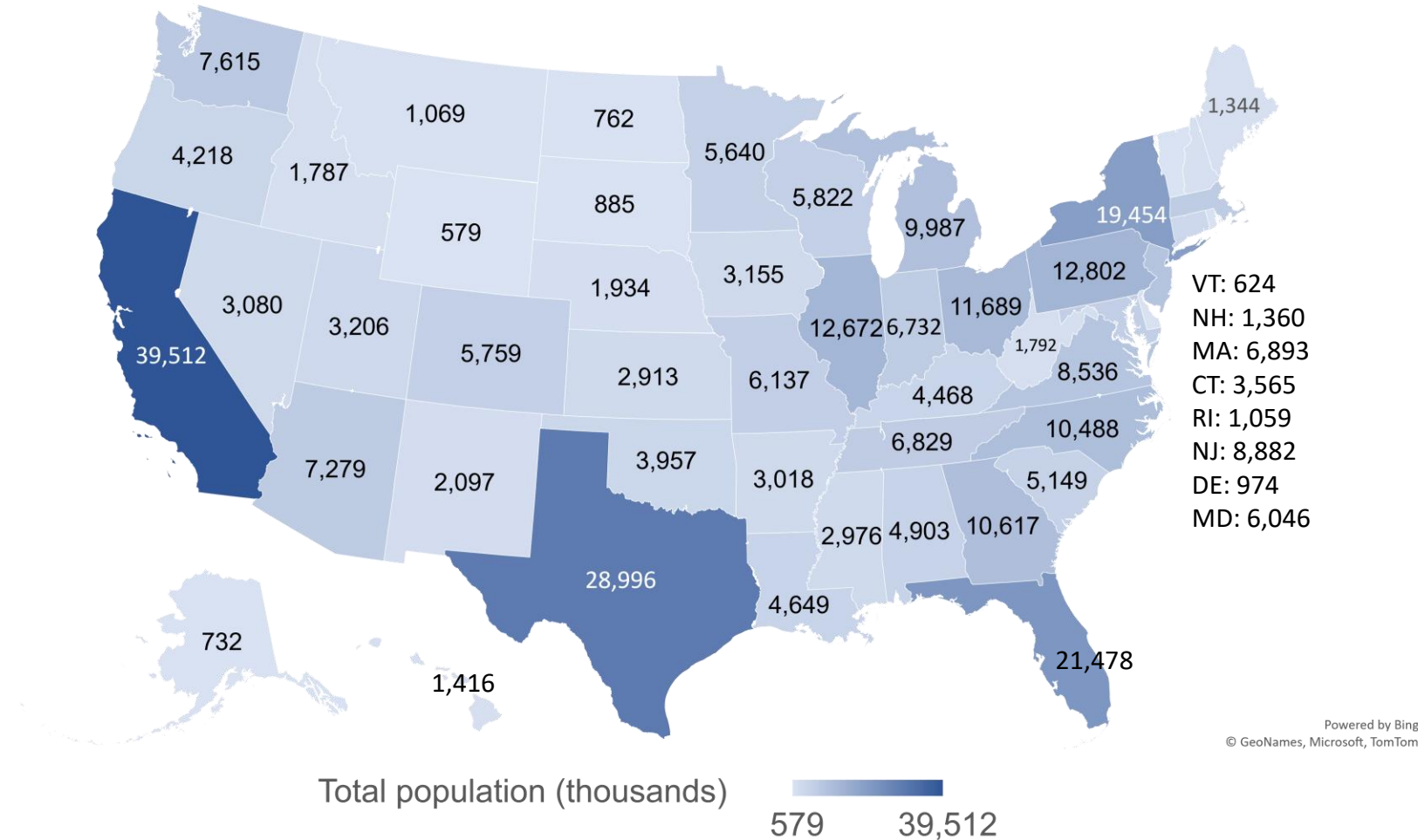
Key Takeaways

- Lockdown order length and economic impact (as measured in YoY GDP impact) were negatively correlated
- Republican governors both issued lesser lockdown orders, but also saw higher COVID case rates per 100K people



And so is absolute population size

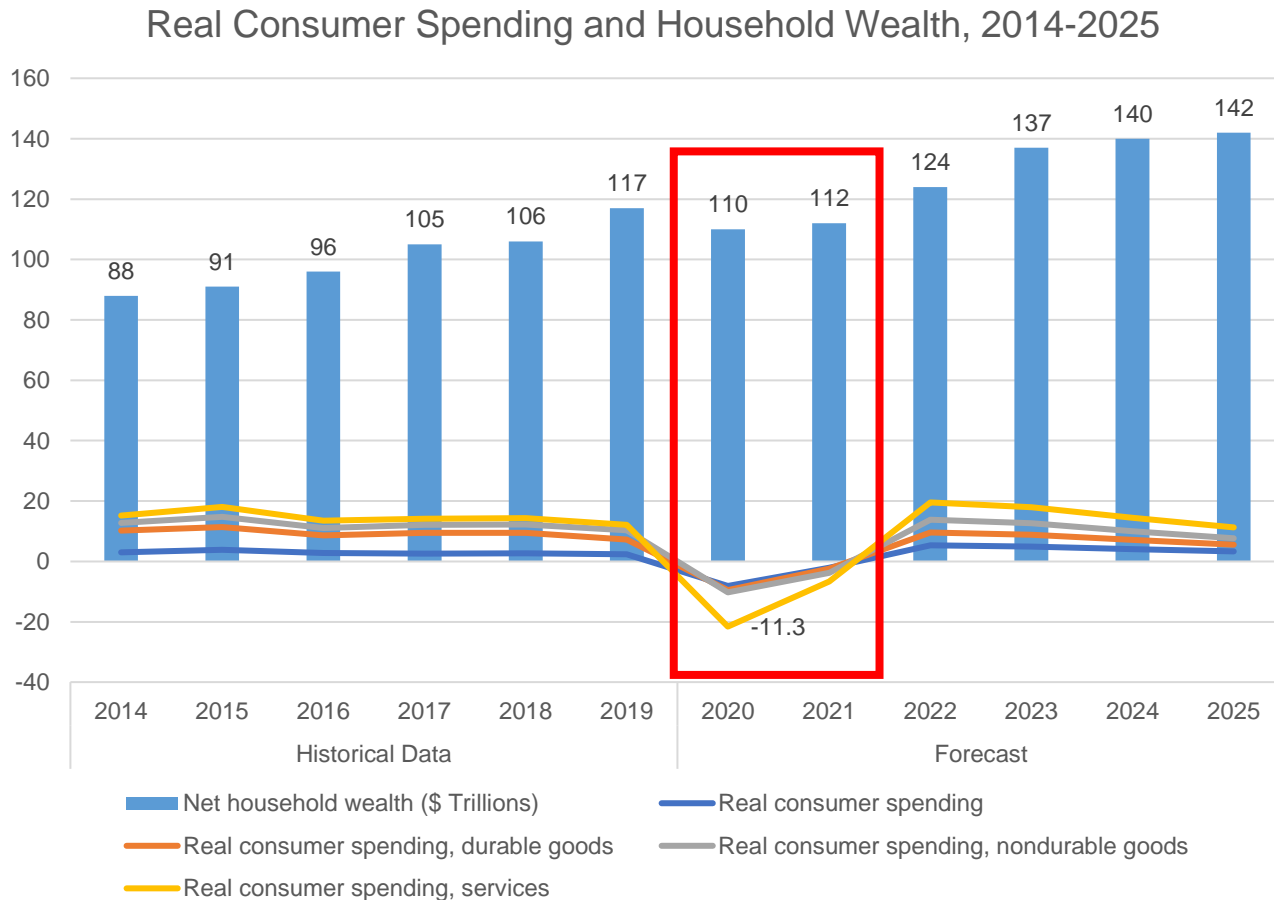
Population by State Q3:2019



Key Takeaways

- A main reason why CA, TX, FL, NY and IL drive US GDP is that they are also 37% of the US population
- This is because consumption is a major driver of GDP
- Due to COVID stimulus and extra unemployment benefits through July, **disposable personal income was 6.1% higher in June than in February 2020** despite a massive increase in unemployment

Because both impact consumption



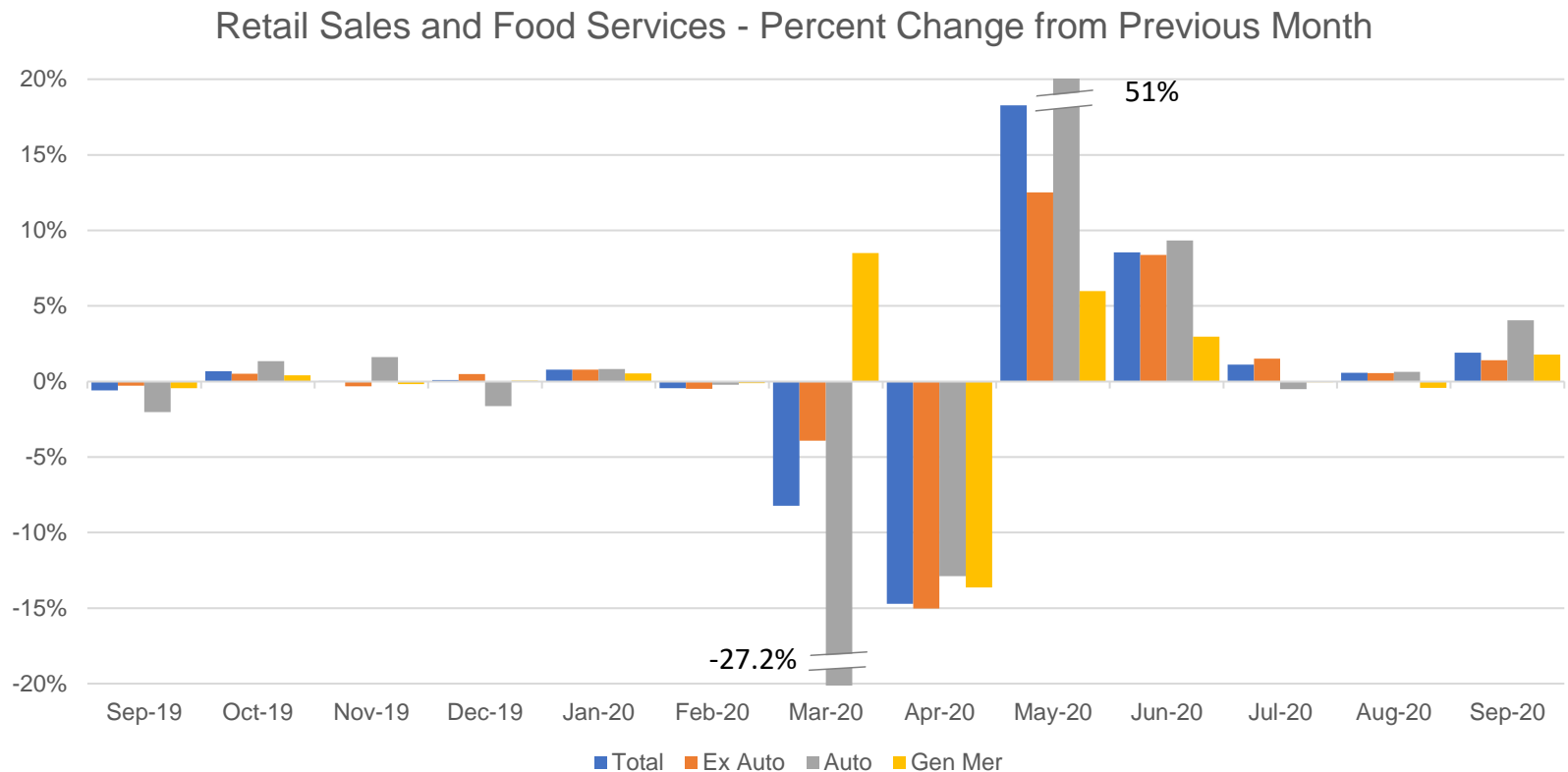
Key Takeaways

- Shift away from entertainment, restaurants and travel and towards home improvement, cars, and essentials
- In 2020, Americans are forecasted to see a net loss in wealth and particular reduction in spending on services

Retail already made up what was lost, and it was mostly online

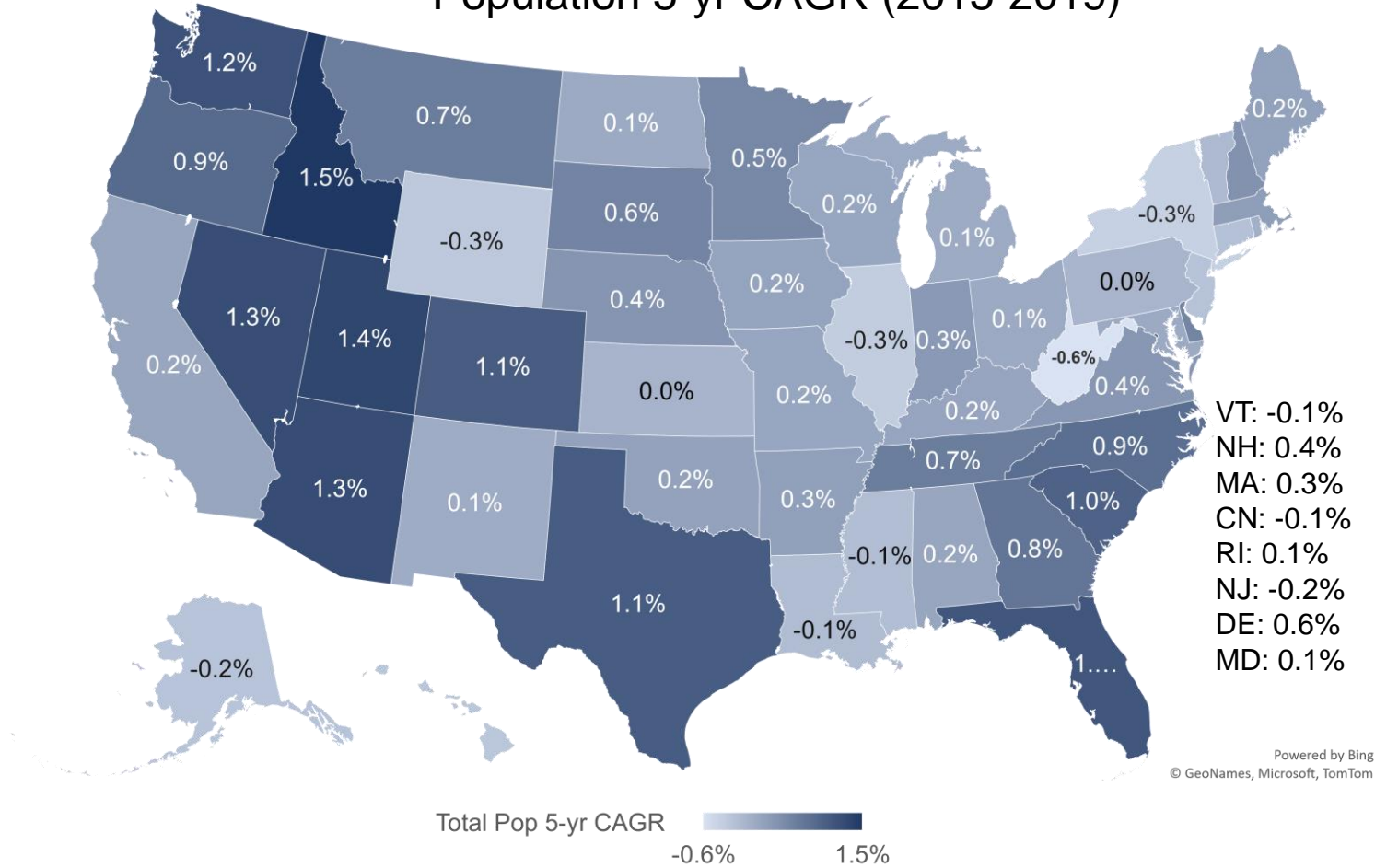
Key Takeaways

- Retail consumption dropped precipitously in March and April
- Consumers made up for expenditures lost in those two months in May and June
- July and after flattened out, with a small uptick in Sept
- Healthy holiday season expected – but mostly online
- Car sales up steeply as consumers seek to avoid public transport



Population trends pre-COVID accelerated

Population 5-yr CAGR (2015-2019)



Key Takeaways

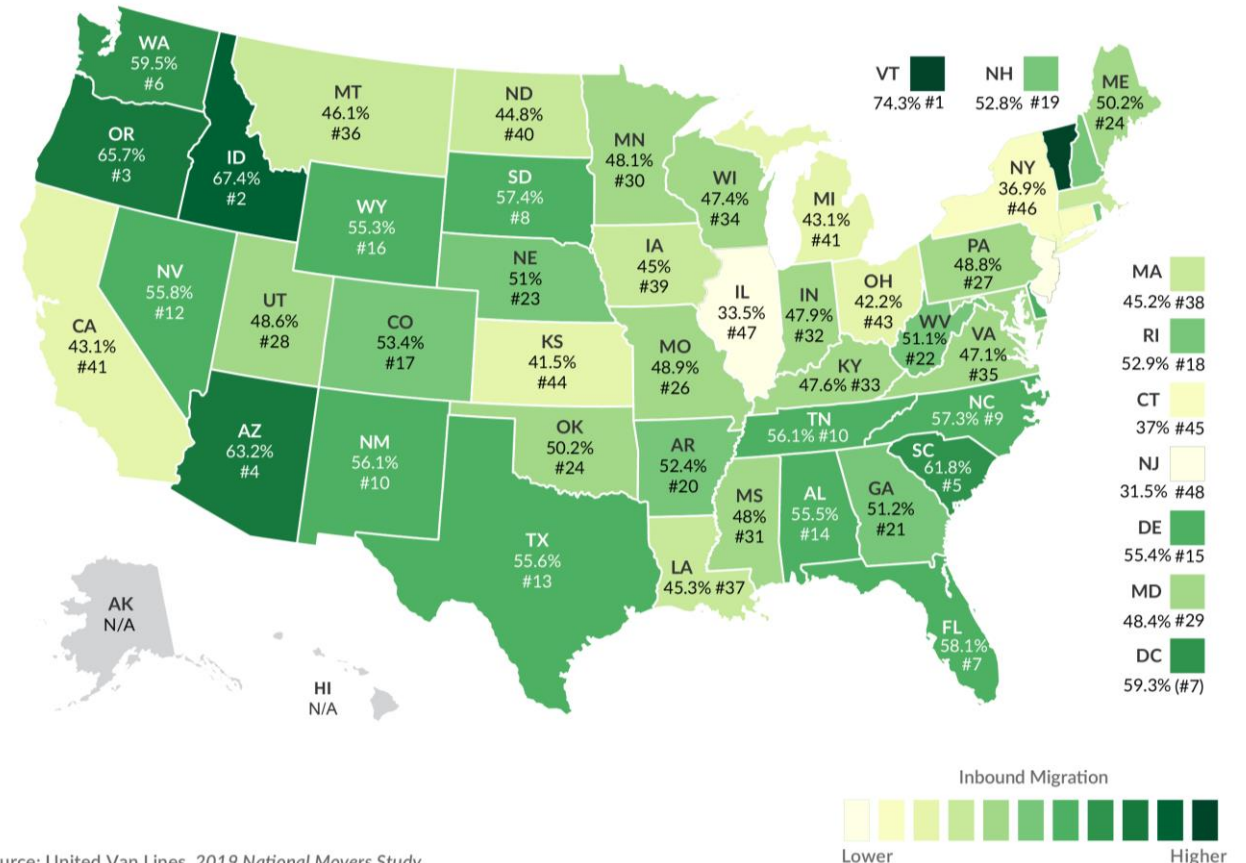
- Population shrinking in the NE, LA, MS, WY, and IL
- Some of the states that saw the biggest impact in GDP because of COVID are also losing population, including:
 - Hawaii (YoY GDP -14.3%)
 - Vermont (-12.5%)
 - Louisiana (-11.5%)
 - West Virginia (-11.1%)
 - Pennsylvania (-10.9%)
 - New Jersey (-10.8%)
- This will make their recoveries harder, as consumption and overall workforce has decreased

Including people migration

Key Takeaways

- Prior to COVID, people were leaving NY, IL and CA and moving to the sunbelt and upper Midwest, driven by desire for lower cost of living, better lifestyle and lower taxes
- COVID has accelerated movement away from cities and high tax states
- Personal state income tax rules for 2020 will be complex – some states are still going to collect taxes from those individuals who worked for more than 180 days out of state
- Of note, Vermont, which was heavily impacted by COVID (-12.5% loss in GDP YoY) saw the highest pre-COVID in-migration in 2019
- Nevada (YoY GDP -13.3%), Tennessee (-13.0%), New Hampshire (-11.5%), and West Virginia (-11.1%) also saw net in-migration
- Michigan (YoY GDP -12.8%), New York (-11.8%), Louisiana (-11.5%), Pennsylvania (-10.9%) and New Jersey (-10.8%) all saw net out-migration in 2019

Inbound Migration as Percent of Total Moves, 2019



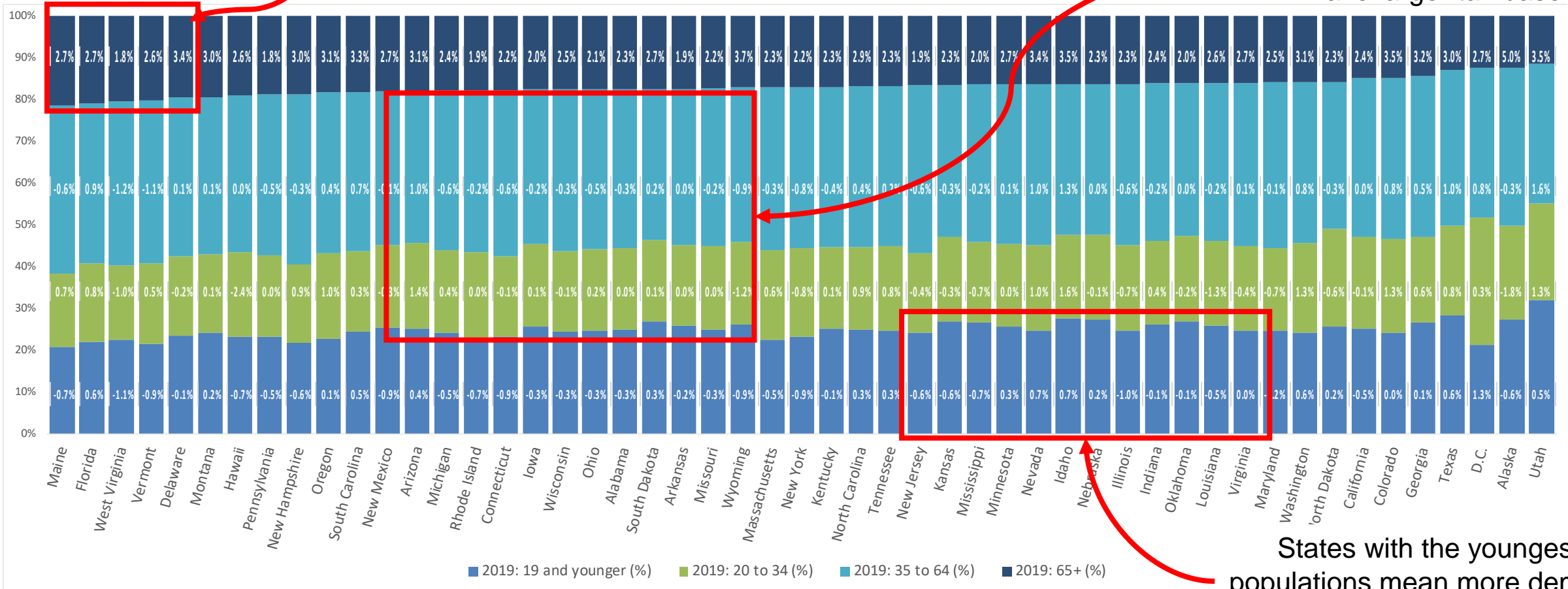
Source: United Van Lines, 2019 National Movers Study.

Whether states are getting younger or older also impacts consumption choices

States with larger elderly populations demand more healthcare services

States with larger working populations have larger tax base

Age Demographics and 5-yr CAGR by State, 2019



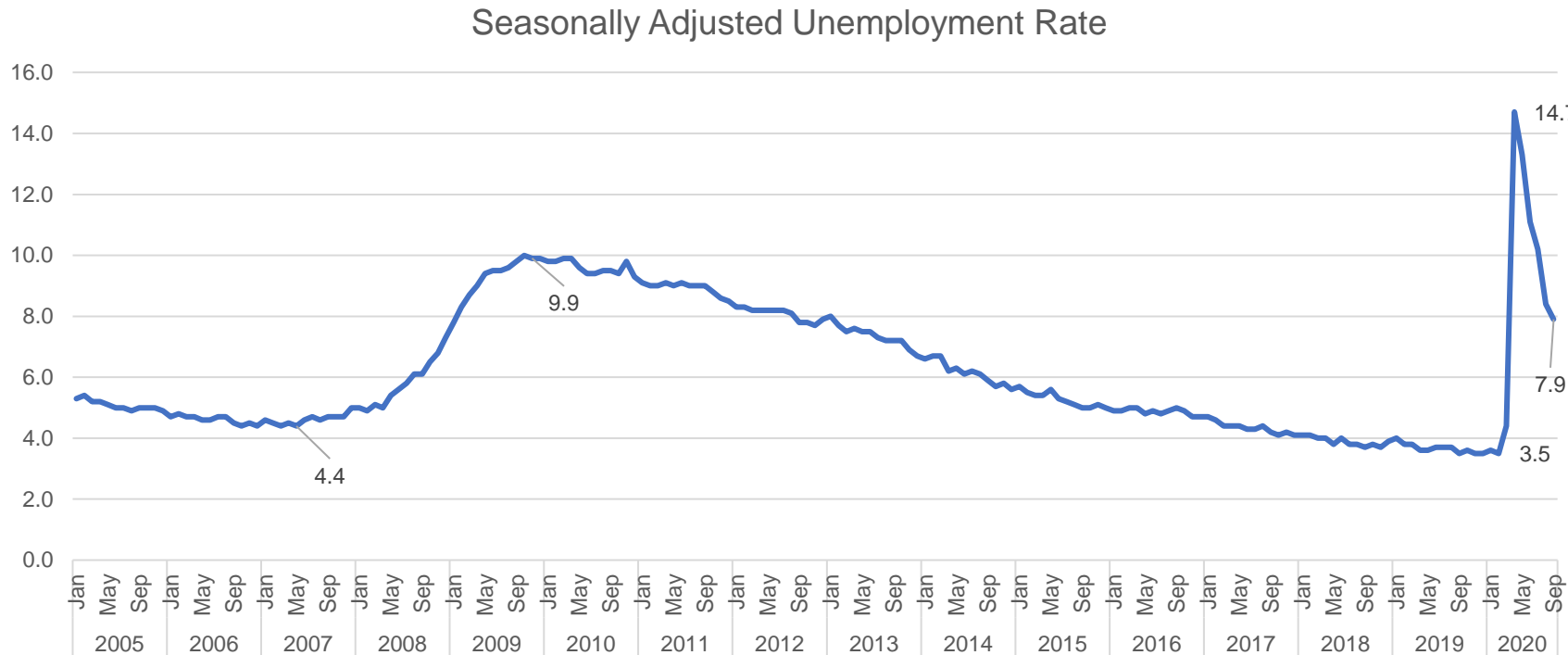
States with the youngest populations mean more demand for education

Population growth trends indicate future costs...or revenue (in taxes)

Key Takeaways

- UT, ID, AZ, CO and WA had highest five-year growth in tax paying population (Young Adults and Adults), which is good for state and local budgets
- ID, NV, WA, TX, and FL are getting younger – highest five-year growth rate in age 19 and younger – which means demand for education, both K-12 and higher education
- AK, WY, ID, CO, and UT are getting older – highest five-year growth rate in population over 65 – which means greater demand for healthcare services, particularly elderly care

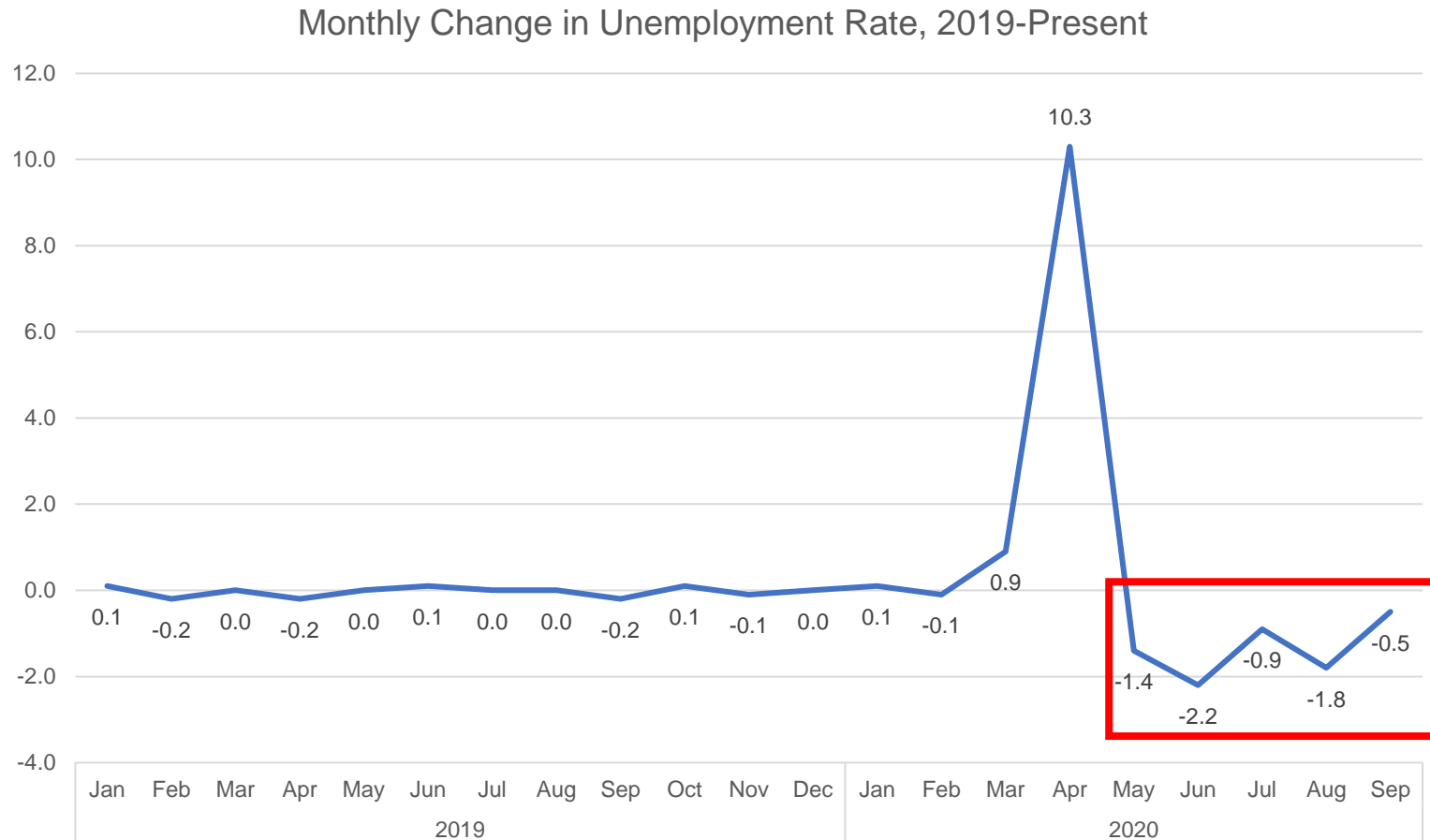
Total unemployment spiked in April



Key Takeaways

- Unemployment spiked nationally in April at 14.7%
- As of Sept 2020, it has dropped to 7.9%, but remains far above the 3.5% where it stood in February 2020
- Unemployment at the height of the pandemic was nearly 5% higher than the worst of the 2008 Financial Crisis

There is evidence that jobs growth is slowing

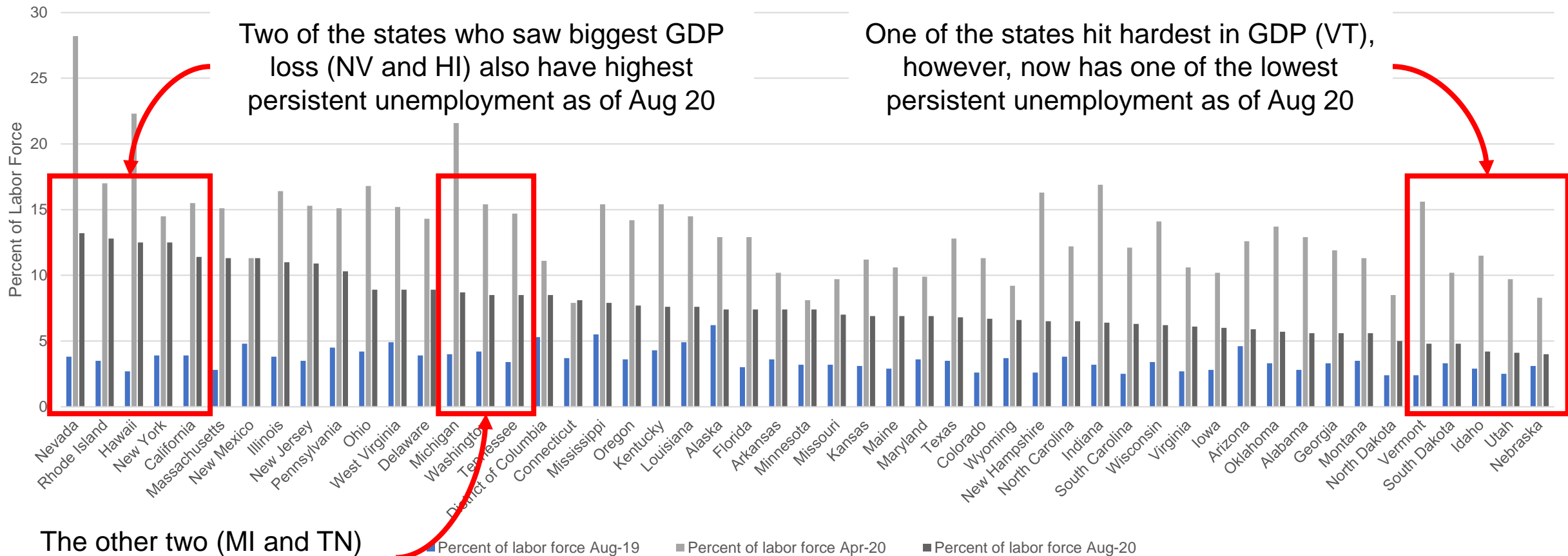


Key Takeaways

- After a 234% increase (or 10.3 percentage points) in April, the recovery has been lumpy
- Between May and June, and July and August, the unemployment rate improved by 2.2% and 1.8%
- But between June and July, and August and September, improvements were less than 1% – flattening out the recovery

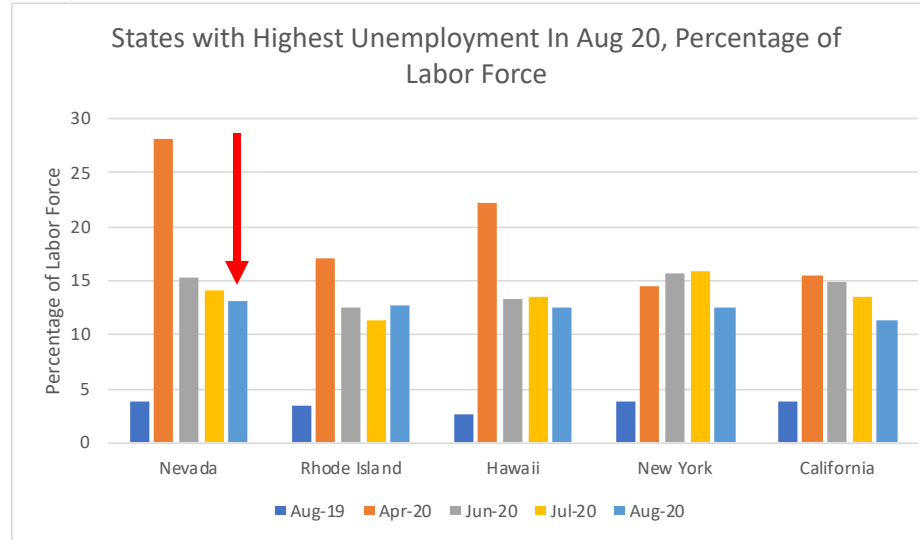
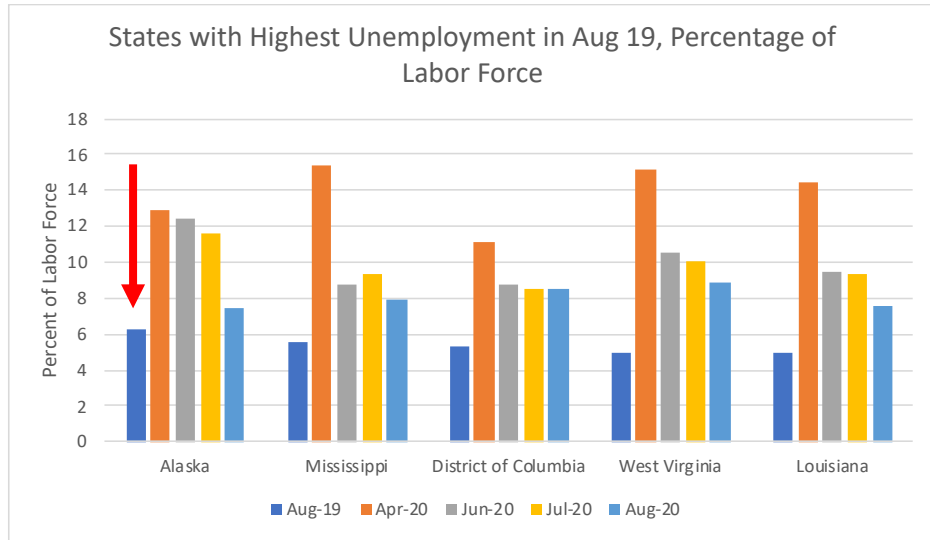
Unemployment is largely a reflection of the industry makeup for those states – and size

Unemployment as a Percentage of Labor Force, by State

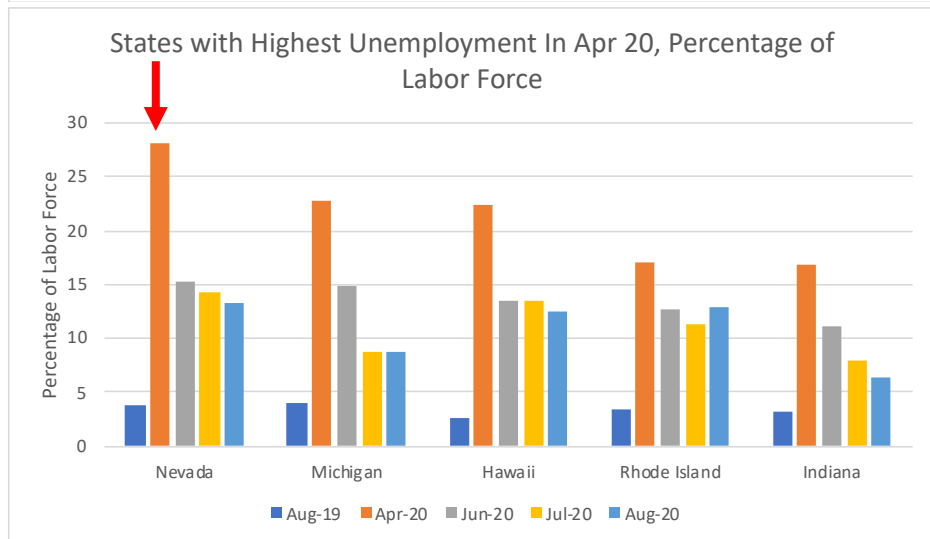


Source: Bureau of Labor Statistics

States hit hardest didn't have highest unemployment pre-COVID



NV, RI, HI, NY and CA have the highest unemployment as a percentage of their labor force in August 2020



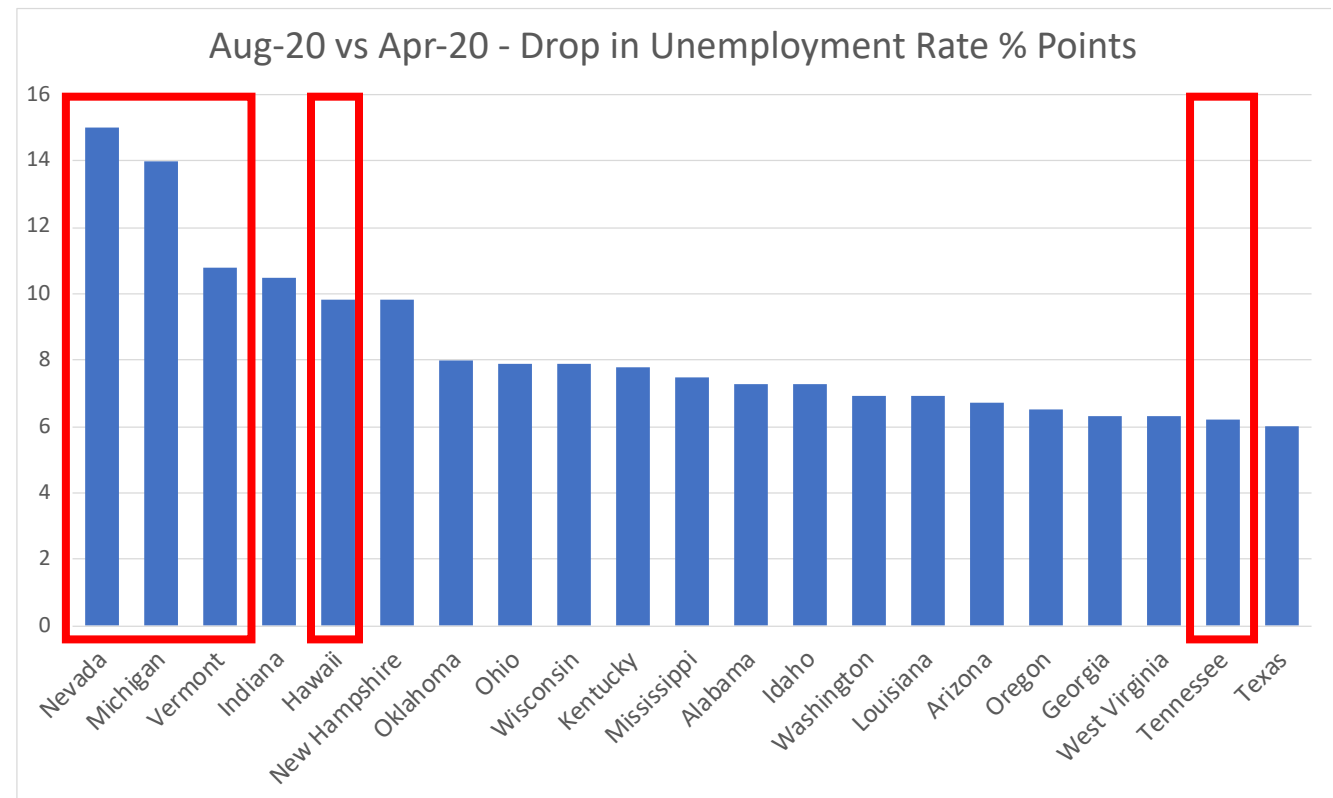
Key Takeaways

- Unemployment before the pandemic was not a predictor of unemployment during the pandemic – or even after
- Three states (NV, RI, and HI) hit hardest in April 2020 still have the highest unemployment rates as a percentage of the labor force
- NY and CA have persistently high unemployment as a percentage of the labor force, even though they were not hit the hardest in April

And the states hardest hit are coming back the fastest

Key Takeaways

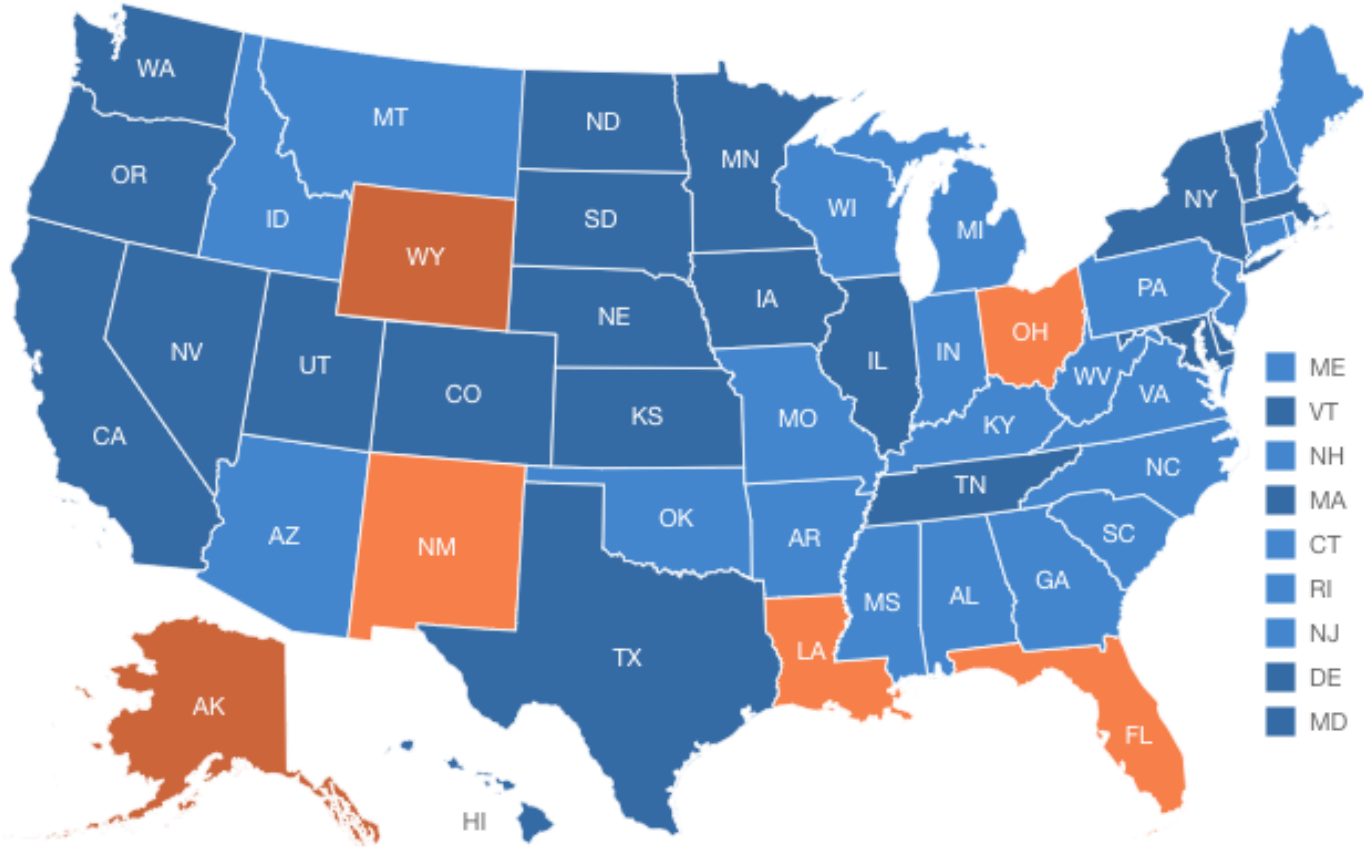
- Of the five states whose GDP was hardest hit by COVID, four of them (NV, MI, VT, and HI) saw the biggest drops in unemployment between April and August 2020
- TN is recovering more slowly



Most states rebounded from the financial crisis

Tax Revenue in Q4 2019 Compared With State's Peak, Adjusted for Inflation

■ 15% or more below
 ■ 0 to 15% below
 ■ 0 to 15% above
 ■ 15% or more above



Key Takeaways

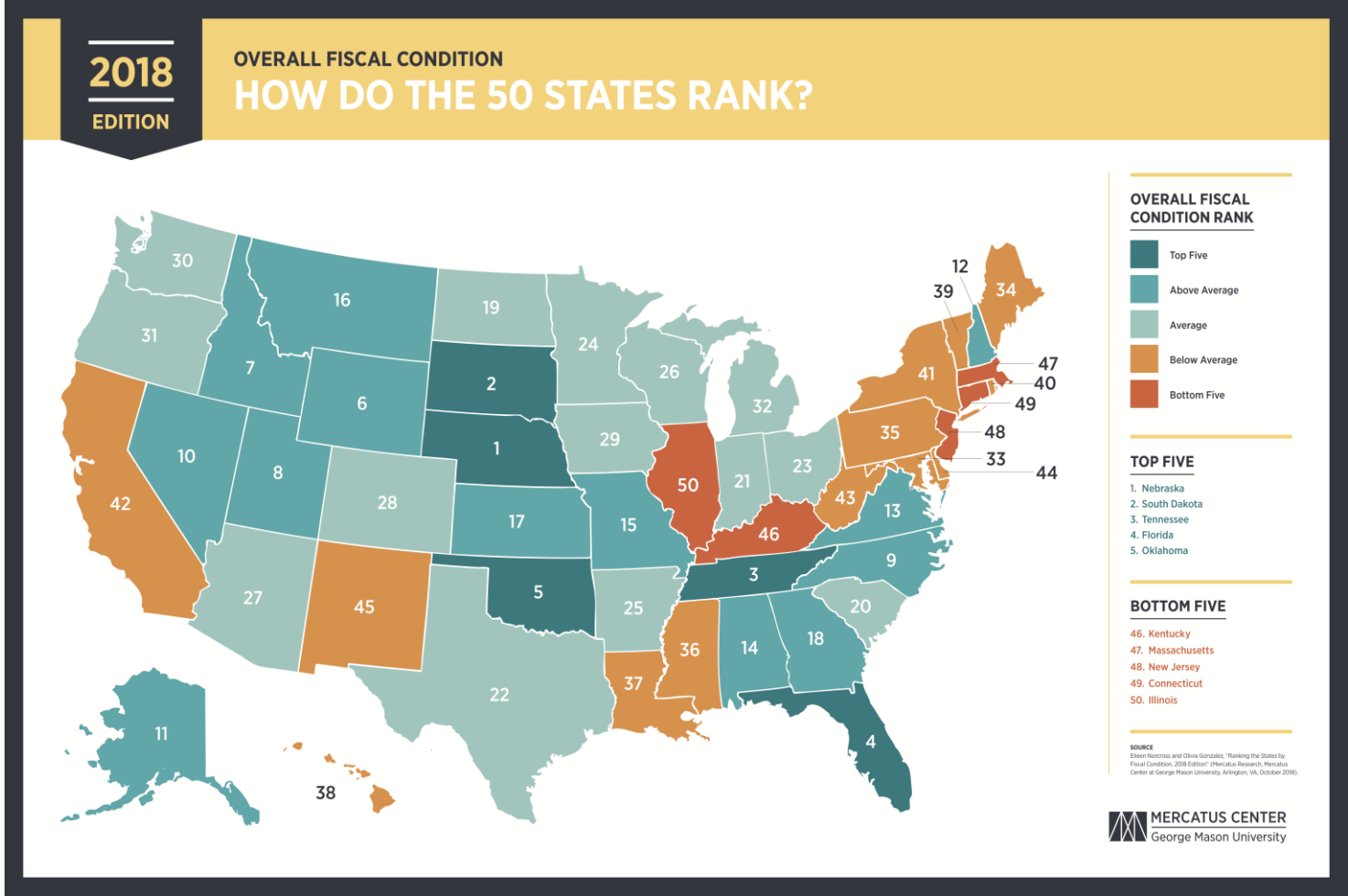
- Compared to their pre-2008 peak, only 6 states did not fully come back – if not expand tax revenue by 15% or more
- WY and AK are still more than 15% below their pre-Financial Crisis peak revenue
- OH, NM, LA and FL are 0-15% below their peak pre-Financial Crisis revenue

Source: Pew Trust, Sept 2020

But that does not mean state budgets are healthy

Key Takeaways

- When taking into consideration cash, revenue to expenditures, savings, and long-term trust fund liabilities, some states were in a far better fiscal position going into 2020 than others
- Nebraska, South Dakota, Tennessee, Oklahoma, and Florida were the most fiscally solvent on these metrics
- Illinois, Kentucky, New Jersey, Connecticut and Massachusetts were the least

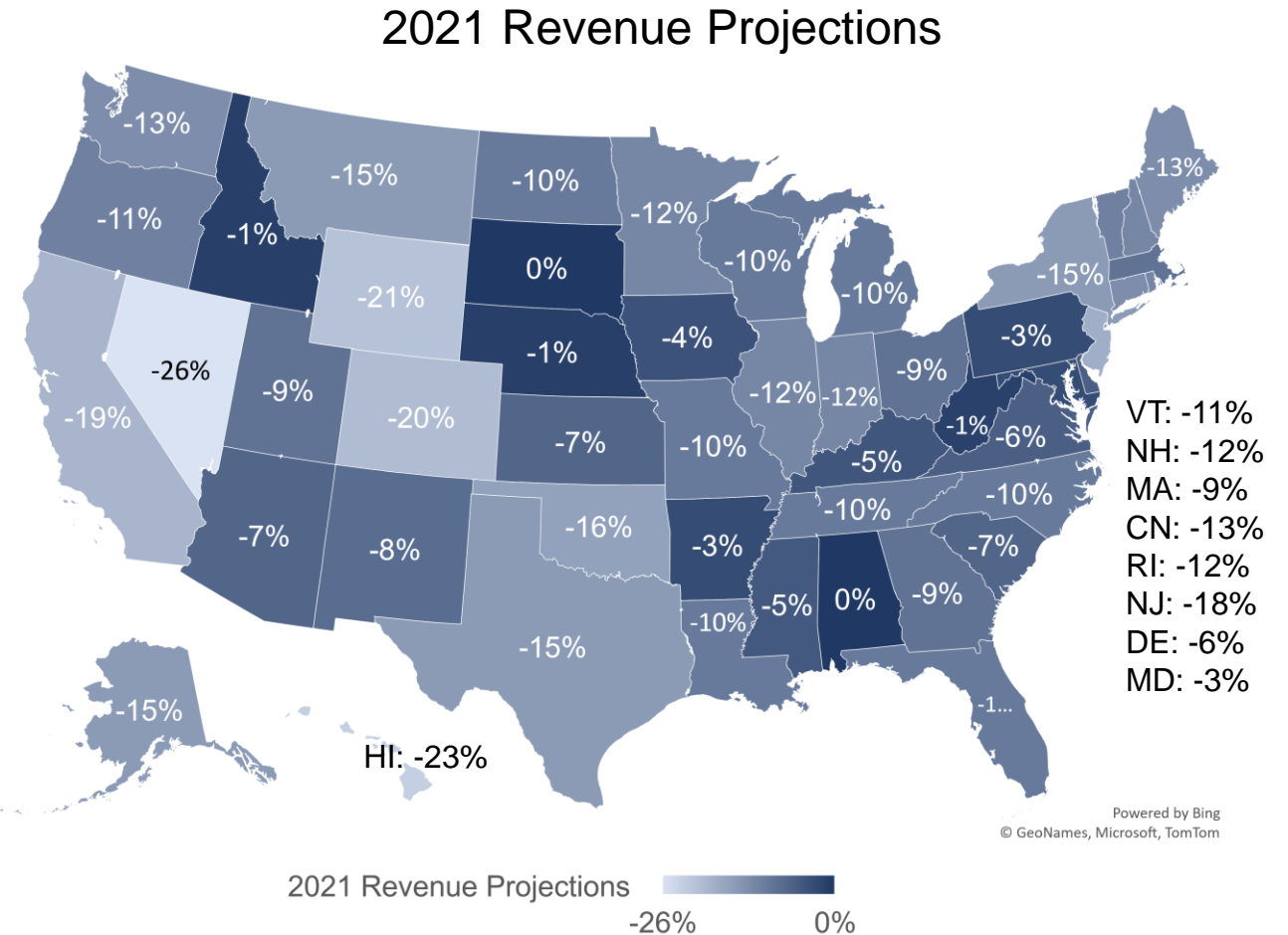


Source: Mercatus Center, 2018

Vast majority of states projecting budget cuts post-COVID

Key Takeaways

- All states combined project roughly \$120 billion revenue decline in 2021
- CA, NY, TX, NJ, MA, IL, and FL make up about 60% of total decline
- These are both the biggest states and the most urbanized states, which saw out migration and often – such as in the case of IL and CA – have deep long-term budget problems
- Alabama and South Dakota are outliers: predicting no losses
- Idaho, West Virginia, Maryland, Pennsylvania and Arkansas only predicted to lose 1-3%



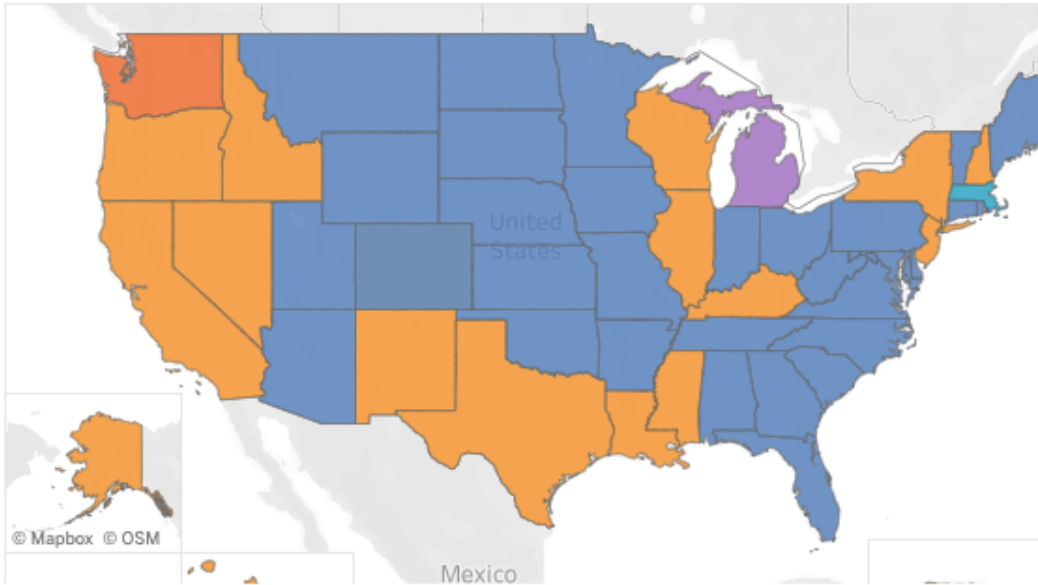
Industry Perspectives

Horizontal

- Transportation
 - Highways
 - Bridges
 - Tunnels
 - Rail
 - Air
 - Transit
- Water & Wastewater
 - Water systems
 - Wastewater systems

What happened to horizontal construction?

Construction Restrictions, June 2020



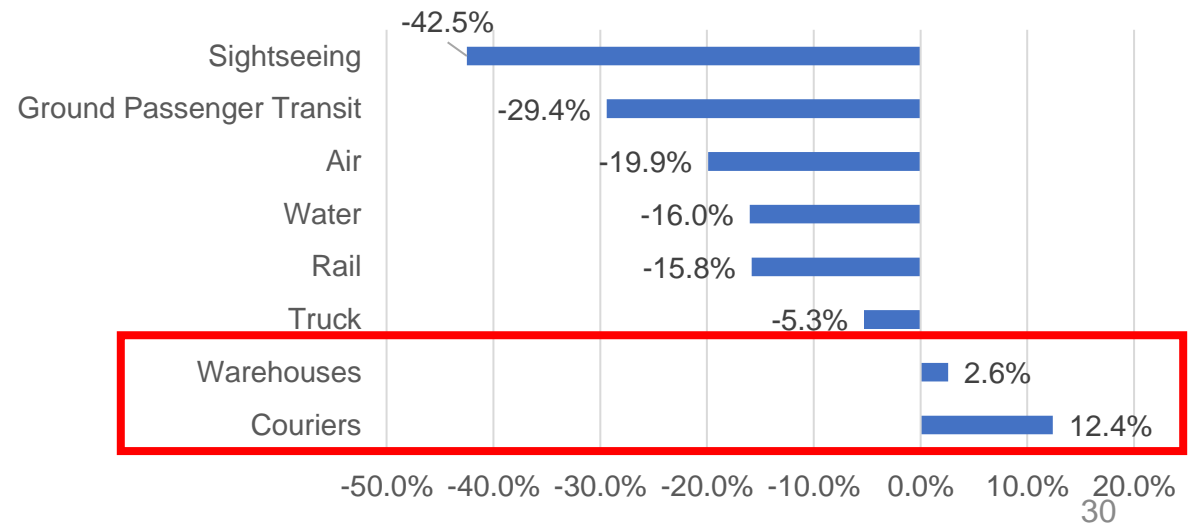
Key Takeaways

- Most construction stopped during height of lockdown, but came back quickly in many states
- As of June 2020, only two states had any restrictions left on construction (WA and MA)
- Projects sped up due to empty roads and no people; project timelines accelerated
- But transportation saw major layoffs, particularly in sectors that support movement of people vs. goods and involve shared transport (e.g., public transit, airlines)

Interactive Map by Jon Keller

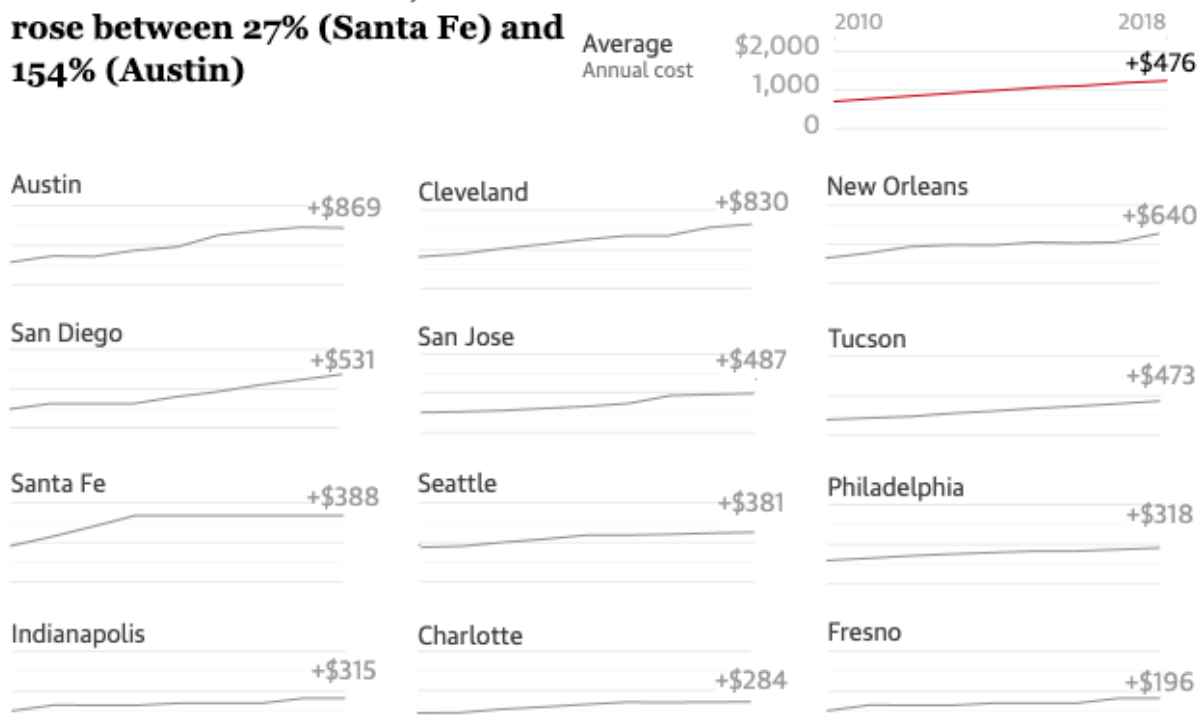
Non-essential construction stopped. Stay at home.	■
Construction restricted in some counties. Stay at home.	■
Construction unrestricted. Stay at home.	■
Construction status unclear. Stay at home.	■
Construction unrestricted. No "stay at home" order.	■
Construction restricted in some counties. No "stay at home" order.	■
Non-essential construction stopped. No "stay at home" order.	■
Non-essential construction stopped. Stay at home in some locations.	■
Construction restricted in some counties. Stay at home in some locations.	■
Construction unrestricted. Stay at home in some locations.	■

Transportation Employment, Percent Change Sept 2019 vs. Sept 20



Water under a different kind of threat

Between 2010 and 2018, water bills in 12 diverse US cities rose between 27% (Santa Fe) and 154% (Austin)



Key Takeaways

- Water bills have increased by an average of \$476 between 2010 and 2018 in major US cities
- Although federal relief paused evictions, it did not wipe out debt, particularly for utilities
- Water systems derive a significant portion of their funding from user fees
- Federal funding for water and sewage systems has decreased by 77% since the 1970s
- The more debt a person accrues on their water bills, the less likely they are to pay; collections become increasingly difficult the more delinquent the person becomes

Guardian graphic | Source: Guardian Investigation; Roger Colton; Circle of Blue; Ohio Environmental Protection Agency; US Census data; American Water Works Association

Key metrics for horizontal

Key Takeaways

- Publicly funded water and transportation projects tend to be funded in advance
- State budget deficits will likely delay any new infrastructure projects in 2021 and beyond
- Water affordability will directly affect whether water systems can even remain solvent, let alone afford investments into critical water and wastewater systems
- Privately funded projects less impacted, particularly if in residential neighborhoods or areas where there is a lot of in-migration as people flee the cities and don't return

Key Metrics

State budget deficits
Lockdown rules (impact on commuting)
Unemployment

Institutional

- Healthcare
 - Hospital
 - Senior Care
 - Other health facilities
- Education
 - K-12
 - Higher education
- Research facilities & labs
 - Pharmaceuticals
 - Life Sciences

What happened to healthcare?

Key Takeaways

- Hospitals were hit with three massive costs during the pandemic:
 - Forced shutdown of regular operations for non-emergent procedures
 - Treating a growing number of uninsured patients
 - Purchasing PPE and other support services for front-line workers (e.g., childcare, transportation)
- Between March 1 and June 1, AHA estimates that hospitals lost over **\$200B** in revenue
 - Received only \$60B in CARES Act and other federal aid
- Nursing homes also saw costs skyrocket; nursing homes lost an estimated **\$57B**, or losses of 23%
 - PPE costs increased over 100%
 - 60% of nursing home patients are paid for through Medicaid, but only covers 70-80% of the cost of care

Hospital Costs	Impact (Billions)
COVID-19 Hospitalizations	\$36.6
Cancelled Surgeries and Other Services	\$161.4
Purchasing PPE	\$2.4
Support for Front Line Workers	\$2.2
Total	\$202.6

Key trends for healthcare

Key Takeaways

- Patients are moving to **telehealth**, which may be persistent due to additional convenience
 - HHS loosened HIPAA rules for telemedicine platforms, which are unlikely to be reversed
- Acceleration of shift to **outpatient** settings, i.e., more smaller clinics, fewer big hospitals
 - Started under Obamacare with bundled Medicaid payment model
 - More than half of states are projecting Medicaid enrollments to increase in 2020 and 2021, due to high unemployment
- Nursing homes will face **reduced capacity** constraints as they attempt to accommodate social distancing requirements
 - More families are opting to keep elderly loved ones at home to reduce risk

Key Metrics

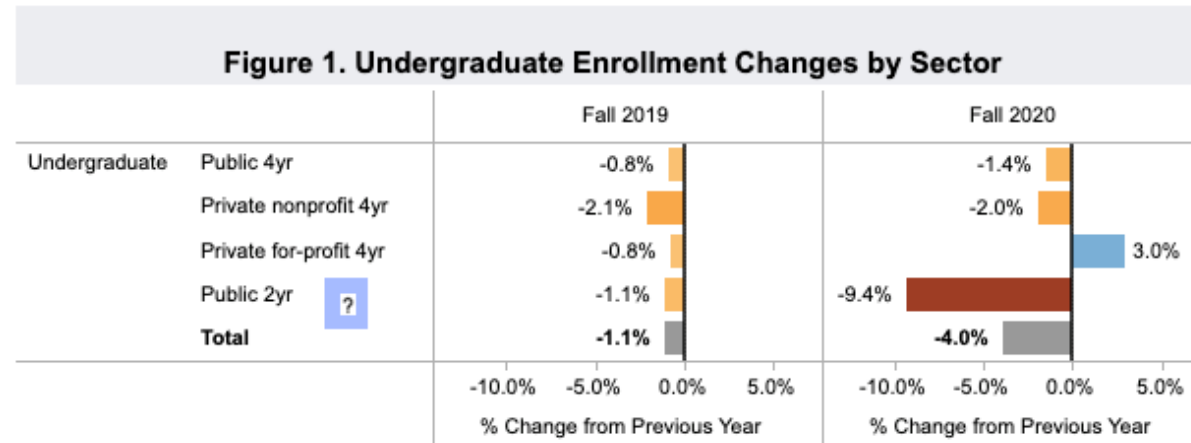
Number of COVID cases
Uninsured rate
Lockdown rules
(restrictions on elective care)

What happened to education?

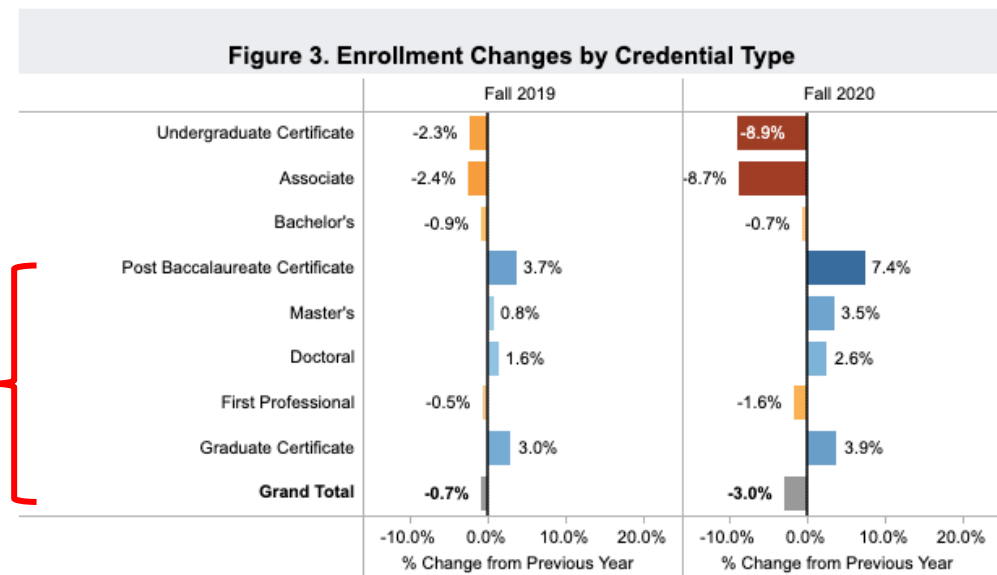
Key Takeaways

- Higher education students are taking time off – expected net **enrollment decline of 4%** in fall 2020
- International enrollment will drop steeply due to visa restrictions and closed borders
- For-profit enrollment projected to go up over non-profit enrollment
- K-12 students went home; parents struggled with remote education
- Shift to private school and pods/microschools if parents can afford them, perhaps as much as 5% (or 6M) net gain to private schools in 2020

Public 2-year colleges likely to be hit the hardest



Graduate enrollment up, everyone else down



Key trends for education

Key Takeaways

- Higher education tends to be counter-cyclical to the market, but may not be this time around
 - Short-term certificate programs available and price efficient
 - Lack of on-campus experience decreases traditional higher ed value
- Public universities and public K-12 schools may be hit hard by loss of public revenue, and in the case of universities, lower enrollment and therefore tuition fees
- Public K-12 schools, typically funded by property taxes, will do better in areas where local funding makes up a greater portion of their budgets (suburbs) than where there are more state dollars (urban areas)
- Well-endowed private universities and schools may choose to invest in infrastructure changes to accommodate social distancing

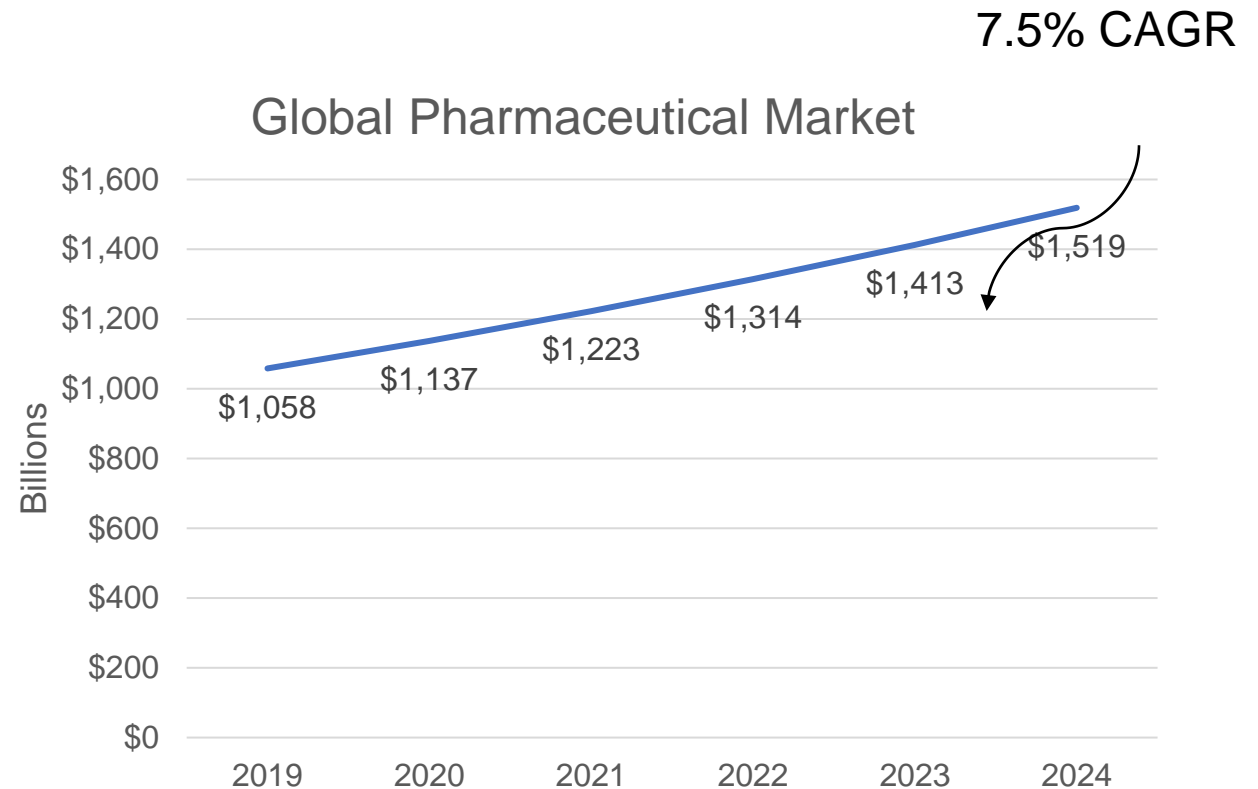
Key Metrics

State budget deficits
Local budget deficits
Lockdown rules
Immigration restrictions

What happened to research facilities?

Key Takeaways

- Pharmaceutical companies recorded more than 800 drug price increases this year through July
- In July alone, drug companies increased the cost of 42 medicines by an average of 3.3%
- At least nine pharma companies are racing to produce a COVID vaccine, including three U.S. only based trials and two jointly in the U.S. and another country:
 - Johnson & Johnson (U.S.)
 - Pfizer (U.S./Germany)
 - Moderna (U.S.)
 - Sinovac (China/U.S.)
 - Novavax (U.S.)
- Q1 saw short term boost in sales as wholesalers stockpiled drugs in anticipated supply chain disruption



Key trends for research facilities

Key Takeaways

- Pharma is having a boom year and likely decade; strong demand for corporate research facilities
- Graduate enrollment also up – see slide 34 – with potential for higher education investment in research facilities as well, particularly with federal subsidies
- Drug prices continue to increase without consequence from Administration; November may change that

Key Metrics

COVID Vaccine trial successes
Higher education graduate enrollment
Drug prices

Environmental

- Remediation
- Resiliency
- Health & Safety

What happened to environmental & resiliency?

Key Takeaways

- Similar to construction, paused in March and then reopened quickly
- Benefited from closed buildings and sites to accelerate work; for example, asbestos abatement in schools accelerated timelines without students in the buildings
- Particularly active hurricane and wildfire season; emergency response saw active summer
- However, state budget deficits are likely to delay resiliency projects that are not already funded in 2021 and beyond; will also impact environmental permitting
- Privately-funded remediation may continue, depending on the industry

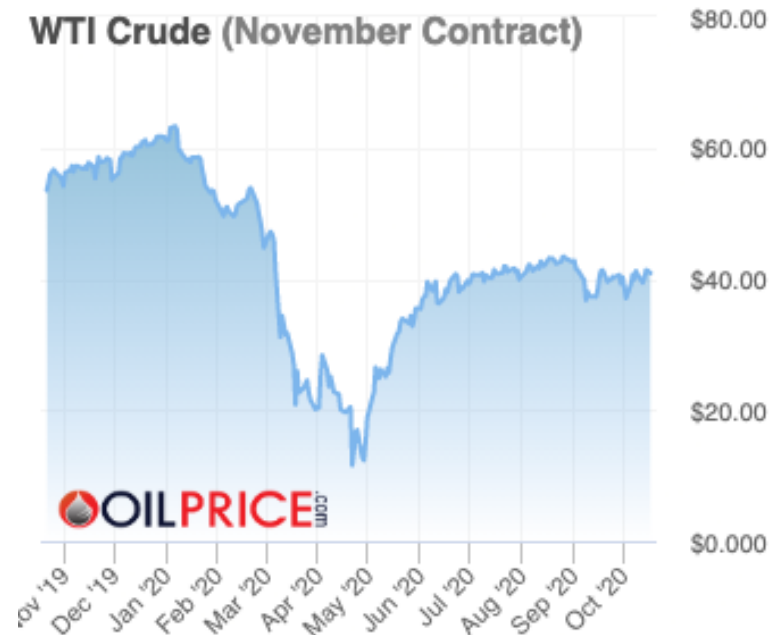
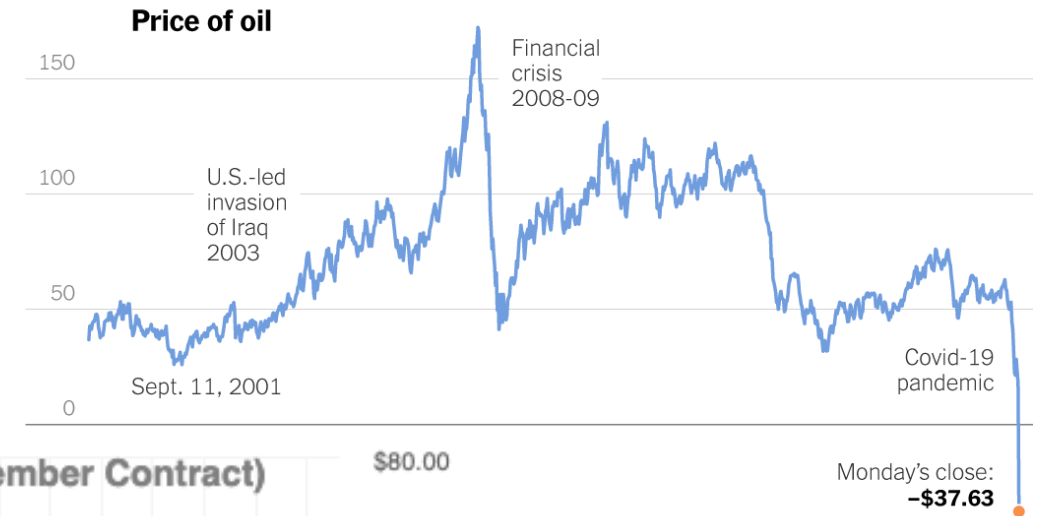
2020 Atlantic Hurricane Landfalls as of Sept 30



Oil & Gas under different kind of threat

Key Takeaways

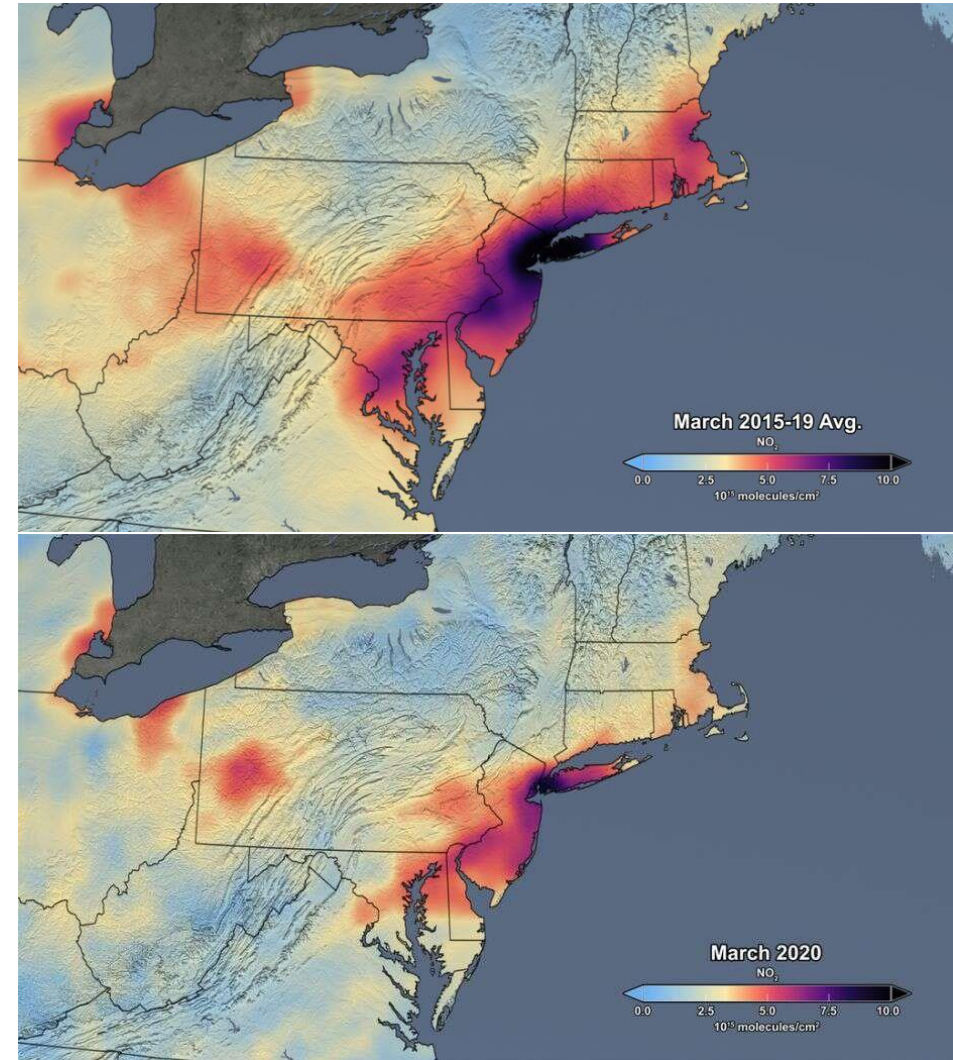
- On April 20, 2020, oil futures went negative for the first time in history
- Oil supply had not predicted a complete halt to the global supply chain, which meant demand dropped steeply
- Price of oil dropped to about \$11 a barrel, far lower than ~\$30 a barrel after the financial crisis
- Hard to slow down oil production; wells cannot be “turned off”
- Likely to be a glut of oil supply and depressed oil prices for at least a year if global supply chains remain muted
- November election may severely restrict oil production due to government policy changes if Democrat is elected



Health & Safety will become a priority

Key Takeaways

- Pollution steeply declined at the height of the lockdown in major urban areas
- Renewed focus on air quality and building design to accommodate social distancing and particulate filtering upgrades
- Major gathering hubs such as office buildings, theaters, stadiums, and entertainment venues may need to invest heavily in air filtering systems to accommodate government rules
- November election may significantly change rules about pollution controls, air scrubbers, and other related green energy requirements



Key trends for environmental

Key Takeaways

- State budget deficits likely to restrict any new resiliency projects in 2021 and beyond
- Remediation may continue, but depressed oil prices will restrict cash on hand for oil & gas companies to invest in clean up, unless mandated to do so by the government
- Air quality and filtration will be a focus area, both to accommodate particulate filtering to reduce the spread of airborne viruses, like COVID, as well as for environmental reasons
 - COVID lockdowns revealed how reduced transportation, particularly by car, can significantly reduce pollution, and almost overnight

Key Metrics

State budget deficits
Oil prices
Lockdown rules
Environmental regulation

Vertical and Development

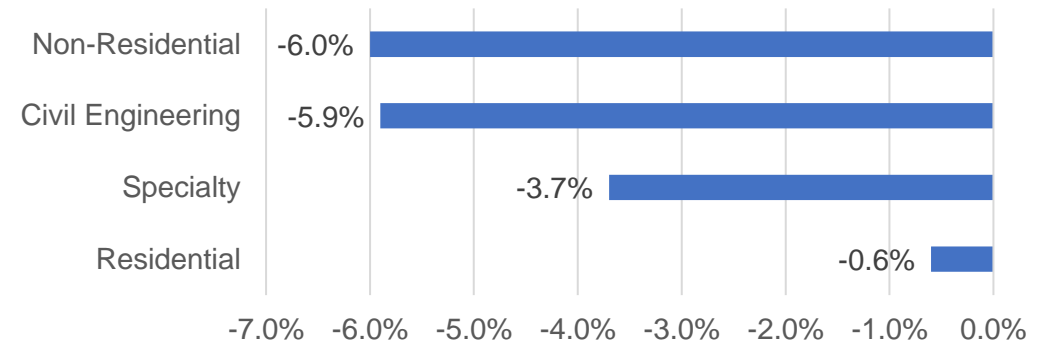
- Commercial real estate
- Office/Interiors
- Residential (single and multi-family)
- Mixed use

What happened to commercial real estate?

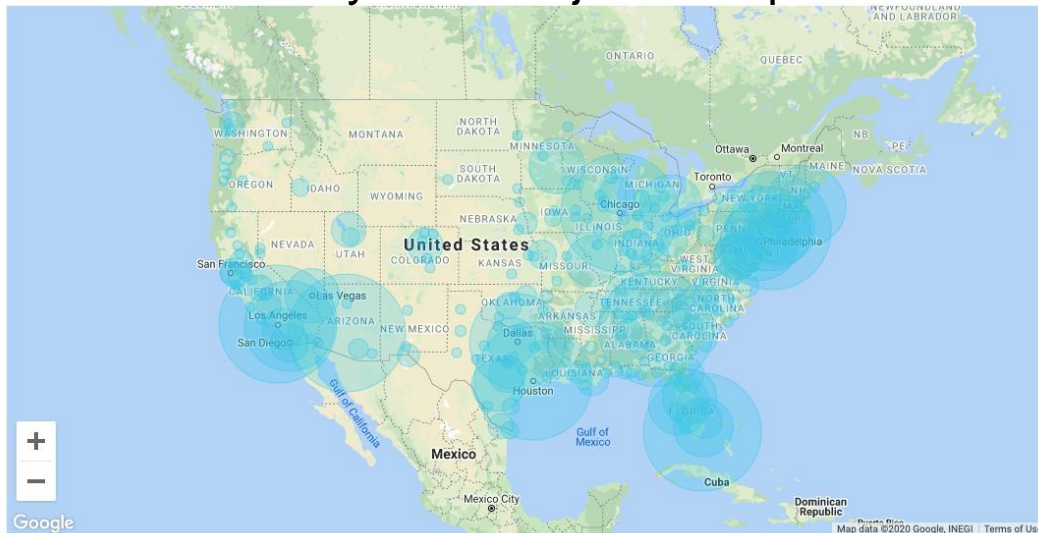
Key Takeaways

- Multi-family and office seeing the higher rates of delinquency on loans where COVID mentioned as a cause, compared to retail and hotel
- Commercial construction shed 6% of employees YoY between Sept 2019 and Sept 2020
- Urban areas hit far harder than others

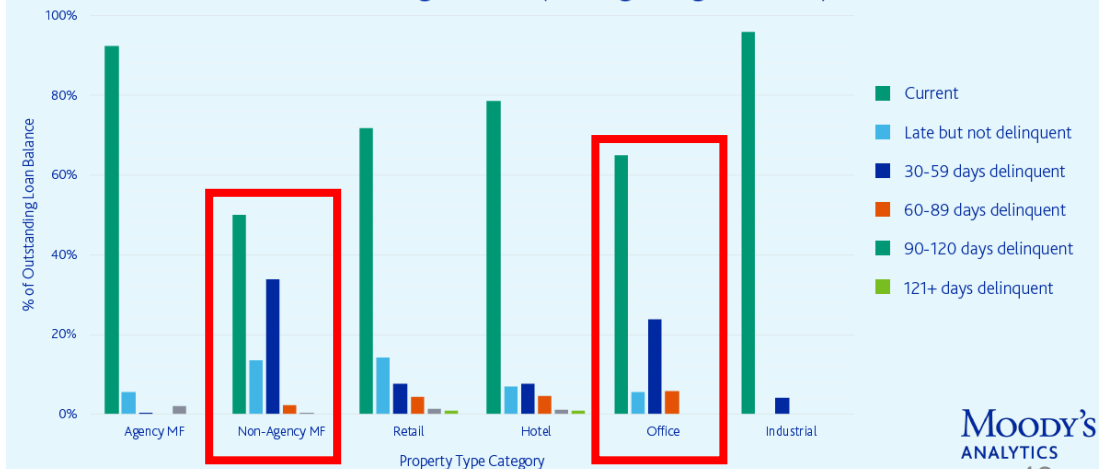
Construction Employment, Percent Change Sept 2019 vs. Sept 20



Cities by CRE Projected Impact

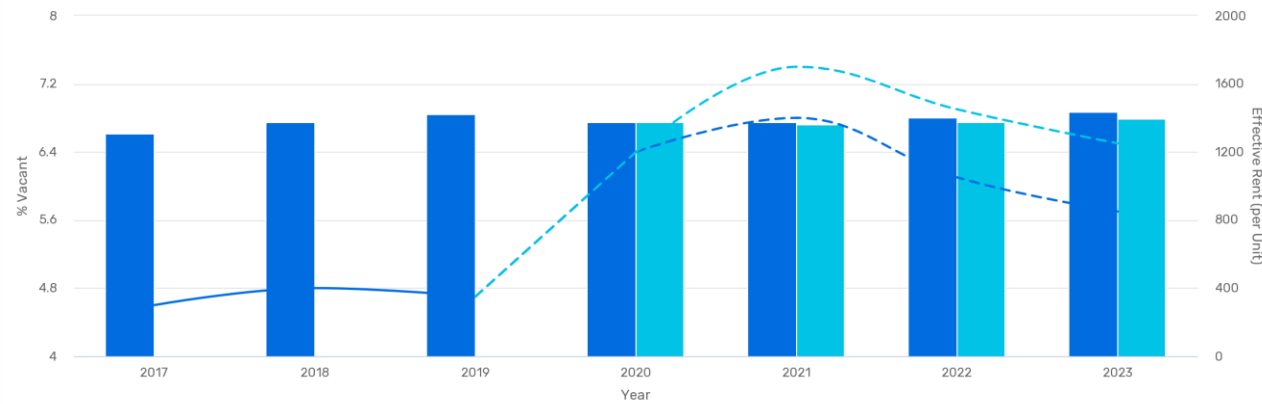


Payment Status Distribution by Property Type for Loans with Servicer Comments Mentioning COVID (through August 2020)

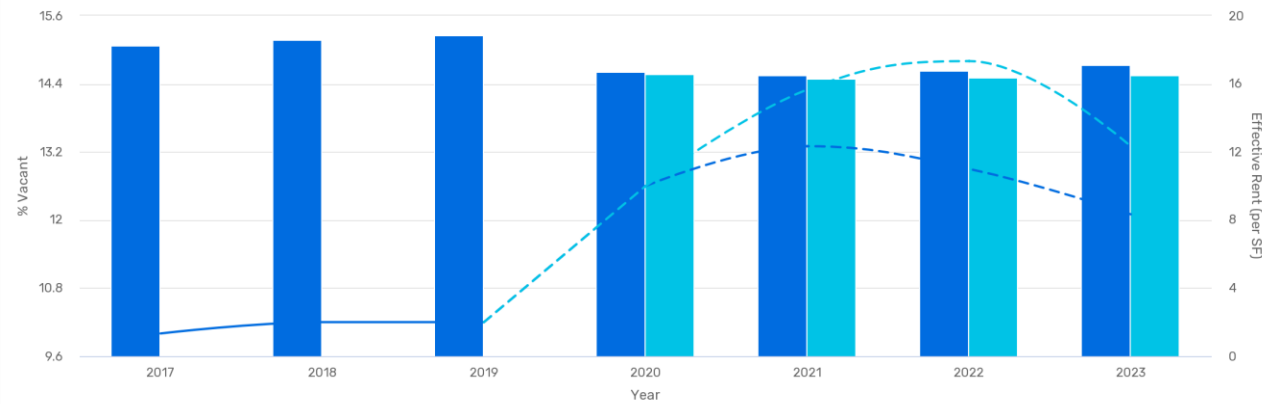


Commercial impact varies by type

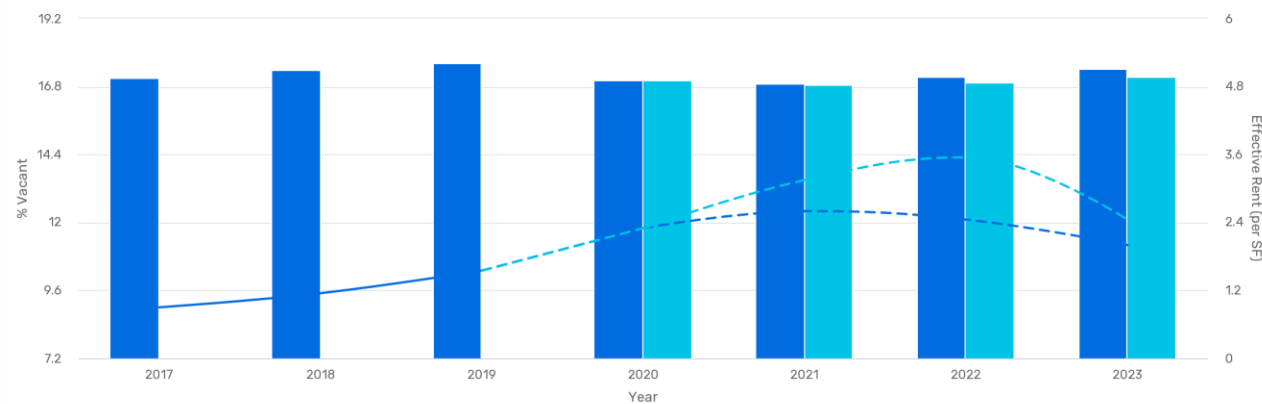
CRE Fundamentals - Apartment



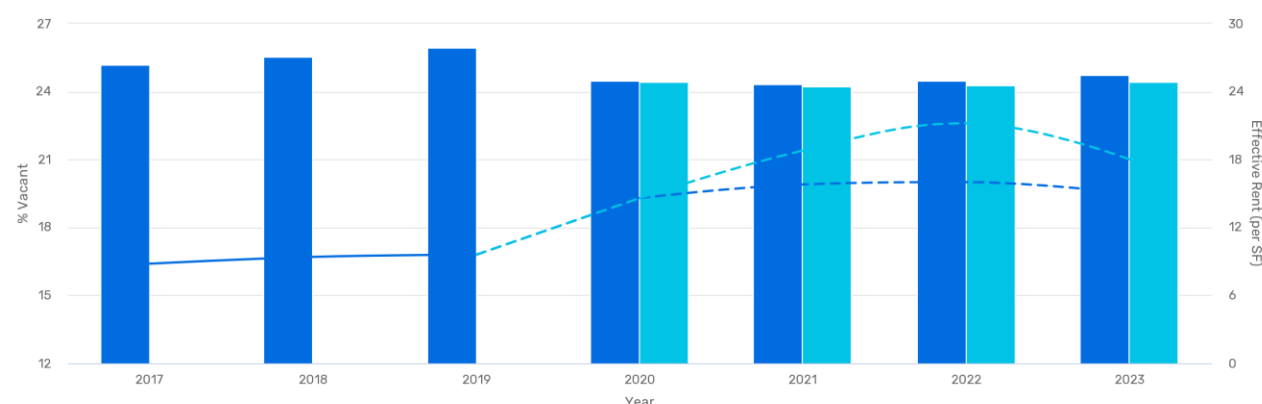
CRE Fundamentals - Retail



CRE Fundamentals - Warehouse/Distribution



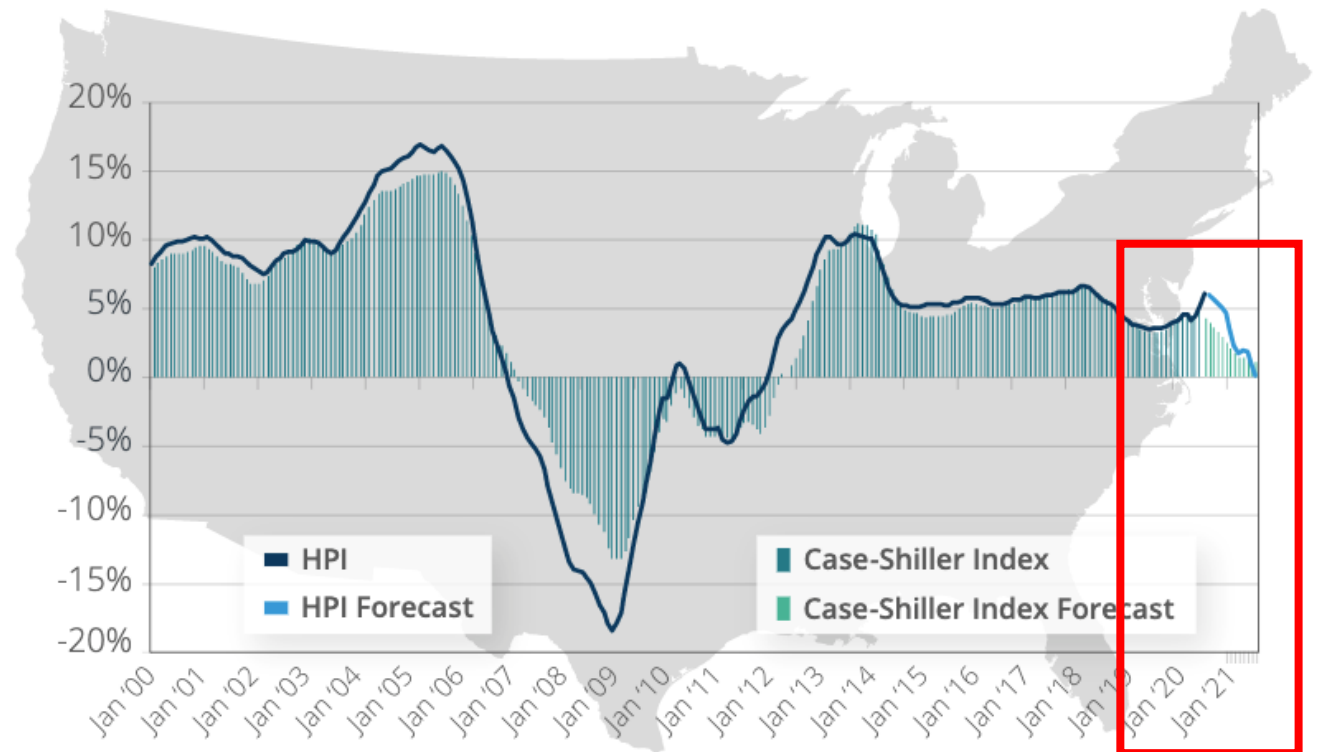
CRE Fundamentals - Office



What happened to residential real estate?

Key Takeaways

- Home prices nationwide, including distressed sales, increased year over year by 5.9% in August 2020 compared with August 2019
- This is because for-sale houses have decreased by 17% as of August 2020 compared to August 2019, putting upward pressure on home prices
- However, longer term forecasts project a decrease in housing prices as personal financial stability declines and homeowners are forced to sell
- Federal eviction moratorium ends at the end of Dec 2020



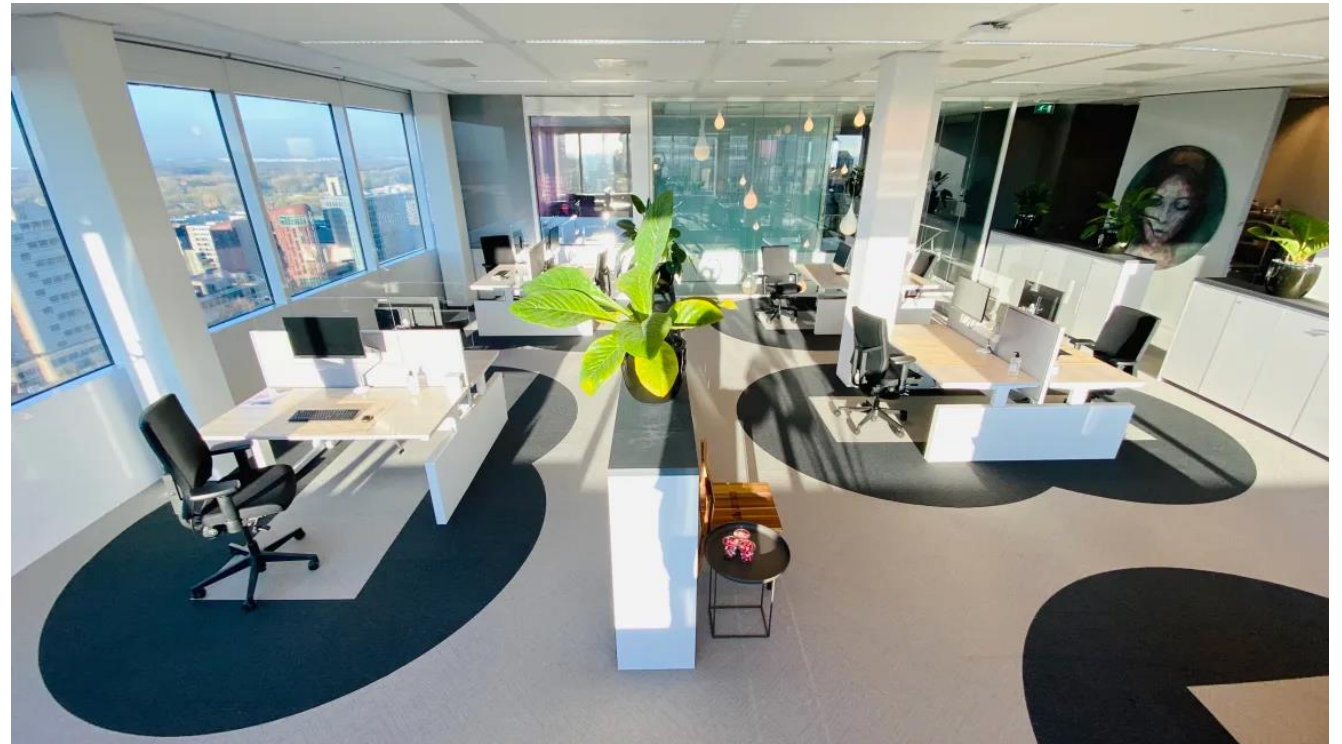
Source: Case-Shiller Index Forecast data provided by Moody's Analytics

Reimagining work will be critical

Key Takeaways

- Both tenants and commercial office space owners are being forced to rethink office layout and design – for physical and well as mental health
 - Desks farther apart
 - Less shared space
 - Reduced capacity conference rooms
 - One way traffic flow
- Perhaps most impactful will be rebuilding office air filtration systems, which today often recycle air, to both kill pathogens and bring in more fresh air from outside
- Far heavier emphasis on virtual communication, to reduce travel and improve social distancing

Cushman & Wakefield's "Six Feet Office" Design



Key trends for Vertical

Key Takeaways

- Commercial development likely to slow, particularly in urban areas, as vacancies increase, and lockdown rules continue
- Residential did well during the pandemic but also likely to slow due to other economic factors and buyers' reduced ability to pay
- Office building owners are interested in getting their tenants back in the office and may invest in HVAC upgrades and interior redesigns, depending on their financial position to afford such investments

Key Metrics

Lockdown rules
Vaccine development
Rapid testing
availability

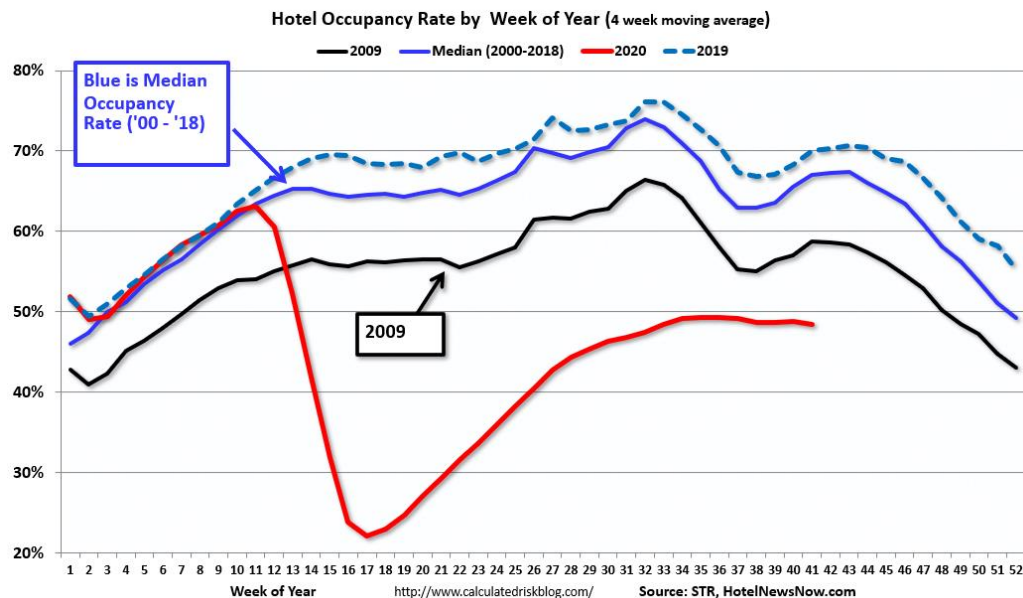
Leisure and Entertainment

- Hotels
- Theaters and other venues
- Museums
- Casinos

Leisure and Entertainment

Key Takeaways

- Entertainment ground to a halt during the pandemic and has largely not reopened
- Re-openings are state based – e.g., Disneyland in Florida is open but Disney World in California is not



Trip Transportation Type	July 1- Sept 30, 2019 Volume	July 1- Sept 30, 2020 Volume	YoY Difference
Automobile	706M	683M	-3.3%
Air	57.9M	15.1M	-73.9%
Rail, Cruise, Other	64.3M	9.3M	-85.5%
Total	828M	707M	-14.6%

- Hotel occupancy rates bottomed out at 22%, and rebounded in July to 50% where they now remain
- CDC guidance on large venues is to reduce capacity, but many owners will lose more money to operate at partial capacity and have opted to stay closed, e.g. Broadway, which is closed until the end of 2020

Key trends for Leisure and Entertainment

Key Takeaways

- By some estimates, leisure and entertainment are not expected to rebound for 4-5 years, even with a deployed and effective vaccine
- Consumer confidence will likely lag any vaccine developments to participate in large venue spaces
- Reduced capacity rules likely to stay in place for some time
- Winter months/northern states will see further reductions as outdoor activities are curtailed

Key Metrics

Lockdown rules
Vaccine development
Rapid testing
availability
Unemployment

Industrial & Manufacturing

- Manufacturing
- Industrial plants

What happened to industrial and manufacturing?

Key Takeaways

- Manufacturing and industrial production paused in March and April, and then resumed
- High risk because work typically cannot be done remotely
- Renewed focus on domestic production due to international supply chain disruption
- Raw good prices are increasing, squeezing manufacturing margins
- Significant COVID outbreaks at some plants, leading to temporary closures and redesigns
- New introduction of robotic technology to reduce risk by some companies

Manufacturing at a Glance

INDEX	Sep Index	Aug Index	% Point Change	Direction	Rate of Change	Trend* (months)
Manufacturing PMI®	55.4	56.0	-0.6	Growing	Slower	4
New Orders	60.2	67.6	-7.4	Growing	Slower	4
Production	61.0	63.3	-2.3	Growing	Slower	4
Employment	49.6	46.4	+3.2	Contracting	Slower	14
Supplier Deliveries	59.0	58.2	+0.8	Slowing	Faster	11
Inventories	47.1	44.4	+2.7	Contracting	Slower	3
Customers' Inventories	37.9	38.1	-0.2	Too Low	Faster	48
Prices	62.8	59.5	+3.3	Increasing	Faster	4
Backlog of Orders	55.2	54.6	+0.6	Growing	Faster	3
New Export Orders	54.3	53.3	+1.0	Growing	Faster	3
Imports	54.0	55.6	-1.6	Growing	Slower	3
Overall Economy				Growing	Slower	5
Manufacturing Sector				Growing	Slower	4

*Number of months moving in current direction.

Manufacturing ISM® Report On Business® data is seasonally adjusted for the New Orders, Production, Employment and Inventories indexes.

Key trends for Industrial and Manufacturing

Key Takeaways

- Shift towards home goods, sanitary paper products, and PPE
- More production likely to come back on shore due to supply chain disruptions, but may see acceleration in automation to reduce risks of virus spread
- Likely increase in remote diagnostic and management systems for heavy machinery
- Plants will likely have to be redesigned to accommodate social distancing and/or the introduction of automation technology to the factory line
- Heavy emphasis on real-time data and industrial IoT, such as remote sensors and data visualization, as well as investments in connectivity such as 5G

Key Metrics

Lockdown rules
Vaccine development
Import restrictions

How did we grade each state?

Category	Measures
Strength of Economy Pre-COVID	<ul style="list-style-type: none"> - GDP as of 2019:Q3 - 5yr CAGR (2015-19)
Population size and aging	<ul style="list-style-type: none"> - Total population size - 5yr CAGR - Ratio of taxpaying to non taxpaying - 5yr CAGR of 65+
COVID Impact on GDP	<ul style="list-style-type: none"> - GDP change: 2020:Q2 vs 2019:Q3 - Absolute loss in GDP by industry
Unemployment	<ul style="list-style-type: none"> - Absolute Aug 20 unemployment as % of labor force - Apr 20 to Aug 20 improvement
Pre-COVID state of the budget	<ul style="list-style-type: none"> - Fiscal solvency
Forecasted state budget deficit in 2021	<ul style="list-style-type: none"> - Predicted revenue losses

Methodology

- Metrics were grouped into quintiles, assigned a grade (A=5, B=4, C=3, D=2, F=1), scored, and ranked
- Grades were assigned within each category and a final/overall grade was assigned to each state
- The final state grade was determined by adding up each metric score, then ranking the results and grouping A-F (Graded on a curve)

States Rating (1)

State	Strength of Economy Pre-COVID	Population size and aging	COVID Impact on GDP	Unemployment	Pre-COVID state of the budget	Forecasted state budget deficit in 2021	Overall "survive COVID" grade
Washington	A	A	A	B	A	C	A
Maryland	A	A	A	D	A	B	A
Colorado	A	B	A	B	A	D	A
Texas	A	A	B	B	B	B	A
Arizona	A	D	B	A	C	B	A
Florida	A	A	B	B	D	B	A
Georgia	A	B	B	A	C	D	A
California	A	A	B	F	A	D	A
Oregon	A	B	C	B	A	A	A
Virginia	B	B	A	B	C	C	A
North Carolina	A	A	B	B	C	B	B
Utah	A	D	A	A	B	C	B
Massachusetts	A	A	B	F	B	B	B
Alabama	C	C	C	A	C	A	B
Indiana	B	C	F	A	C	A	B
Minnesota	A	B	C	D	A	B	B
Illinois	B	B	B	D	A	C	B

States Rating (2)

State	Strength of Economy Pre-COVID	Population size and aging	COVID Impact on GDP	Unemployment	Pre-COVID state of the budget	Forecasted state budget deficit in 2021	Overall "survive COVID" grade
New York	A	A	B	F	B	B	B
North Dakota	F	C	A	B	A	B	B
Idaho	B	D	B	A	C	C	B
New Jersey	B	A	B	F	C	B	B
Pennsylvania	A	A	C	D	C	C	B
South Carolina	A	D	D	B	C	A	B
Tennessee	A	A	F	B	B	D	B
Wisconsin	C	B	F	A	C	B	B
Ohio	A	A	F	B	D	D	C
Oklahoma	D	B	B	A	D	C	C
Hawaii	C	D	D	B	A	A	C
Iowa	D	C	B	B	C	B	C
Nevada	B	C	F	B	A	C	C
District of Columbia	C	B	A	F	N/A	B	C
Kentucky	C	B	F	A	C	B	C
Nebraska	D	D	B	B	B	D	C
South Dakota	F	F	A	A	B	B	C

States Rating (3)

State	Strength of Economy Pre-COVID	Population size and aging	COVID Impact on GDP	Unemployment	Pre-COVID state of the budget	Forecasted state budget deficit in 2021	Overall "survive COVID" grade
Arkansas	D	D	B	D	C	A	D
Kansas	C	D	C	D	B	A	D
Michigan	B	B	F	B	C	C	D
New Hampshire	C	D	D	A	C	D	D
Montana	F	F	B	A	C	A	D
Vermont	F	F	F	A	B	B	D
Connecticut	D	C	B	F	C	C	D
Delaware	F	F	A	D	B	B	D
Missouri	C	A	C	D	D	D	D
Rhode Island	F	C	B	F	C	B	D
Maine	C	F	D	D	C	A	F
West Virginia	F	D	C	B	D	A	F
Mississippi	D	D	D	B	D	B	F
Louisiana	D	D	F	B	D	C	F
New Mexico	C	F	A	F	D	D	F
Alaska	F	D	C	B	D	D	F
Wyoming	F	F	B	D	D	D	F

How did we grade industries?

Category	Measures
Strength Pre-COVID	<ul style="list-style-type: none">- GDP as of 2019:Q3- 5yr CAGR (2015-19)
COVID Impact on GDP	<ul style="list-style-type: none">- GDP % change: 2020:Q2 vs 2019:Q3
Unemployment	<ul style="list-style-type: none">- Absolute Sep 20 unemployment as % of labor force

Ranking methodology:

- Metrics were grouped into quintiles, assigned a grade (A=5, B=4, C=3, D=2, F=1), scored, and ranked
- Grades were assigned within each category and a final/overall grade was assigned to each industry
- The final industry grade was determined by adding up each metric score, then ranking the results and grouping A-F (Graded on a curve)

Industry Rating

Industry	Strength Pre-COVID	COVID Impact on GDP	Unemployment	Final Industry Rating
Professional Services	B	C	B	A
Real estate	B	B	B	A
Finance & insurance	D	A	A	A
Healthcare	B	D	A	A
Information	B	B	D	A
Utilities	D	A	A	A
Government	C	B	A	A
Mgmt of companies	C	B	N/A	B*
Manufacturing	B	D	B	B
Retail trade	B	C	C	B
Ag, Forestry, fishing, hunting	D	B	B	C
Construction	C	C	C	C
Gov- Federal civilian	D	A	N/A	C*
Gov- State and local	C	C	N/A	C*
Admin, waste mgmt, remediation	C	D	D	D
Transportation and whsing	B	F	D	D
Wholesale trade	D	C	C	D
Gov- Military	F	A	N/A	D*
Oil & Gas, Mineral Extraction	C	D	F	D
Educational services	F	D	C	F
Accommodation & food services	D	F	F	F
Arts, Entertainment, Rec	D	F	F	F
Other services (except gov)	D	F	D	F

* Weighted existing scores to address missing unemployment data

Infrastructure Perspective

Infrastructure current scenario

- Consensus that a stimulus bill is overdue to address aging infrastructure and advancing telecom technologies
 - Prime time for infrastructure investments – low rates and available labor
- FAST Act (just extended for one year) was the last bill passed (\$13.6B added to the HTF)
- Will there be another stimulus as part of CARES Act? And if so, will there be an infrastructure deal as part of it?
 - Trump has proposed a \$1T deal
 - House Democrats passed a \$2.2T bill a few weeks ago; pared down version of \$3.4T HEROES Act from May
 - Senate Republicans have called “dead on arrival”
 - Mnuchin and Pelosi are still negotiating a last-minute compromise before the election
 - Possibility for a stand-alone airlines support bill (\$29B)

Or...

- Will the next infrastructure bill be pushed through after elections? If so,
 - What will be the impact of Biden’s proposal?
 - What will be the impact of Trump’s proposal?

Trump's plan highlights (\$1 trillion)

- Most funds towards roads and bridges
 - \$75 billion toward expanding surface transportation spending
 - \$190 billion to major infrastructure investment such as bridges and freight
- \$50 billion for 5G wireless infrastructure and billion for rural broadband
- \$10 billion to a capital revolving fund to finance federal property purchases or improvements
- \$100 billion on incentive programs to private, state and local entities for alternative delivery and financing structures
- \$20 billion to expand financing programs such as TIFIA loans, PABs, RRIF (rail) + broadening eligibility
- Dollars to 20 states for specific projects
- Other investments: Inland Waterways system, VA facilities, public lands
- Total estimated 1 million jobs added

State projects under Trump plan

- \$135 million to Louisiana DOT to complete the elevated LA1 from Leeville to Golden Meadow
- \$79.5 million to Port Houston in Texas to boost capacity and efficiency of its Barbours Cut Container Terminal
- \$73.7 million for the Puget Sound Gateway Program in Washington state
- \$71.5 million for completion of the Greenville Bypass in Washington County, Miss., a project that's expected to reduce travel times along Highway 82
- \$65 million for Rhode Island for "multiple safety improvements and repairs" along the state's RI-246 corridor
- \$60.7 million for Eagle County, Colo., for improvements to a stretch of the Vail Pass along Interstate 70
- \$56.8 million to New Castle County, Del., for a redesign of an interchange at Interstate 95 and state Highway 896
- \$55.1 million to Kentucky for widening of a stretch of the Mountain Parkway from two lanes to four lanes
- \$50 million to Nevada for a proposed reconstruction of the interchange between Tropicana Avenue and Interstate 15
- Others: Arkansas (\$40 million); Minnesota (\$40 million); Maine (\$38.1 million); South Carolina (\$34.6 million); Florida (\$29.9 million); Michigan (\$25 million); North Carolina (\$25 million); West Virginia (\$12 million); Tennessee (\$11.2 million); Wisconsin (\$6.8 million); and Oklahoma (\$6.2 million)

Biden's plan highlights (\$2 trillion)

- 500,000 electric vehicle charging stations by 2030
- \$400 billion for clean energy
- \$100 billion to modernize schools
- \$50 billion on repairing roads and bridges in first year
- \$10 billion for transit; zero-emission public transport
- 6 million buildings and homes upgrade; \$300 billion for housing construction
- Invest in water/sewer systems
- Expand broadband to rural
- Ban new permits for oil and gas drilling on federal land and offshore
- 1 million jobs in auto industry; 1 million jobs in Construction
- 250K jobs in climate-smart ag, resilience, conservation

Assumptions on overall industry impact from infrastructure stimulus

Industry	Trump	Biden
Mining, Oil & Gas	Continue to follow gradual recovery path	Takes investment out of industry; will suffer in short/long term
Construction	Surface transport/construction jobs added by both	Surface transport/construction jobs. Biden to add housing construction jobs
Manufacturing	Bill to improve unemployment rate of recovery	More auto industry jobs
Transportation and warehousing	Recovery rate to accelerate	Recovery rate to accelerate
Utilities	Not heavily impacted by COVID; low unemployment levels maintained	Not heavily impacted by COVID; low unemployment levels maintained
Information	Investment in telecom	Investment in telecom
Educational services	No investments	Plans to modernize schools

Assumptions for proposed scenarios

- GDP baseline assumes partial recovery from Q2
- GDP improvement from infrastructure stimulus estimated at 1.6X dollars invested
- Allocation of GDP increase was distributed across impacted industries
- Unemployment impact determined by jobs generated (based on each proposal) as well as estimated industry recovery time

Industry Ratings vs Infrastructure Bills

Industry	Strength Pre-COVID	COVID Impact on GDP	Unemployment	Weighted Score	Weighted scores rank	Final Industry Rating	Trump Rating	Biden Rating
Professional Services	B	C	B	17.0	1	A	A	A
Real estate	B	B	B	16.0	2	A	B	A
Finance & insurance	D	A	A	15.0	3	A	C	C
Healthcare	B	D	A	15.0	3	A	A	A
Information	B	B	D	15.0	3	A	A	A
Utilities	D	A	A	15.0	3	A	C	C
Government	C	B	A	15.0	3	A	B	C
Mgmt of companies	C	B	N/A	14.7	8	B	D	B
Manufacturing	B	D	B	14.0	9	B	A	A
Retail trade	B	C	C	14.0	9	B	B	A
Ag, Forestry, fishing, hunting	D	B	B	12.0	11	C	C	C
Construction	C	C	C	12.0	11	C	C	C
Gov- Federal civilian	D	A	N/A	12.0	11	C	D	D
Gov- State and local	C	C	N/A	12.0	11	C	B	B
Admin, waste mgmt, remediation	C	D	D	11.0	15	D	C	C
Transportation and whsing	B	F	D	11.0	15	D	B	B
Wholesale trade	D	C	C	10.0	17	D	D	D
Gov- Military	F	A	N/A	9.3	18	D	F	D
Oil & Gas, Mineral Extraction	C	D	F	9.0	19	D	C	D
Educational services	F	D	C	8.0	20	F	F	D
Accommodation & food services	D	F	F	7.0	21	F	D	D
Arts, Entertainment, Rec	D	F	F	7.0	21	F	D	D
Other services (except gov)	D	F	D	7.0	21	F	F	F

Trump plan impact

Industry	Strength Pre-COVID	COVID Impact on GDP	Unemployment	Weighted Score	Weighted scores rank	Weighted Industry Rating	Original Grade
Information	B	B	B	18.0	1	A	A
Professional Services	B	C	B	17.0	2	A	A
Healthcare	B	D	A	17.0	2	A	A
Manufacturing	B	D	B	17.0	2	A	B
Real estate	B	B	C	15.0	5	B	A
Transportation and whsing	B	F	C	15.0	5	B	D
Retail trade	B	C	D	15.0	5	B	B
Gov- State and local	C	C	N/A	14.7	8	B	C
Government	C	B	A	13.0	9	B	A
Utilities	D	A	A	12.0	10	C	A
Ag, Forestry, fishing, hunting	F	B	B	12.0	10	C	C
Admin, waste mgmt, remediation	C	D	F	11.0	12	C	D
Finance & insurance	D	F	A	11.0	12	C	A
Construction	C	C	C	11.0	12	C	C
Oil & Gas, Mineral Extraction	C	D	D	11.0	12	C	D
Mgmt of companies	C	B	N/A	10.7	16	D	B
Arts, Entertainment, Rec	D	F	F	10.0	17	D	F
Gov- Federal civilian	F	A	N/A	9.3	18	D	C
Wholesale trade	F	C	C	8.0	19	D	D
Accommodation & food services	D	F	F	8.0	19	D	F
Other services (except gov	F	F	D	7.0	21	F	F
Educational services	F	D	D	7.0	21	F	F
Gov- Military	F	A	N/A	6.7	23	F	D

Biden plan impact

Industry	Strength Pre-COVID	COVID Impact on GDP	Unemployment	Weighted Score	Weighted scores rank	Weighted Industry Rating	Original Grade
Manufacturing	B	A	A	18.0	1	A	B
Information	B	A	C	17.0	2	A	A
Professional Services	B	C	B	17.0	2	A	A
Healthcare	B	C	B	15.0	4	A	A
Real estate	B	B	C	15.0	4	A	A
Retail trade	B	A	D	15.0	4	A	B
Gov- State and local	C	A	N/A	14.7	7	B	C
Mgmt of companies	C	C	N/A	13.3	8	B	B
Transportation and whsing	B	C	D	13.0	9	B	D
Government	C	F	A	12.0	10	C	A
Utilities	D	D	A	12.0	10	C	A
Ag, Forestry, fishing, hunting	F	B	B	12.0	10	C	C
Construction	C	D	B	12.0	10	C	C
Admin, waste mgmt, remediation	C	D	D	11.0	14	C	D
Finance & insurance	D	F	A	11.0	14	C	A
Gov- Federal civilian	F	B	N/A	10.7	16	D	C
Oil & Gas, Mineral Extraction	C	C	F	10.0	17	D	D
Arts, Entertainment, Rec	D	B	F	10.0	17	D	F
Wholesale trade	F	F	C	8.0	19	D	D
Accommodation & food services	D	D	F	8.0	19	D	F
Educational services	F	D	C	8.0	19	D	F
Gov- Military	F	B	N/A	8.0	19	D	D
Other services (except gov	F	F	D	7.0	23	F	F

Appendix

Industries change in % of total GDP Q2:2020 vs Q3:20192	Comprehensive Economic Performance Report: Q2 2020 vs Q3 2019																					
	Accommodation & food services	Admin, waste mgmt, remediation	Ag, Forestry, fishing, hunting	Arts, Entertainment, Rec	Construction	Educational services	Finance & insurance	Gov- Federal civilian	Gov- Military	Gov- State and local	Healthcare	Information	Manufacturing	Mgmt of companies/ enterprises	Oil & Gas, Mineral Extraction	Other services (except gov)	Professional Services	Real estate	Retail trade	Transportation and whsing	Utilities	Wholesale trade
Alabama	-0.8%	-0.2%	0.0%	-0.2%	0.2%	0.0%	0.5%	0.5%	0.2%	0.2%	-0.9%	0.1%	-0.3%	0.0%	0.0%	-0.3%	0.4%	0.7%	0.0%	-0.4%	0.4%	0.0%
Alaska	-1.0%	0.1%	0.2%	-0.3%	0.3%	0.0%	0.2%	0.6%	0.3%	0.0%	-0.6%	0.1%	0.0%	0.1%	1.2%	-0.2%	0.1%	0.8%	0.1%	-1.3%	0.3%	0.0%
Arizona	-1.0%	-0.2%	0.3%	-0.6%	0.3%	0.0%	0.5%	0.3%	0.1%	0.1%	-0.6%	0.3%	-0.3%	0.3%	0.1%	-0.2%	-0.1%	0.8%	0.3%	-0.4%	0.2%	0.1%
Arkansas	-0.9%	0.0%	0.1%	-0.1%	0.3%	0.0%	0.5%	0.2%	0.1%	0.1%	-0.7%	0.1%	-0.6%	0.6%	0.0%	-0.3%	0.0%	0.6%	0.1%	-0.6%	0.6%	0.1%
California	-1.1%	-0.1%	0.5%	-0.8%	0.0%	0.0%	0.5%	0.2%	0.1%	0.1%	-0.5%	1.2%	-0.1%	0.1%	0.0%	-0.3%	0.3%	1.2%	-0.2%	-0.5%	0.2%	-0.2%
Colorado	-0.9%	-0.1%	-0.5%	-0.8%	0.2%	0.0%	0.6%	0.3%	0.1%	0.2%	-0.5%	1.2%	-0.2%	0.3%	0.2%	-0.3%	0.2%	0.8%	0.0%	-0.6%	0.2%	0.0%
Connecticut	-1.1%	-0.1%	0.1%	-0.5%	0.0%	0.0%	1.0%	0.2%	0.2%	0.0%	-0.7%	1.1%	-0.3%	0.1%	0.0%	-0.3%	-0.1%	1.2%	-0.3%	-0.3%	0.2%	0.0%
Delaware	-0.9%	-0.1%	0.0%	-0.3%	0.2%	0.0%	1.7%	0.1%	0.1%	0.1%	-0.8%	0.1%	-0.7%	0.2%	0.0%	-0.2%	-0.2%	1.0%	-0.1%	-0.3%	0.2%	0.0%
District of Columbia	-1.7%	-0.1%	0.0%	-0.5%	0.0%	0.0%	0.2%	2.2%	0.2%	0.0%	-0.5%	0.4%	0.0%	0.3%	0.0%	-0.5%	0.2%	0.2%	-0.1%	-0.1%	0.1%	0.0%
Florida	-1.4%	-0.2%	0.3%	-0.7%	0.3%	0.0%	0.8%	0.2%	0.1%	0.2%	-0.5%	0.2%	-0.1%	0.2%	0.0%	-0.4%	0.2%	1.1%	0.1%	-0.5%	0.3%	0.0%
Georgia	-0.9%	-0.1%	-0.3%	-0.3%	0.2%	0.0%	0.8%	0.3%	0.2%	0.2%	-0.5%	0.4%	-0.5%	0.3%	0.0%	-0.2%	0.2%	0.7%	0.1%	-0.6%	0.3%	-0.2%
Hawaii	-5.2%	0.0%	0.3%	-0.7%	0.7%	-0.1%	0.6%	1.0%	1.1%	0.4%	0.1%	0.2%	-0.1%	0.1%	0.0%	-0.2%	0.3%	2.5%	0.4%	-1.2%	0.5%	-0.1%
Idaho	-1.0%	0.1%	-0.7%	-0.5%	0.5%	0.0%	0.5%	0.4%	0.1%	0.3%	-0.6%	-0.1%	-0.3%	0.2%	0.0%	-0.3%	0.2%	1.0%	-0.1%	-0.4%	0.3%	0.1%
Illinois	-1.1%	-0.2%	0.8%	-0.7%	0.0%	-0.1%	1.1%	0.2%	0.1%	0.1%	-0.5%	0.4%	-0.3%	0.2%	0.0%	-0.3%	0.1%	1.0%	0.1%	-0.7%	0.2%	-0.1%
Indiana	-0.8%	-0.1%	0.2%	-0.4%	0.2%	-0.1%	0.6%	0.2%	0.0%	0.3%	-0.6%	0.1%	-0.2%	0.1%	0.0%	-0.3%	0.1%	0.8%	0.1%	-0.4%	0.3%	0.0%
Iowa	-0.8%	-0.1%	0.6%	-0.3%	0.0%	-0.1%	1.4%	0.2%	0.1%	0.0%	-0.5%	0.2%	-0.6%	0.1%	0.0%	-0.3%	0.1%	0.7%	0.0%	-0.5%	0.3%	-0.1%
Kansas	-0.8%	-0.1%	0.0%	-0.3%	0.1%	0.0%	0.6%	0.2%	0.2%	-0.1%	-0.4%	0.3%	0.3%	0.1%	-0.1%	-0.3%	0.2%	0.8%	0.0%	-0.6%	0.2%	-0.1%
Kentucky	-1.1%	-0.1%	0.0%	-0.2%	0.2%	0.0%	0.6%	0.3%	0.3%	0.3%	-0.7%	0.2%	-0.3%	0.1%	-0.2%	-0.3%	0.0%	1.0%	0.1%	-0.7%	0.4%	0.1%
Louisiana	-1.1%	0.0%	0.1%	-0.4%	0.1%	0.0%	0.5%	0.2%	0.1%	0.4%	-1.3%	0.0%	0.5%	0.2%	-0.4%	-0.2%	0.1%	0.9%	0.1%	-0.4%	0.5%	0.0%
Maine	-1.8%	-0.1%	0.4%	-0.6%	0.2%	-0.1%	0.7%	0.6%	0.1%	0.1%	-0.8%	0.0%	-0.2%	0.2%	0.0%	-0.3%	0.1%	1.3%	0.0%	-0.3%	0.4%	0.1%
Maryland	-1.1%	-0.2%	0.0%	-0.6%	0.1%	0.0%	0.5%	1.2%	0.3%	0.1%	-0.7%	0.1%	0.0%	0.0%	0.0%	-0.3%	0.0%	1.0%	-0.1%	-0.4%	0.1%	-0.1%
Massachusetts	-1.2%	-0.2%	0.0%	-0.8%	0.0%	-0.1%	0.9%	0.2%	0.2%	0.1%	-0.6%	0.5%	-0.3%	0.1%	0.0%	-0.3%	0.6%	1.2%	-0.1%	-0.3%	0.1%	0.1%
Michigan	-1.1%	-0.3%	-0.1%	Michigan	0.1%	-0.1%	0.8%	0.2%	0.1%	0.5%	-0.4%	0.4%	-1.1%	0.3%	0.0%	-0.3%	0.1%	1.4%	0.1%	-0.3%	0.4%	0.0%
Minnesota	-0.8%	-0.1%	0.2%	-0.5%	0.2%	0.0%	0.9%	0.2%	0.1%	0.1%	-0.6%	0.2%	-0.5%	0.2%	0.1%	-0.3%	0.1%	0.9%	0.0%	-0.5%	0.3%	0.0%
Mississippi	-1.1%	-0.1%	-1.0%	-0.2%	0.2%	0.0%	0.4%	0.4%	0.2%	0.4%	-0.8%	0.2%	-0.2%	0.3%	0.0%	-0.2%	0.1%	0.8%	0.1%	-0.6%	0.8%	0.1%
Missouri	-0.9%	0.0%	-0.3%	-0.5%	0.1%	0.0%	0.7%	0.4%	0.1%	0.2%	-0.5%	0.3%	-0.8%	0.4%	0.0%	-0.3%	0.3%	0.8%	0.1%	-0.5%	0.3%	0.1%
Montana	-1.2%	0.0%	1.7%	-0.5%	0.3%	0.0%	0.3%	0.5%	0.2%	0.1%	-0.8%	0.2%	-0.2%	0.0%	-0.2%	-0.3%	0.1%	1.0%	-0.2%	-0.7%	0.5%	0.0%
Nebraska	-0.6%	-0.1%	-0.7%	-0.3%	0.2%	0.0%	1.4%	0.2%	0.1%	0.0%	-0.4%	0.3%	0.1%	0.3%	0.0%	-0.3%	0.1%	0.7%	0.1%	-1.4%	0.2%	0.0%
Nevada	-4.1%	-0.2%	-0.1%	-1.1%	0.7%	0.0%	0.8%	0.3%	0.2%	0.5%	-0.1%	0.2%	0.4%	0.4%	0.6%	-0.2%	0.3%	2.0%	0.0%	-0.5%	0.3%	0.0%
New Hampshire	-1.8%	-0.1%	0.0%	-1.1%	0.2%	0.1%	1.4%	0.3%	0.0%	0.1%	-0.5%	0.4%	-0.3%	0.3%	0.0%	-0.3%	0.4%	1.2%	-0.2%	-0.2%	0.3%	0.0%
New Jersey	-1.0%	-0.3%	0.1%	-0.7%	0.0%	-0.1%	0.7%	0.2%	0.1%	0.3%	-0.8%	0.8%	-0.1%	0.6%	0.0%	-0.4%	0.5%	1.2%	-0.2%	-0.6%	0.2%	-0.1%
New Mexico	-0.9%	0.1%	-0.6%	-0.3%	0.1%	0.0%	0.3%	0.9%	0.5%	0.4%	-0.5%	-0.1%	-0.3%	0.1%	-1.8%	-0.3%	0.3%	0.9%	0.0%	-0.4%	0.3%	0.0%
New York	-1.8%	-0.6%	-0.1%	-1.2%	-0.3%	0.0%	2.1%	0.2%	0.1%	0.4%	-0.6%	1.8%	-0.3%	0.0%	0.0%	-0.3%	0.2%	1.3%	-0.5%	-0.5%	0.2%	-0.2%
North Carolina	-1.3%	-0.1%	-0.4%	-0.4%	0.1%	-0.1%	0.9%	0.2%	0.3%	0.2%	-0.5%	0.2%	-0.5%	0.3%	0.0%	-0.3%	0.2%	0.8%	0.0%	-0.3%	0.2%	0.2%
North Dakota	-0.8%	-0.1%	2.9%	-0.2%	-0.1%	0.0%	0.4%	0.1%	0.2%	0.0%	-0.4%	0.2%	-0.2%	0.2%	-1.6%	-0.2%	0.1%	0.7%	0.0%	-1.0%	0.4%	-0.2%
Ohio	-0.9%	-0.2%	-0.1%	-0.6%	0.2%	-0.1%	1.1%	0.2%	0.1%	0.3%	-0.4%	0.3%	-0.8%	0.5%	-0.1%	-0.3%	0.1%	0.9%	0.1%	-0.5%	0.3%	-0.1%
Oklahoma	-0.6%	0.0%	-0.4%	-0.2%	0.1%	0.0%	0.4%	0.5%	0.2%	0.7%	-0.2%	0.4%	-0.4%	0.5%	-3.2%	-0.1%	0.0%	0.8%	0.5%	-0.8%	0.2%	0.0%
Oregon	-1.5%	-0.1%	0.8%	-0.5%	0.2%	-0.1%	0.4%	0.2%	0.0%	0.1%	-0.6%	0.5%	-0.5%	0.6%	0.0%	-0.3%	0.1%	1.2%	0.0%	-0.4%	0.2%	0.1%
Pennsylvania	-0.9%	-0.1%	-0.2%	-0.7%	0.1%	0.0%	0.8%	0.3%	0.1%	0.3%	-0.5%	0.6%	-0.3%	0.2%	-0.3%	-0.3%	0.2%	1.1%	-0.1%	-0.6%	0.3%	0.0%
Rhode Island	-1.5%	-0.2%	0.0%	-0.6%	0.1%	-0.1%	1.4%	0.4%	0.2%	0.2%	-1.0%	0.2%	-0.2%	0.5%	0.0%	-0.4%	0.2%	1.0%	-0.2%	-0.2%	0.1%	-0.1%
South Carolina	-1.6%	-0.2%	-0.2%	-0.3%	0.1%	0.0%	0.6%	0.3%	0.2%	0.4%	-0.4%	0.3%	-0.5%	0.2%	0.0%	-0.3%	0.2%	1.1%	0.1%	-0.4%	0.3%	0.1%
South Dakota	-1.0%	0.0%	1.2%	-0.2%	0.3%	0.0%	0.5%	0.2%	0.1%	-0.1%	-0.9%	0.2%	-0.1%	0.2%	0.0%	-0.3%	0.1%	0.5%	-0.1%	-0.4%	0.3%	0.0%
Tennessee	-1.5%	0.0%	-0.2%	-1.3%	0.3%	0.0%	0.9%	0.4%	0.1%	0.6%	-0.8%	0.3%	-0.2%	0.1%	0.0%	-0.2%	0.3%	1.3%	0.0%	-0.5%	0.2%	0.3%
Texas	-0.6%	-0.1%	-0.3%	-0.3%	0.2%	0.0%	0.5%	0.2%	0.1%	0.4%	-0.3%	0.3%	-0.5%	0.0%	-0.9%	-0.2%	0.4%	0.6%	0.1%	-0.5%	0.2%	-0.1%
Utah	-0.8%	0.0%	-0.2%	-0.5%	0.7%	0.0%	0.8%	0.4%	0.1%	0.0%	-0.2%	0.4%	-0.3%	0.1%	0.0%	-0.3%	-0.2%	0.6%	0.0%	-0.6%	0.1%	0.0%
Vermont	-2.3%	-0.1%	-0.8%	-0.7%	0.1%	-0.1%	0.7%	0.5%	0.1%	0.6%	-0.5%	0.4%	-0.4%	0.4%	0.0%	-0.3%	0.6%	1.3%	0.1%	-0.2%	0.4%	0.2%
Virginia	-0.9%	-0.2%	-0.4%	-0.4%	0.2%	0.0%	0.4%	0.7%	0.4%	-0.1%	-0.6%	0.1%	-0.3%	0.4%	0.0%	-0.3%	0.4%	0.9%	0.0%	-0.4%	0.2%	0.0%
Washington	-1.1%	-0.1%	0.6%	-0.5%	-0.2%	-0.1%	0.2%	0.2%	0.1%	0.0%	-0.8%	2.2%	-0.4%	0.0%	0.0%	-0.3%	0.3%	0.8%	0.4%	-0.5%	0.2%	-0.2%
West Virginia	-1.1%	-0.1%	0.1%	-0.2%	-0.2%	0.0%	0.3%	0.8%	0.1%	0.5%	-0.5%	0.2%	0.1%	0.1%	-0.3%	-0.2%	-0.1%	0.9%	0.1%	-0.4%	0.5%	-0.3%
Wisconsin	-0.9%	-0.2%	-0.6%	-0.4%	0.2%	0.0%	1.0%	0.2%	0.0%	0.1%	-0.6%	0.1%	-0.4%	0.3%	0.0%	-0.3%	0.1%	1.1%	0.1%	-0.4%	0.3%	0.0%
Wyoming	-0.7%	-0.1%	-0.6%	-0.2%	0.2%	0.0%	0.0%	0.4%	0.2%	0.6%	-0.2%	0.1%	0.4%	0.0%	-2.3%	-0.2%	0.1%	1.0%	0.5%	-1.0%	0.5%	0.0%

Thank You

Stafford Palmieri
Principal Advisor
spalmieri@morrisseygoodale.com
917-952-5544 (m)