

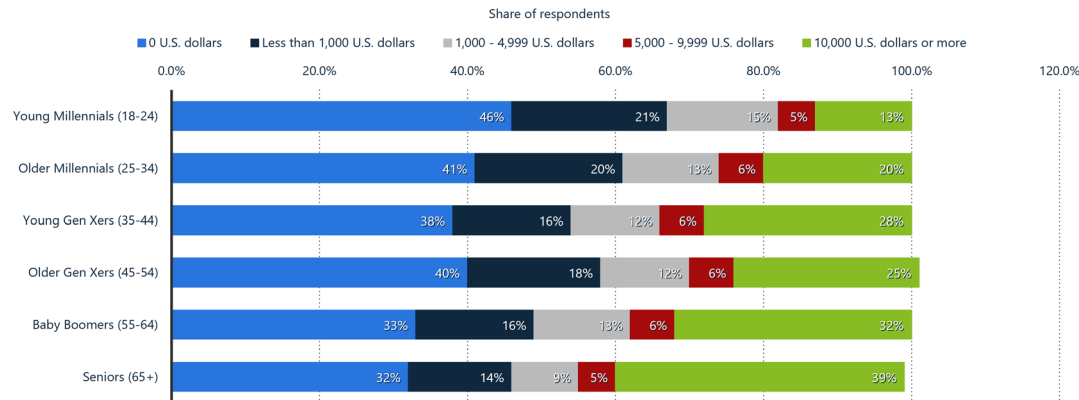
The Essential Economy – Impact to Telecommunications Industry Vol. 1

Jim Patterson
Patterson Advisory Group
April 16, 2019

The Economic Situation Prior to COVID-19 Was Fragile

How much money do you have saved in your savings account? (by generation)

Amount of money saved in saving accounts in the United States 2017, by generation



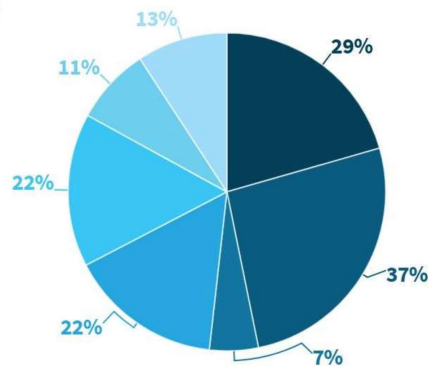
Note: United States; August 15 to 17, 2017; 18 years and older; 8,131
Further information regarding this statistic can be found on [page 55](#).
Source(s): GOBankingRates; ID:497789

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Savings deposits statista

Why Are You Living Paycheck to Paycheck?

- I don't make enough money each month at my current job
- My cost of living is too high
- I don't know how to budget properly
- I have too much debt
- I am unemployed
- I have bad spending habits
- Other



Respondents could select more than one answer.
Last updated Aug. 16, 2019

GBR

~50% of Americans live paycheck to paycheck
 - About 60% of them < \$1000 in savings
 - Those living paycheck-to-paycheck estimate they need \$2200/ mo. more to break the cycle

37% say that they live paycheck to paycheck because their housing costs are too high (usually their largest single expense)
 - Northeast housing costs are 35-90% higher per month than in the Midwest/ South

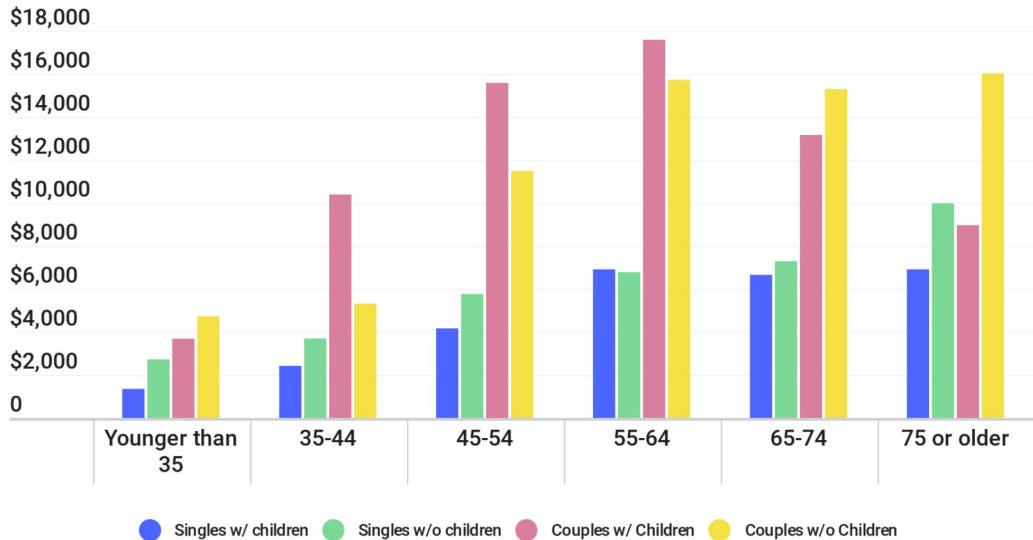
Second highest reason is not enough income (low wages). In the pre-COVID economy, supplementary income (2nd job, side gig) could potentially solve this problem. A lot harder now.

Result: More credit card usage to “weather the storm” which lasts until card is maxed out. This is why the full effect of COVID-19 might take months to unfold.

Savings Will Only Last So Long

Savings varies widely by household type and age

The average household has \$8,863 tucked in a savings account.



Note: Data adjusted for inflation
Source: 2016 Survey of Consumer Finances

How much do Americans have in emergency savings?

Enough to cover ...



Note: 8% responded "don't know/refused."
Source: Bankrate's Financial Security Index, June 6-10, 2018

Bankrate

The Bankrate study backs up the previous data – about 40% of Americans have low incomes and no safety net. This savings gap tends to be focused on young, single individuals (families and older individuals have more savings cushion).

Prior to COVID-19, Many Areas of the US Were Prospering

West is strongest, driven by Washington, Utah, and Arizona

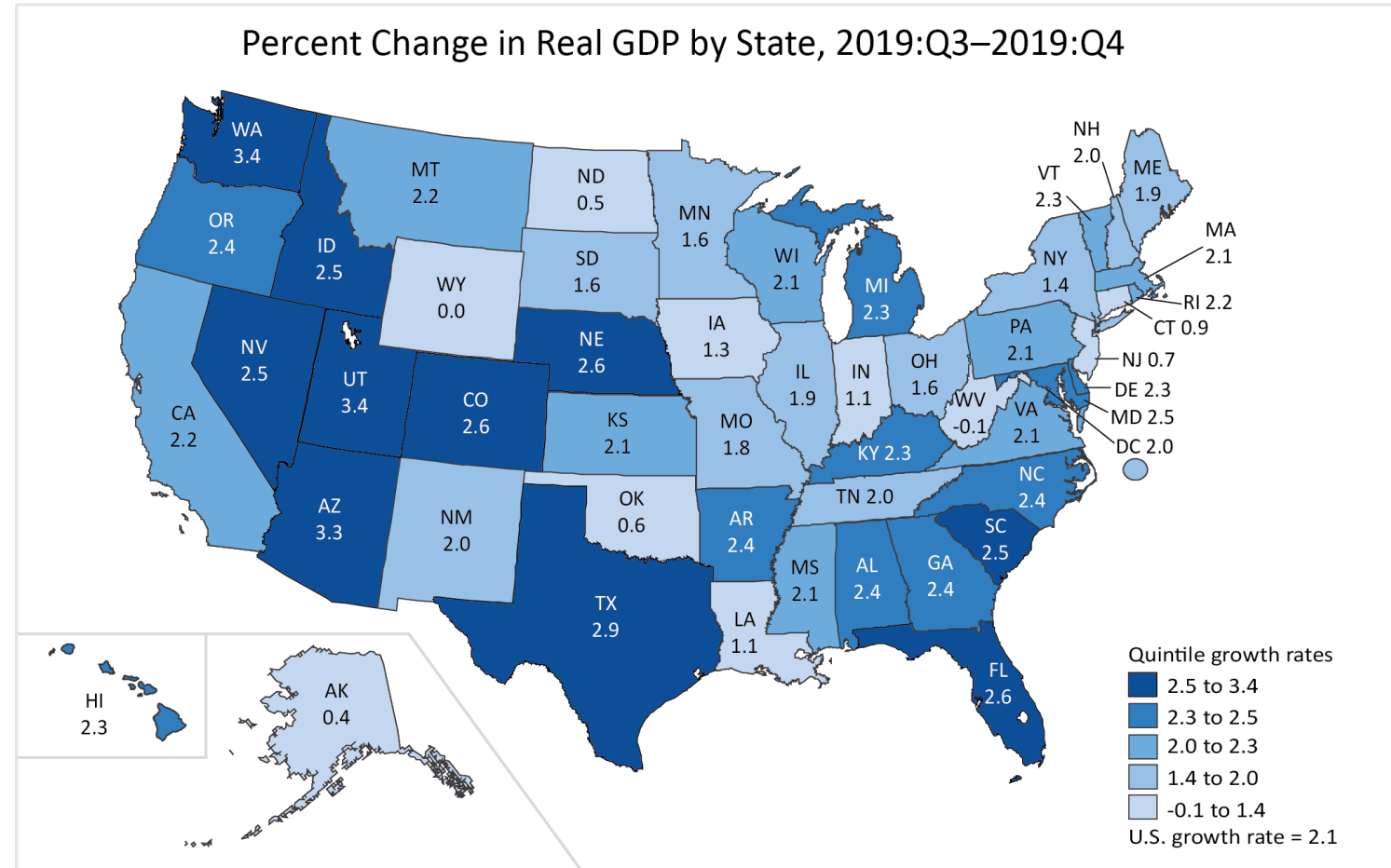
South growth above average. Except for Louisiana and Oklahoma (oil price exposure), every state in the South was growing at 2% or greater. The Carolinas, Georgia, Alabama and Florida all had 2.4% growth or greater.

Midwest growth was very choppy, with strength in Nebraska, Wisconsin, and Michigan offset by below average growth in Ohio, Indiana, Iowa, and Missouri.

Northeast also choppy, with New Jersey, Connecticut, and New York dragging down overall growth for the region.

Key matchups:

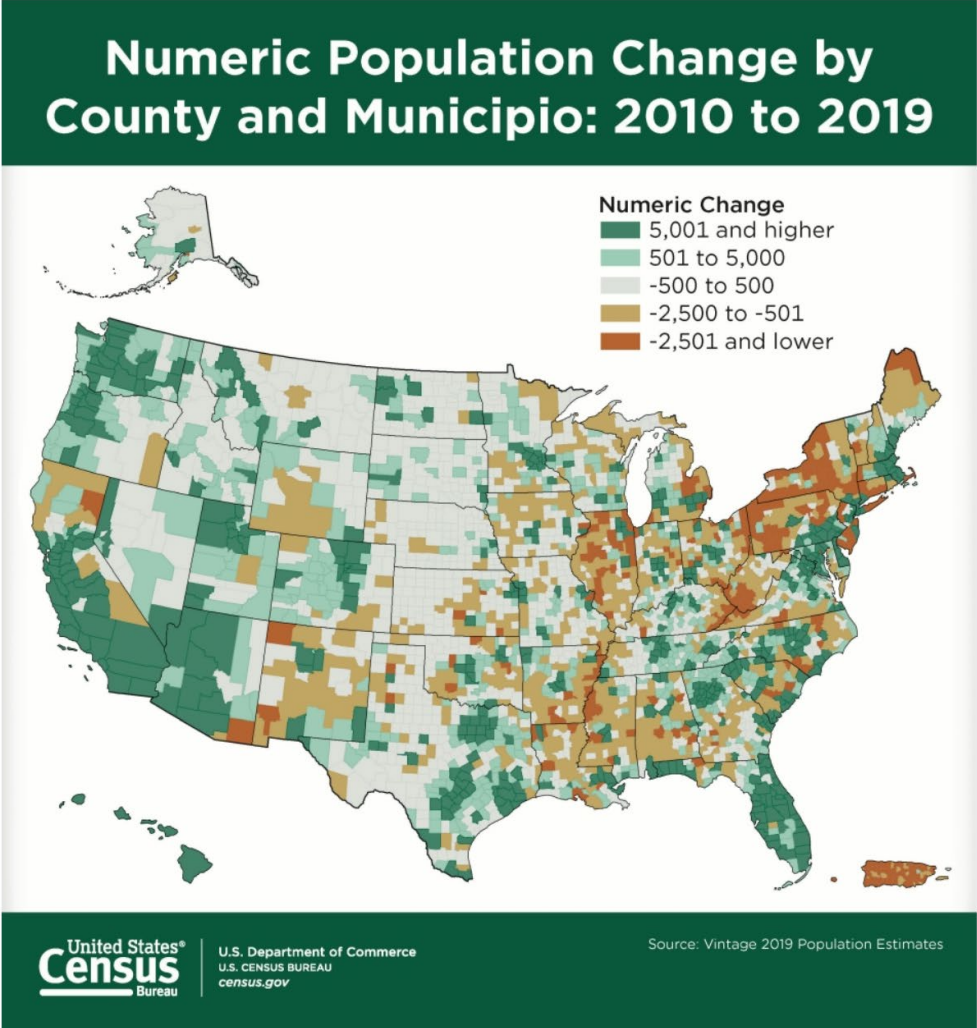
- Texas more than 2x New York
- Texas more than 1.3x California



U.S. Bureau of Economic Analysis

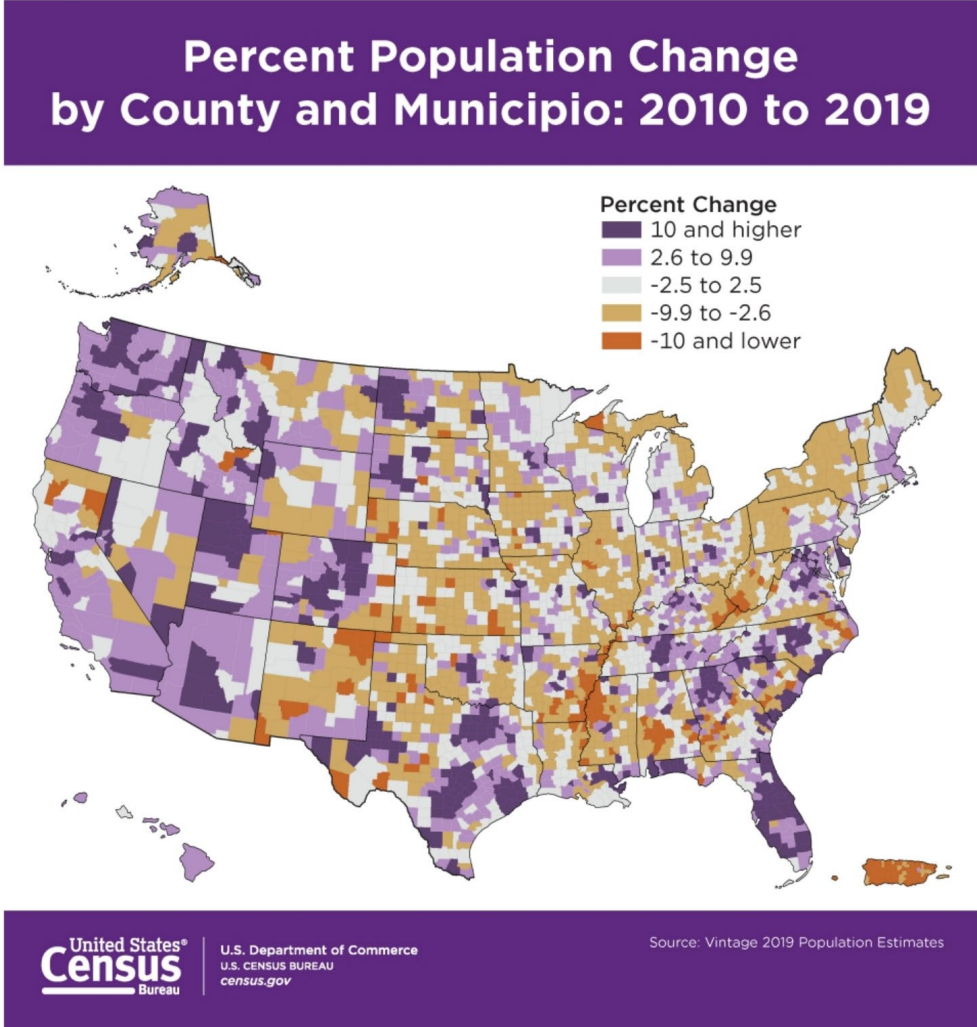
Numeric Population Change by County and Municipio: 2010 to 2019

MARCH 26, 2020



Percent Population Change by County and Municipio: 2010 to 2019

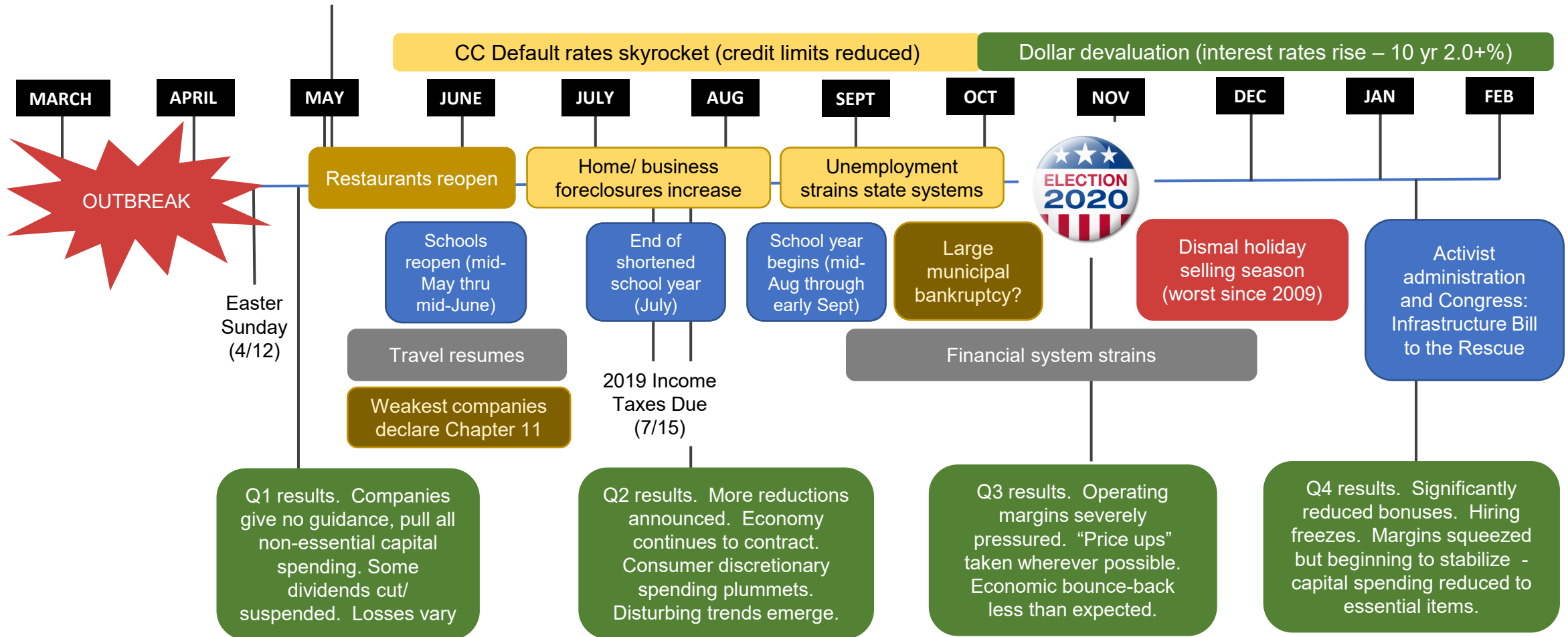
MARCH 26, 2020



Full Economic Impacts Ripple Throughout 2020 and 2021 (3/17 version)

Relief check arrives (early May) – to pay off accumulated March debts

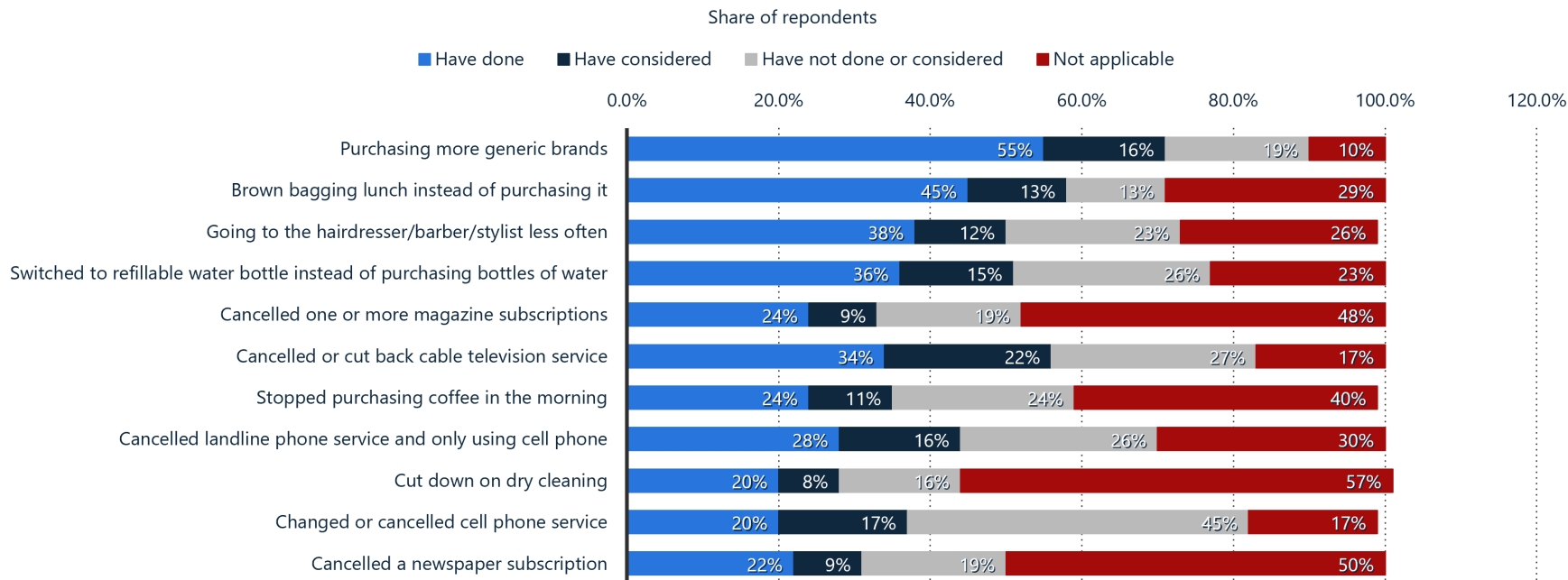
Wild cards: Europe (ex-UK) recovery; USA election results; need for second stimulus in 2020; second Corona virus impact; effect of increased regulations in 2021



2017 Survey – How Americans are Economizing

Have you done or considered doing any of the following over the past six months in order to save money?

Saving money behavior in the U.S. 2017



Each of these life changes takes on new meaning in the Essential Economy:

- More generics
- Less lunches out
- Less bottled water
- Less cable TV
- Shopping cell phone service

Note: United States; August 10 to 14, 2017; 18 to 69 years; 1,020
Further information regarding this statistic can be found on [page 38](#).
Source(s): Statista Survey; [ID 380119](#)

After COVID-19: The Essential Economy

- *Do I absolutely need it to survive?*
 - **Examples:** Energy, Rent, Food, Broadband, Gasoline, Health Care, Mobile Phone, etc.
 - 40% of the US households will not make it past this question
- *Can I live without it?*
 - **Examples:** Unlimited or faster data, traditional cable TV, lower deductibles, top shelf liquor, same/higher smartphone payments (for entire family), brand names (vs. generics), home cleaning/ lawn services, sit-down vs. QSR, kids instrument lessons/sports camps, express toll lanes, Amazon Prime
 - Some might not be eliminated, just less frequent (theater movies, lattes, Ben & Jerry's, concerts)
- *Can I defer this purchase (or "Is it worth using savings to purchase now?")*
 - **Examples:** New personal electronics (including smartphones), cars, boats, vacation homes, major appliances, remodeling/ contractor work, vacations, elective surgery/ Smile Direct, additional education
 - Expect new vs. used to become a more deciding factor (CPO smartphones)
 - Waiting for "on sale" will impact more deferrals
 - Might not see the full effect of this until the holidays
- Luxury is out: travel & leisure, cars, yachts, watches, \$1500 smartphones, penthouse apartments
- Charities (churches, synagogues, not-for-profits) will suffer
- Municipalities and states also take a long time to recover (sales tax losses will be enormous)

Impacts to the Telecom Sector

Forced online adoption during the virus period drives new ecommerce habit (and less store traffic)

- More carrier stores close (or do not reopen)
- Walmart/ StraightTalk share of gross adds grow
- Apple reasserts in-store experience (grand re-openings)
- Increased investment in ecommerce systems and processes

Wireless customers live with less data and added features (“no frills”)

- T-Mobile: \$15 for 2GB and \$25 for 5GB have high appeal, especially for seniors
- AT&T: \$30 plan includes 250 MB data
- Verizon: \$35 plan for 2GB
- StraightTalk: \$35 plan for 3GB (which is likely on AT&T or Verizon network)
- Mint Mobile (T-Mobile): \$15 for 3GB (but you need to pay 3 months up front)

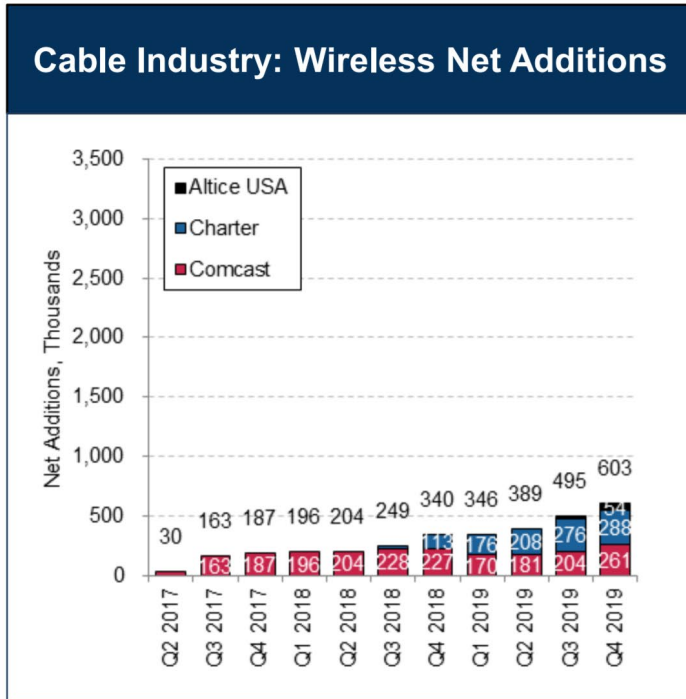
Note: Mint Mobile also offers a 12GB plan for \$25/ month (3 months up front)

5G adoption stalls until sub-\$500 devices are plentiful

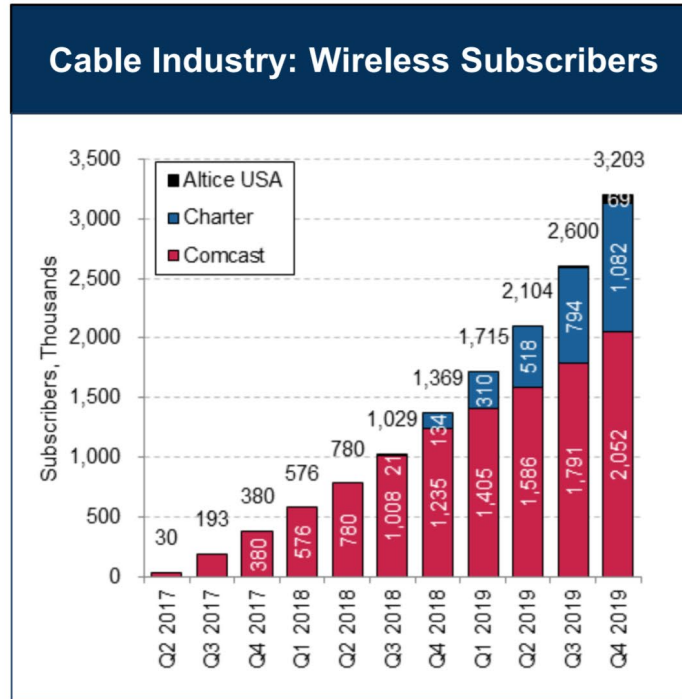
- Expect launches from Moto, LG and Google (Pixel 4a for \$400 w/ 36-mo. financing)
- Those with 5G devices (esp. Sprint/ T-Mobile) will have terrific experiences
- Everyone but Verizon retail (including Cable MVNOs): no 5G upcharge

Impacts to the Telecom Sector (cont.) – Cable Impacts Wireless Churn

Cable is emerging as a strong competitor for phone subscriber growth (I)



Source: Company reports, MoffettNathanson estimates and analysis



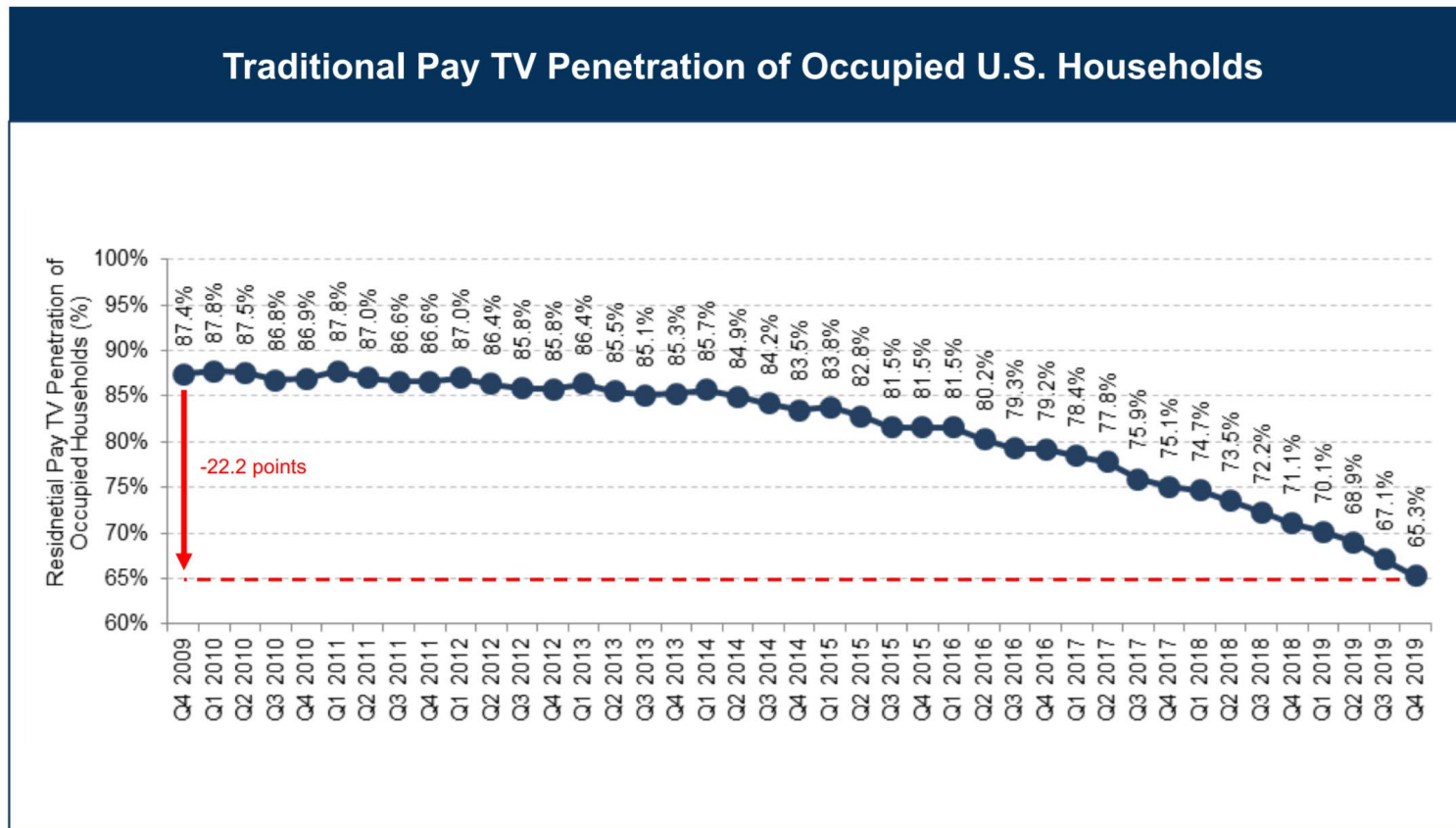
Source: Company reports, MoffettNathanson estimates and analysis

Even though T-Mobile/ Sprint merger dampens churn rates in Q2, cable, TMO, and others keep churn rates higher than expected for the year

- Unlimited data for cable customers at \$45 is very attractive (taxes/fees included at Charter, excl. at Xfinity)
- Cable has very efficient inbound acquisition model (30% come into a store/ 70% over the phone or online)
- Network quality is excellent
- Phone installment plan pricing is same as carrier (adjusted for credit quality)
- Cable is taking some share from retail prepaid providers (Cricket, Metro, Boost)
- Overall, cable accounted for 30-35% of all wireless industry phone net additions in 2019. This will grow to 40% in 2020.

Impacts to the Telecom Sector (cont.) – Cord Cutting Increases

Traditional Pay TV penetration peaked in Q1 2010, and has been falling ever since...



Cable suffers increased video cord-cutting

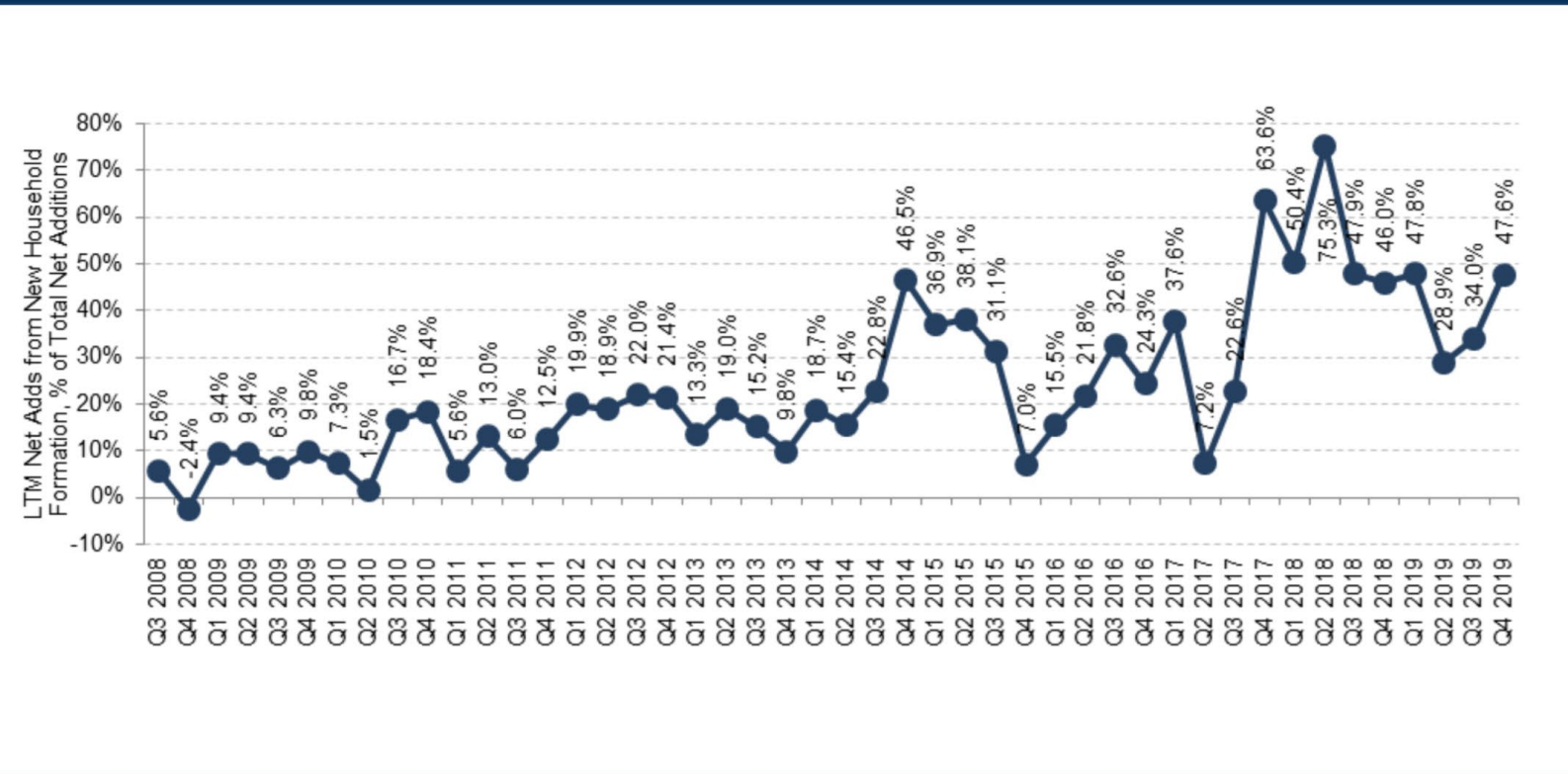
- No regional sports (or MLB network or SEC network or...) for the next 45-60 days
- Increased quest for value drives customers to YouTube TV (\$50 all in)
- Penetration could tank quickly (< 50%) and rebound after 30-60 days (enough to get a win back rate from cable)
- Bad time to launch AT&T TV (\$39.99 + taxes/ fees + RSN network charges)

Source: U.S. Census Bureau HVS, Company reports, MoffettNathanson estimates and analysis

Impacts (cont.) – Broadband Opportunities Diminish

New household formation has become a bigger driver of industry broadband growth, leaving the industry more cyclically vulnerable

Share of Broadband Net Additions from New Household Formation, Rolling Twelve Months



Since the end of 2017, cable (and to a lesser extent FiOS and AT&T Fiber) have become dependent on new household formation as a source of growth.

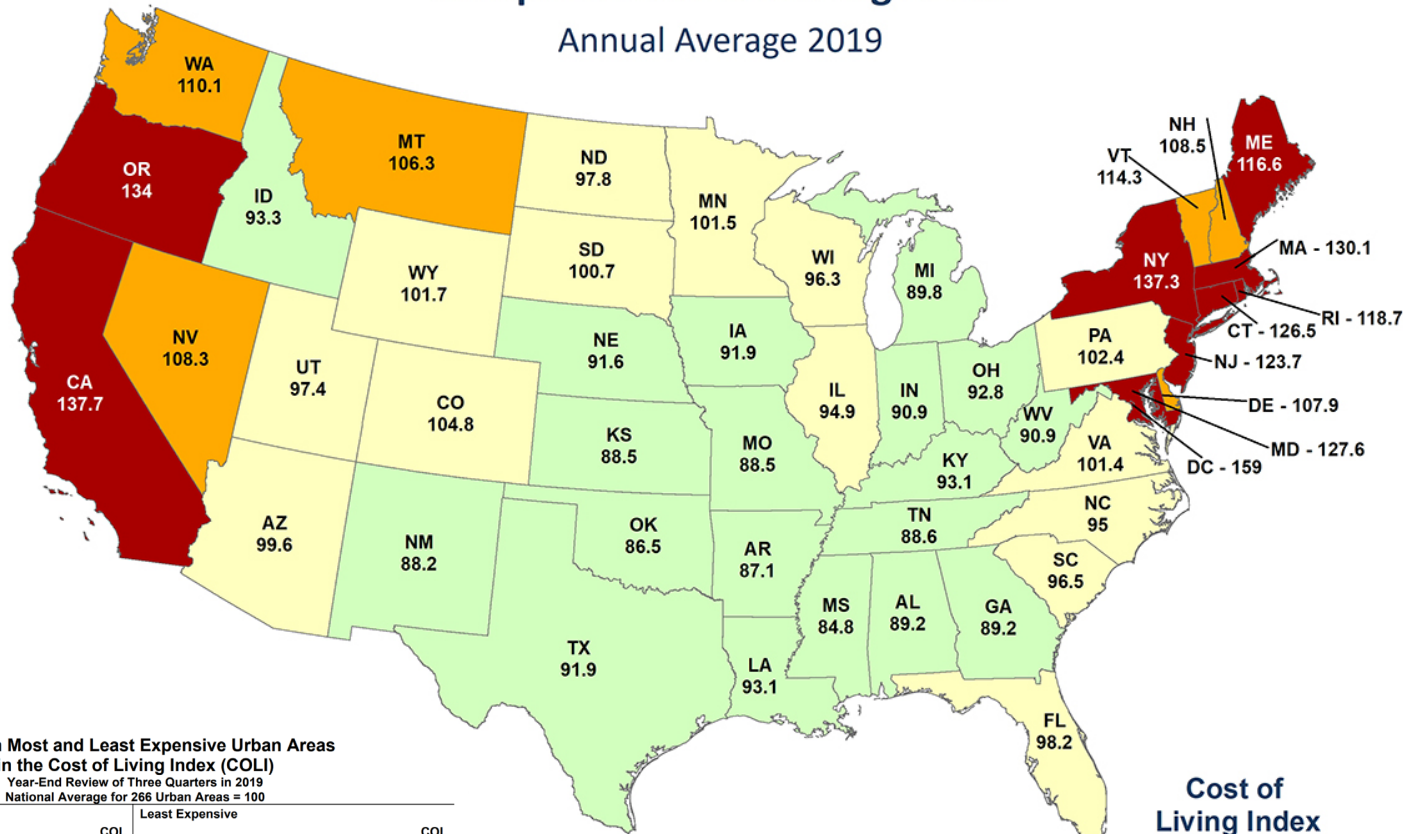
If new housing dries up, broadband net additions could decrease by 30-40%

Source: U.S. Census Bureau HVS, Company reports, Company reports, MoffettNathanson estimates and analysis

After the Storm – Away From the Coasts

Composite Cost of Living Index

Annual Average 2019



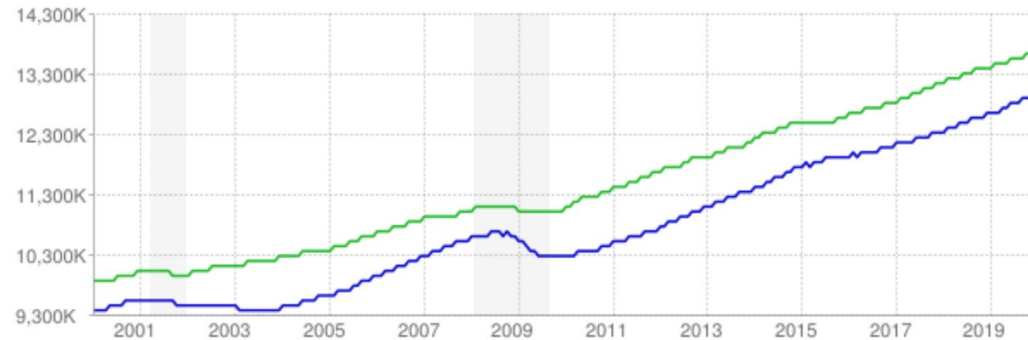
After the Storm – Away From the Coasts (cont.)

Total Employment in Texas

CES employment in December 2019 for Texas is at a new high of 12,976,700.

CPS employment in Texas for December 2019 is at a new high of 13,697,783.

Employment: **CES**, **CPS**



Source: deptofnumbers.com employment figures

TEXAS

- Texas lost 587,000 jobs from peak to trough in the Great Recession (blue line)
- Since January 2011, the Lone Star State has increased employment ranks by 2.7 million or 26% (~25K new jobs per month for 9 years)
- This figure includes the +/- impact of the oil boom (and 2015-17 bust) and Hurricane Harvey
- 9 yr employment growth: Dallas +31%; Houston +27%; San Antonio +29%; Austin +41%
- \$9 billion budget surplus est. for 2020

Total Employment in New York

CES employment peaked in November 2019 for New York at 9,826,700. Since then 4,900 jobs have been lost in New York according to the employer survey.

CPS employment in New York reached a maximum of 9,248,063 in January 2019. 75,783 jobs have been lost in New York since then according to the household survey. From a September 2019 low of 9,142,871, New York has added 29,409 jobs according to the CPS survey.

Employment: **CES**, **CPS**



NEW YORK

- New York state lost 410,000 jobs from peak to trough in the Great Recession (blue line)
- Since January 2011, the Empire State has increased employment ranks by 1.2 million or 14% (~11K new jobs per month for 9 years)
- 9 yr employment growth: New York +15%; Buffalo +6%; Rochester +7%; Albany +11%
- \$6.1 billion budget deficit est. for 2020

Costs of a Two-Bedroom Apartment By State/ Region



NORTHEAST

Massachusetts	\$ 1,758	Northeast
New York	\$ 1,599	Northeast
New Jersey	\$ 1,501	Northeast
Connecticut	\$ 1,321	Northeast
New Hampshire	\$ 1,208	Northeast
Vermont	\$ 1,184	Northeast
Rhode Island	\$ 1,085	Northeast
Maine	\$ 1,035	Northeast
Pennsylvania	\$ 1,006	Northeast

SOUTH

Virginia	\$ 1,203	South
Florida	\$ 1,189	South
Texas	\$ 1,055	South
Georgia	\$ 958	South
South Carolina	\$ 898	South
North Carolina	\$ 881	South
Louisiana	\$ 877	South
Tennessee	\$ 862	South
Alabama	\$ 776	South
Kentucky	\$ 772	South
Mississippi	\$ 750	South
Arkansas	\$ 742	South

MIDWEST

Illinois	\$ 1,084	Midwest
Minnesota	\$ 1,027	Midwest
Michigan	\$ 897	Midwest
Wisconsin	\$ 872	Midwest
North Dakota	\$ 866	Midwest
Nebraska	\$ 836	Midwest
Indiana	\$ 834	Midwest
Missouri	\$ 832	Midwest
Kansas	\$ 828	Midwest
Ohio	\$ 818	Midwest
Oklahoma	\$ 808	Midwest
Iowa	\$ 803	Midwest
South Dakota	\$ 796	Midwest

New York (state average) is \$641/ mo. (\$7700/ yr.) higher than Georgia. This represents about \$801 more in pre-tax dollars (assuming 25% tax rate). Assuming a 40-hour work week (21 working days), this effect alone would result in an effective \$4.75/ hour wage increase. Note: this only includes rent differences.

Vs. N Carolina, the numbers are \$718/ \$898/ \$5.35 per hour. New York vs. Kentucky is \$827/\$1034/ \$6.15 per hour.

Telecom is Generally High-Yield Dependent

The “health line” is changing, especially for weaker local exchange providers

NON-INVESTMENT GRADE

INVESTMENT GRADE

Weakest ← → Strongest



If credit rating outlooks change, all of the non-investment grade “middle” is at risk

Bottom Line: Impacts to the Telecom Sector

Substantial impact to 40% of consumers and 50% of SMB

- Essential Economy mindset dominates as the economy reboots
- Telecom industry is impacted by downgrades
- Winners: New T-Mobile; Cable MVNOs, StraightTalk, YouTube TV, Hulu Live, Moto, LG, CPO Devices, Work-From-Home electronics, data center providers, Granite
- Losers: AT&T (DirecTV), Samsung, Apple, 5G, Paetec (Windstream SMB), Masergy, certain infrastructure funds
- Neutral: Cable, Google, Verizon

Anything that can be deferred will be deferred

- Sub 6GHz deployments very safe (US Cellular, New T-Mobile, AT&T, Verizon)
- mmWave deployments at high risk
- Capital markets determine auction timing (FCC wants max demand)
- Dish likely slows down

Smaller (and predominately rural) carriers and cable operators will need government assistance

- Frontier, TDS, Windstream, US West all in trouble
- Emergency Spectrum System operating contracts to the rescue?

Bottom Line: Impacts to the Telecom Sector (cont.)

“The Great American Move” Occurs

- South, West, Midwest... anywhere but the coasts
- Large infrastructure needs in Texas, Georgia, Carolinas, Tennessee, Florida
- Result is the tale of two economies (and likely certain state pension bankruptcies)

“Made in America” sentiment becomes a mandate

- Supply chain lessons learned. “The Americas” becomes an end-to-end geographic chain
- 5G equipment providers come into focus (Cisco/ Mitel to the rescue?)
- Former globalists rebalance to partial nationalists

More radical options possible but unlikely

- Sanders’ presidency (and nationalism) pushed aside for now
- Increased regulation (including anti-trust measures) likely
- Emergency infrastructure bill likely in 2020 (structure TBD)