



NASBP Virtual Events

Unmasking Post-COVID Economic and Financial Market Conditions

S. SCOTT MACDONALD, PH.D.

PRESIDENT AND CEO, SW GRADUATE SCHOOL OF BANKING FOUNDATION
DIRECTOR, ASSEMBLIES FOR BANK DIRECTORS
ADJUNCT PROFESSOR, DEPT. OF FINANCE, COX SCHOOL OF BUSINESS
SOUTHERN METHODIST UNIVERSITY

SCOTT@SWGSB.ORG

WWW.SWGSB.ORG

The Southwestern Graduate School of Banking
Assemblies for Bank Directors
Southern Methodist University ■ Cox School of Business
PO Box 750214 ■ Dallas TX 75275
Phone 214-768-2991 ■ Fax 214-768-2992
info@swgsb.org ■ www.swgsb.org

S. Scott MacDonald, Ph.D.

smacдона@mail.cox.smu.edu

S. Scott MacDonald is president and CEO of the *Southwestern Graduate School of Banking* (SWGSB) Foundation, director of the *Assemblies for Bank Directors*, and Adjunct Professor of Finance, Cox School of Business, Southern Methodist University. He received his B.A. degree in economics from the University of Alabama and his Ph.D. from Texas A&M University. Dr. MacDonald is a frequent speaker at professional programs, banker associations and banking schools. He is the recipient of numerous teaching and research awards, and was recently inducted into the Independent Bankers Association of Texas' *Wall of Heroes and Legends*. He is a nationally sought-after strategic planning facilitator and consultant to the financial services industry. He has served as an expert resource witness before the Texas state Senate and is a former Chairman of the Board of Directors of a Texas financial institution. Dr. MacDonald is the co-author of the best-selling textbook on banking, *Bank Management*, as well as author of numerous articles in professional and academic journals.

SWGSB

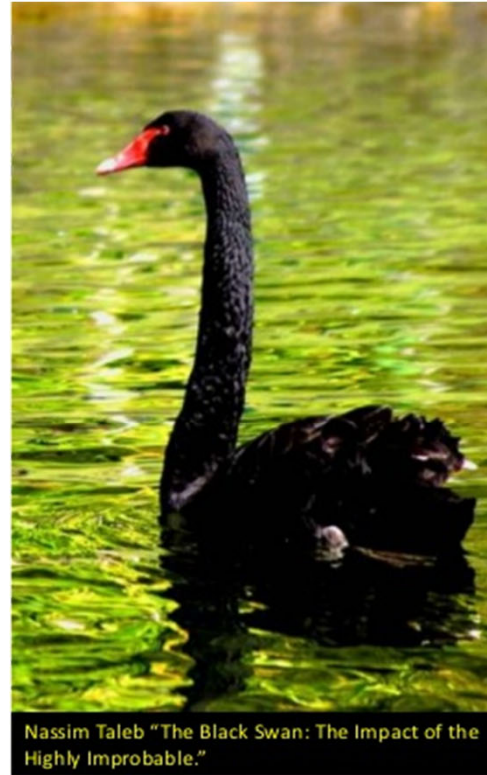


What is the difference between a black swan event and one you were unprepared for?

A black swan is a *highly improbable event* with three principal characteristics: it is unpredictable; it carries a massive impact; and, after the fact, we concoct an explanation that makes it appear less random, and more predictable, than it was.

Taleb continues by recognizing what he terms the problem –

“Lack of knowledge when it comes to rare events with serious consequences.”



Nassim Taleb “The Black Swan: The Impact of the Highly Improbable.”

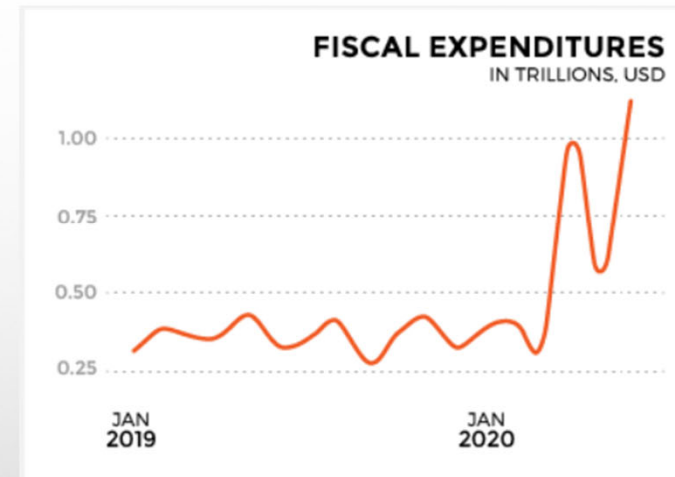
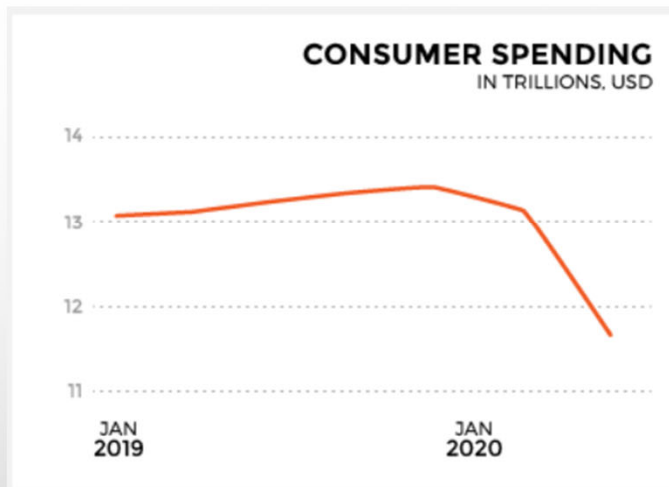
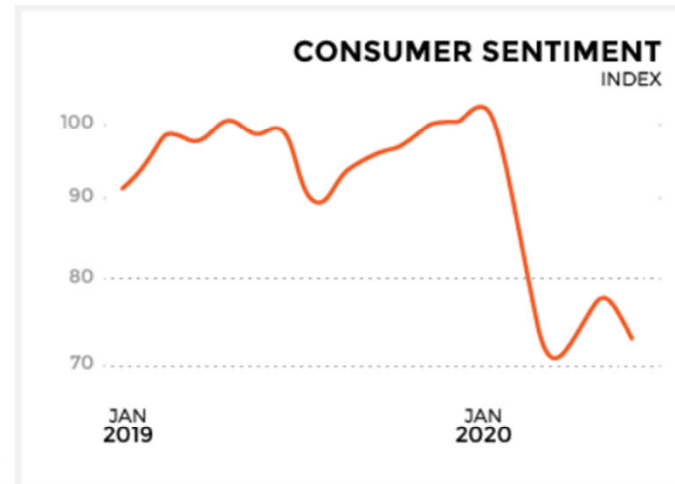
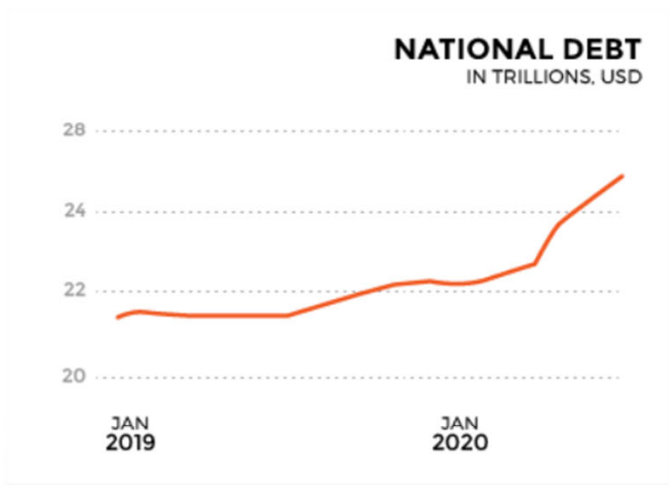
The Intelligence Collaborative
<http://IntelCollab.com> #IntelCollab

Powered by

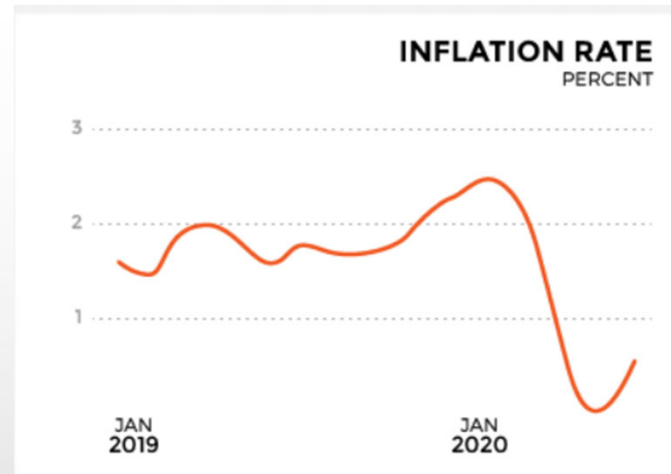
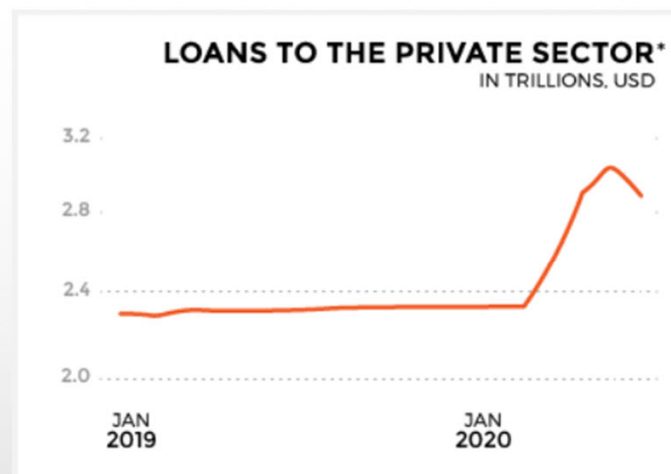
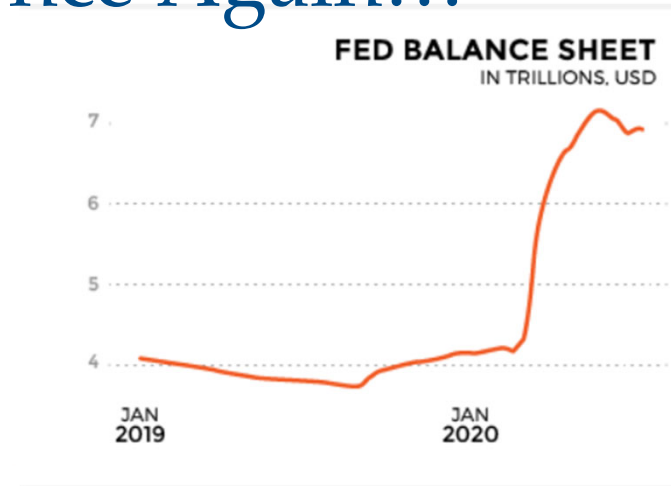
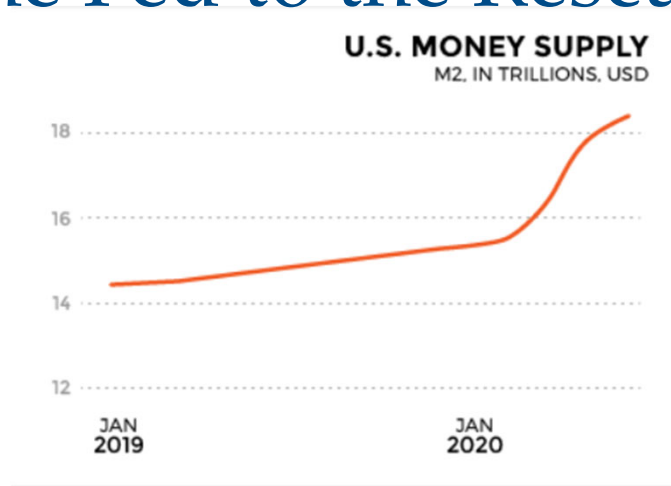
 AURORA WDC



What a mess!



The Fed to the Rescue Once Again...



Source: <https://www.visualcapitalist.com/economic-impact-of-covid-h1-2020/>



What impact might Coronavirus have on the Economy?

- Supply chain disruptions make it difficult for U.S. firms to finish their products
- Consumers are buying fewer things as they worry about the virus and its spread
- Uncertainty over the virus and its economic effects can damage the economy
- Interest rates and stock price decline as economic uncertainty takes hold, yet the stock market has recovered?



Change in Jobs During the Pandemic.

Chart 3: Job Change by Industry, February to July 2020



Table 1: Change in Jobs by Industry, February to July

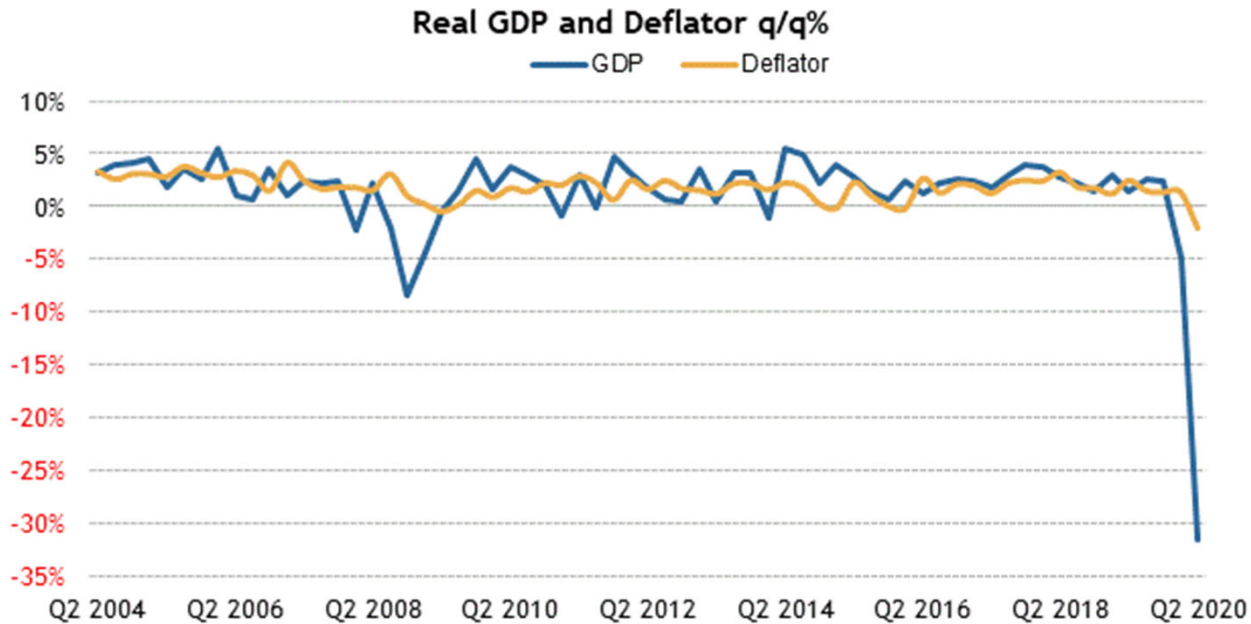
State	Industry	Change (%)
United States	Arts, Entertainment, and Recreation, SA	-36.5%
United States	Accommodation & Food Services, SA	-23.9%
United States	Mining & Logging, SA	-13.0%
United States	Admin & Support & Waste Services, SA	-12.0%
United States	Information, SA	-11.4%
United States	Other Services, SA	-10.6%
United States	Educational Services, SA	-9.3%
United States	Transport, Warehousing, & Utilities, SA	-8.3%
United States	Real Estate & Rental & Leasing, SA	-7.8%
United States	Local Government, SA	-6.6%
United States	Health Care & Social Assistance, SA	-6.1%
United States	Retail, SA	-5.8%
United States	Construction, SA	-5.8%
United States	Manufacturing, SA	-5.8%
United States	Wholesale, SA	-5.3%
United States	Management of Companies & Enterprises, SA	-4.7%
United States	Professional, Scientific, & Tech Services, SA	-4.2%
United States	State Government, SA	-3.8%
United States	Finance & Insurance, SA	-0.5%
United States	Federal Government, SA	1.6%

Source: <https://public.tableau.com/views/CovidChart3v3-ChangeinNumberofJobs/Dashboard1>



GDP? What??

The key takeaway IS the fact that the COVID crisis triggered the biggest downturn for the U.S. economy on record.



Optimistic (?) estimate for third quarter are for a 24% increase in real GDP.

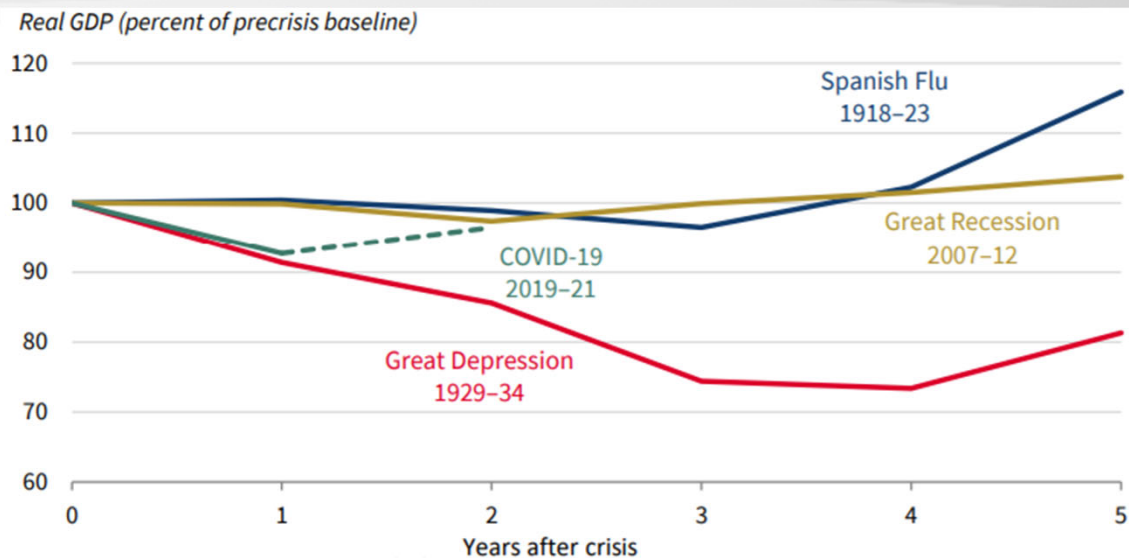
Source: Bureau of Economic Analysis; updated 08/27/20

Briefing.com

- The second estimate for Q2 GDP showed output decreased at an annualized rate of 31.7% (Briefing.com consensus - 32.9%) versus the advance estimate of -32.9%.
- The GDP price index was down 2.0% (Briefing.com consensus -1.8%) versus the advance estimate of -1.8%.



GDP Recover from Previous Crises



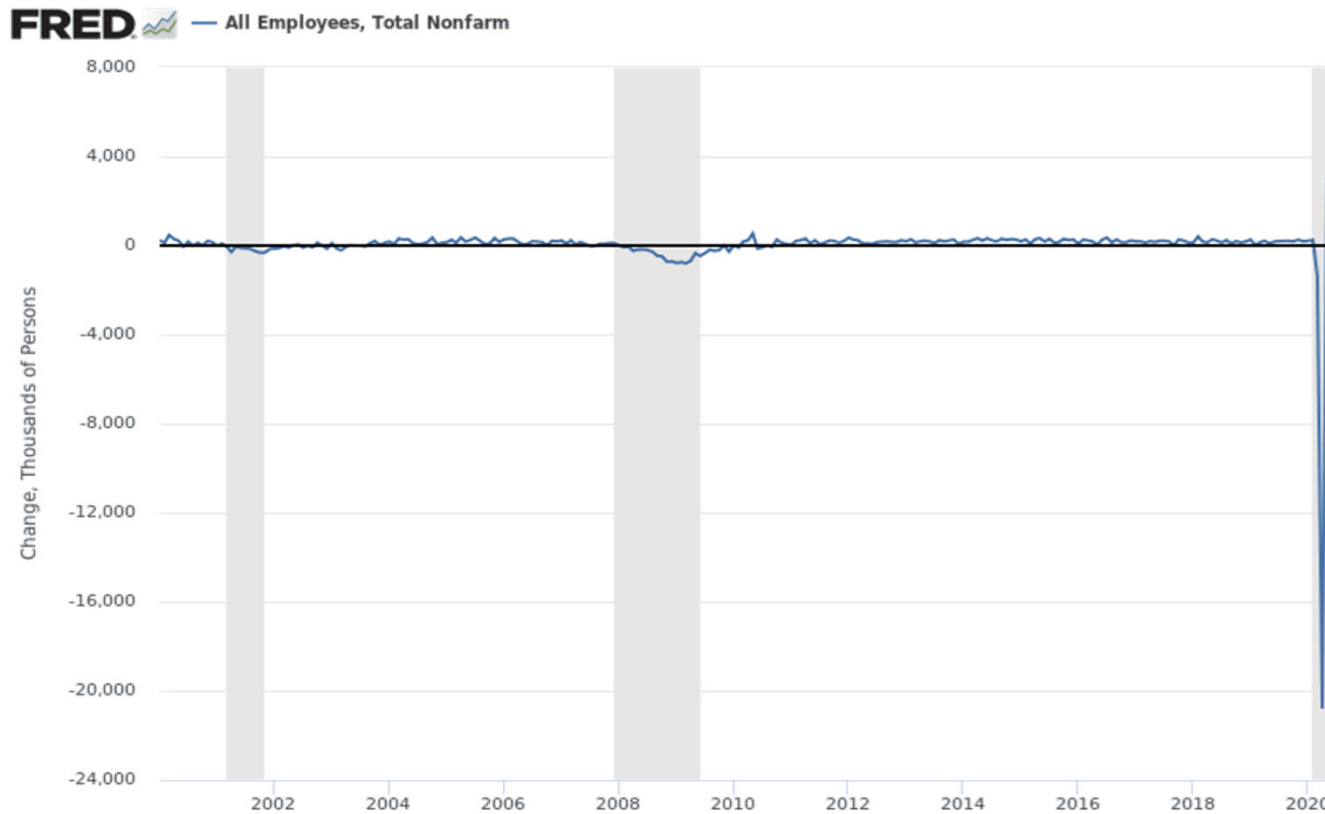
Event	First year considered	Real GDP growth	
		Year 1	Year 2
Spanish Flu	1919	0.4%	-1.5%
Great Depression	1930	-8.6%	-6.4%
Great Recession	2008	-0.1%	-2.5%
COVID-19 (CBO forecast)	2020	-5.9%	4.8%
COVID-19 (Blue Chip consensus forecast)	2020	-5.5%	4.0%
COVID-19 (OECD single hit scenario)	2020	-7.3%	4.1%
COVID-19 (OECD double hit scenario)	2020	-8.5%	1.9%

Sources: FRED; OECD; HISTSTAT; CBO; Blue Chip; CEA calculations.

<https://www.whitehouse.gov/wp-content/uploads/2020/08/Evaluating-the-Effects-of-the-Economic-Response-to-COVID-19.pdf>



And we thought the financial crisis was tough on jobs?



Source: U.S. Bureau of Labor Statistics

[myf.fred/g/v9RU](https://myf.fred.stlouisfed.org/g/v9RU)

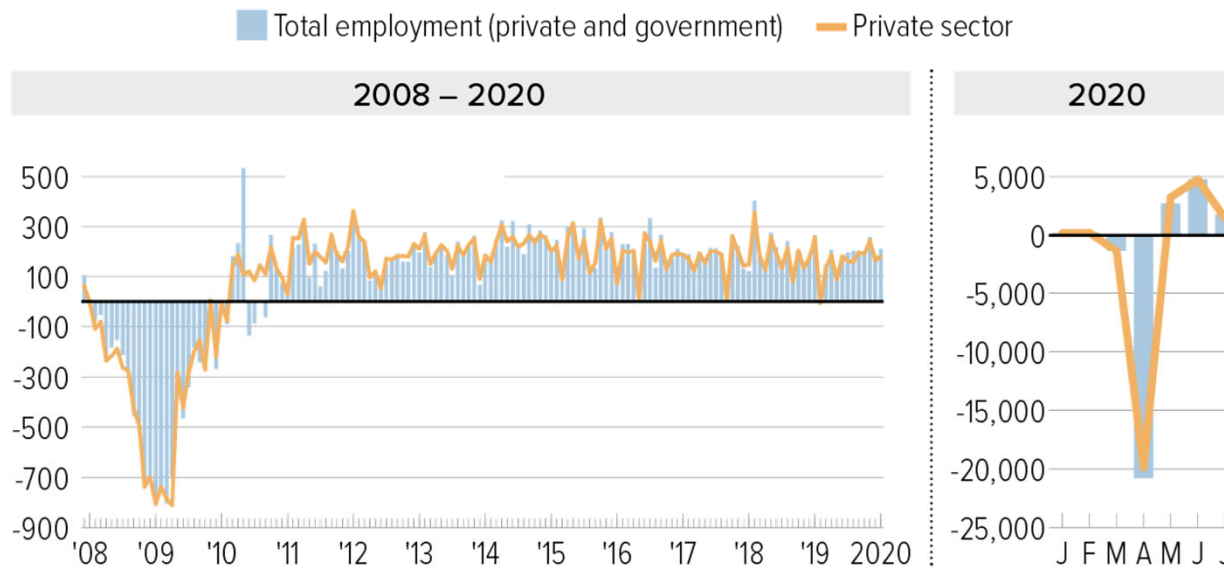
SWGGSB



Putting Employment on a Different Scale, However, Shows How Dramatic the Pandemic Has Been.

Recent Employment Losses Nearly Wipe Out 113 Straight Months of Job Growth Expansion

Monthly change in nonfarm employment in thousands



CENTER ON BUDGET AND POLICY PRIORITIES | CBPP.ORG

Source: <https://www.cbpp.org/recent-employment-losses-nearly-wipe-out-113-straight-months-of-job-growth-expansion>



But, thank goodness for small favors, unemployment is getting better...

Unemployment Rate (SA)



Source: Bureau of Labor Statistics; updated 08/07/20

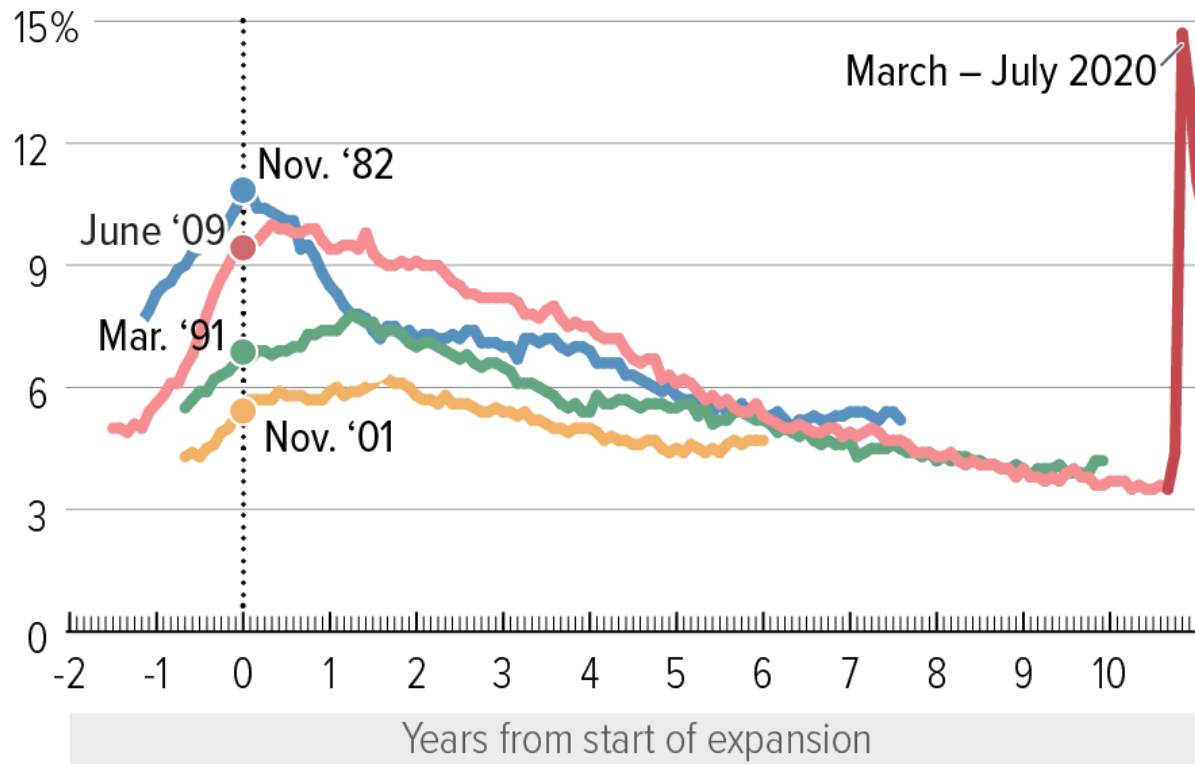
Briefing.com

The key takeaway from the report is that the labor market is recovering from the shock of the COVID-induced seizure, but still has a long way to go, evidenced by the 10.2% unemployment rate and a 55.1% employment-population ratio that is far below the 60.7% level seen a year ago.



Unemployment Fell Slowly During Most Recent Expansion to Below Rates Reached in 1990s, But Now Exceeds Great Recession Peak.

Unemployment rates in recent recessions and expansions

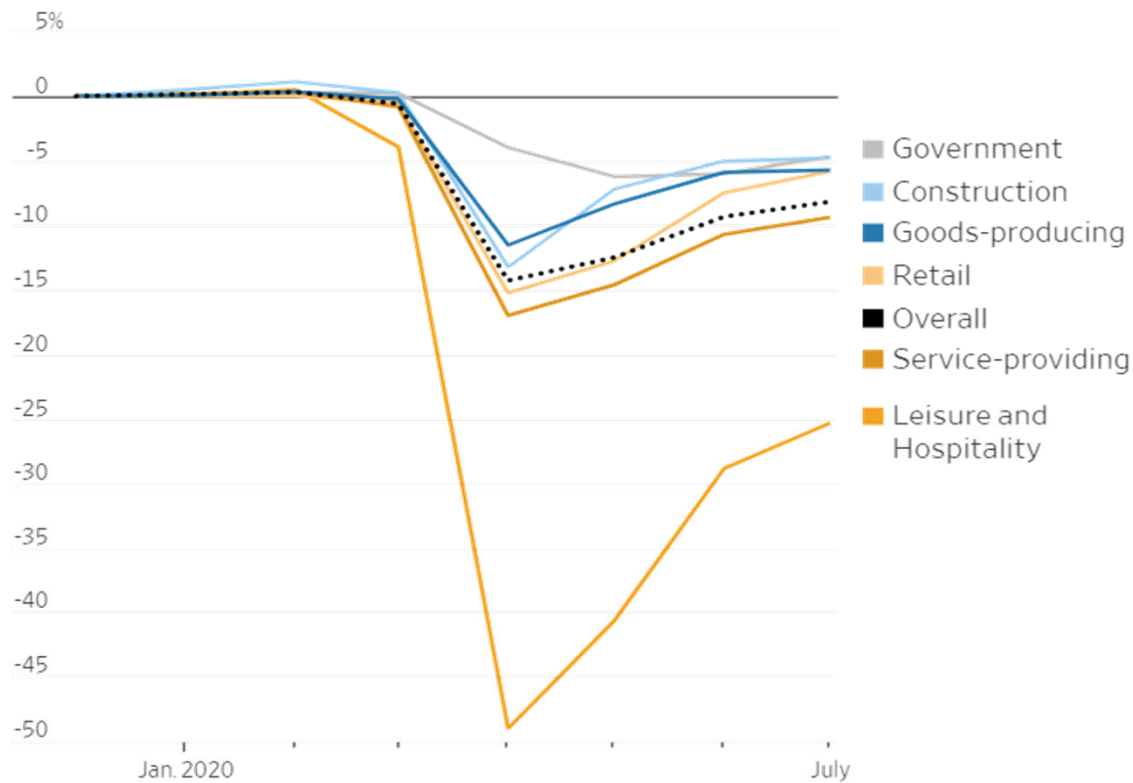


Source: <https://www.cbpp.org/unemployment-fell-slowly-during-most-recent-expansion-and-below-rates-reached-in-1990s-but-now>



Leisure and Hospitality industry payrolls have been hit the hardest.

Change in payrolls from December

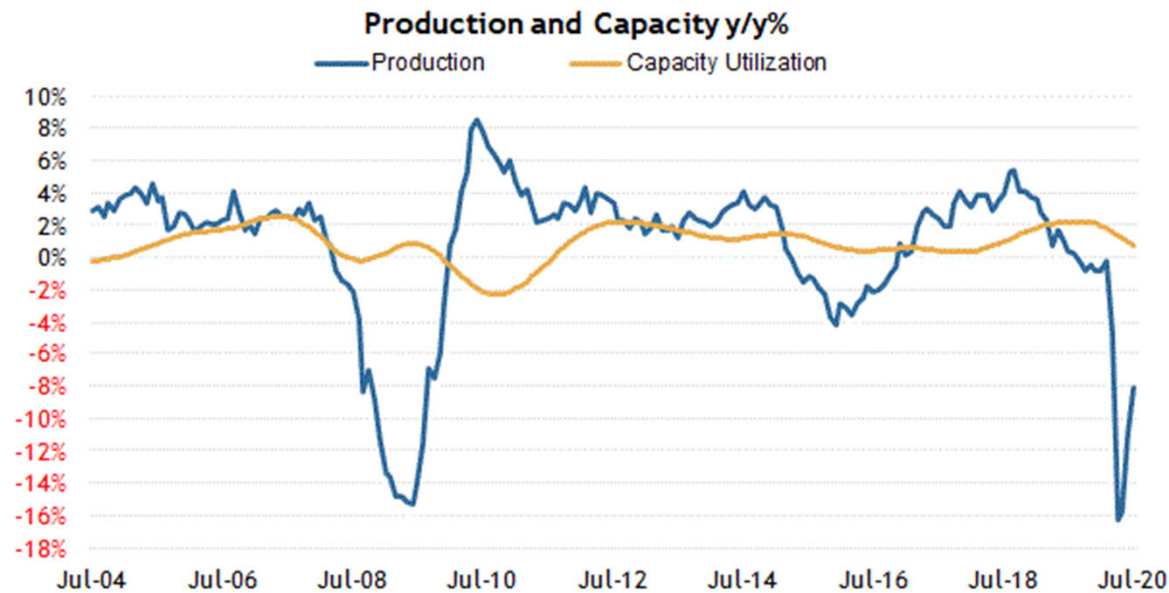


Note: Seasonally adjusted
Source: Labor Department

<https://www.wsj.com/articles/july-jobs-report-unemployment-claims-2020-11596771828>



Production has fallen significantly.



Source: Federal Reserve; updated 08/14/20

Briefing.com

The key takeaway from the report is that while total industrial production remains well below levels from a year ago, the production of motor vehicles and parts has largely recovered.



Monthly Retail Sales have come back from March and April.

Category	JUL	JUN	MAY	APR	MAR
Retail Sales	1.20%	8.40%	18.30%	-14.70%	-8.20%
Excluding Autos	1.90%	8.30%	12.30%	-15.20%	-3.80%
Durable goods					
Building Materials	-2.90%	0.80%	12.80%	-2.20%	0.70%
Autos/parts	-1.20%	9.10%	48.30%	-12.20%	-25.90%
Furniture	0.00%	37.40%	77.10%	-48.90%	-22.10%
Nondurable goods					
General Merchandise	-0.20%	2.10%	6.00%	-13.60%	8.50%
Food	0.20%	-1.50%	2.20%	-12.90%	26.90%
Gasoline stations	6.20%	14.80%	12.00%	-24.50%	-16.50%
Clothing	5.70%	98.80%	180.10%	-73.50%	-48.70%
e*retailing/non-store	0.70%	-2.10%	7.70%	9.40%	5.00%

<https://www.briefing.com/calendars/economic/display-article?ArticleId=ER20200916083000RetailSalesex-auto&FileName=retail.htm>

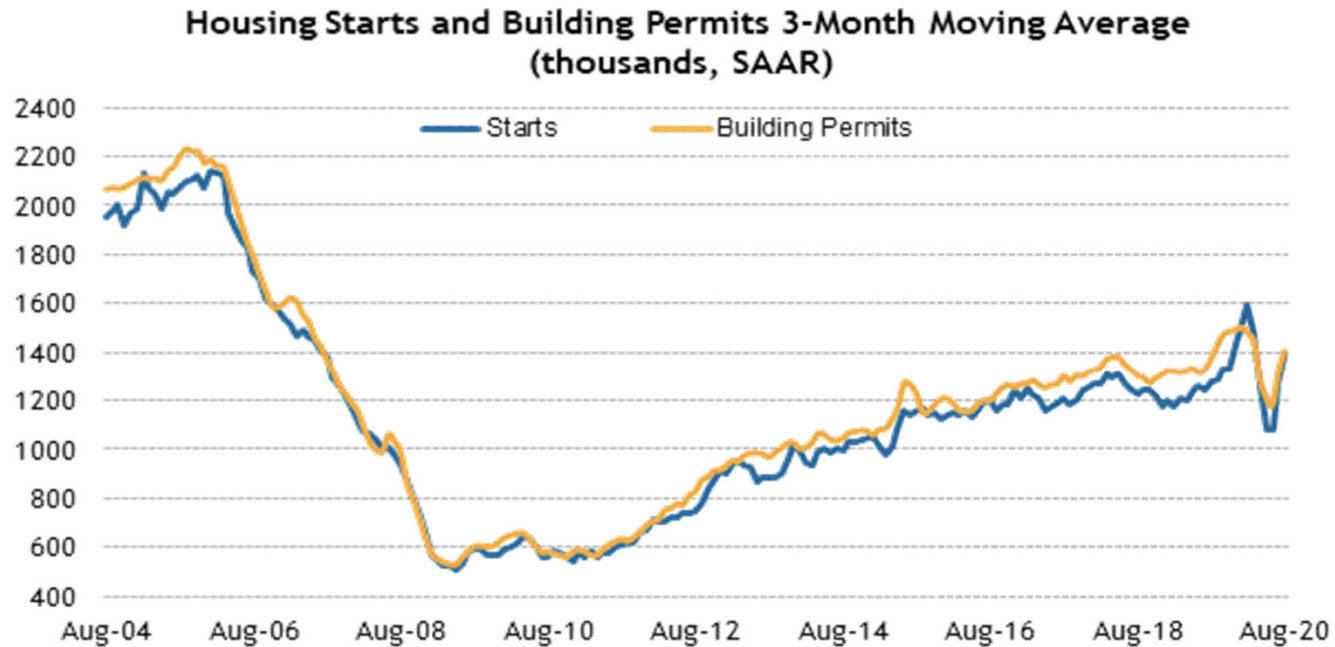


Housing

Residential Housing has been surprisingly strong.



Housing Market Has Remained Strong



Source: Census Bureau; updated 09/17/20

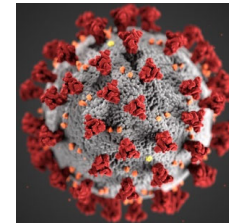
Briefing.com

- Housing Starts for August declined 5.1% m/m to a seasonally adjusted annual rate of 1.416 million units (Briefing.com consensus 1.489 million) but were up 2.8% yr/yr.
- Building Permits declined 0.9% m/m to 1.470 million (Briefing.com consensus 1.520 million) and were down 0.1% yr/yr.



The Amazon Effect and CRE?

Again, will Coronavirus fuel the flames?



A select listing of COVID-19 fatalities:

- What impact has Amazon have on strip centers as well as anchor stores:
 - Sears
 - Toys R Us
 - Payless Shoes
 - Radio Shack
 - Sports Authority
- 24 Hour Fitness
- Advantage Rent A Car
- Borden Dairy
- Brooks Brothers
- Chesapeake Energy
- Chuck E. Cheese
- Hertz
- JCPenney
- J.Crew
- Neiman Marcus
- Pier 1



Monetary Policy

The Fed reversed course with concern over the Coronavirus.

Pulling out plays from the 2008 era.

They have lower interest rate to near zero again.

The have stated they are not so concerned about inflation and will likely keep rates low for years.

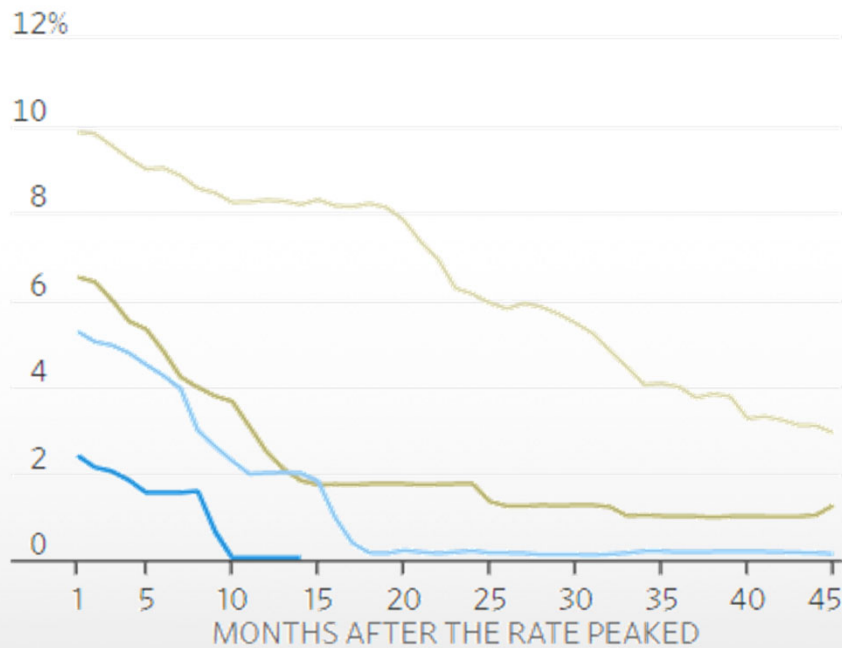


“New” Fed Policy

Back to Zero

How the federal-funds rate changed in the last four downturns

■ 2020 ■ 2007-09 ■ 2001 ■ 1990



Source: Federal Reserve

The Federal Reserve approved on Aug. 27, 2020 a major shift in how it sets interest rates by dropping its longstanding practice of pre-emptively lifting them to head off higher inflation, a move likely to leave U.S. borrowing costs very low for a long time.

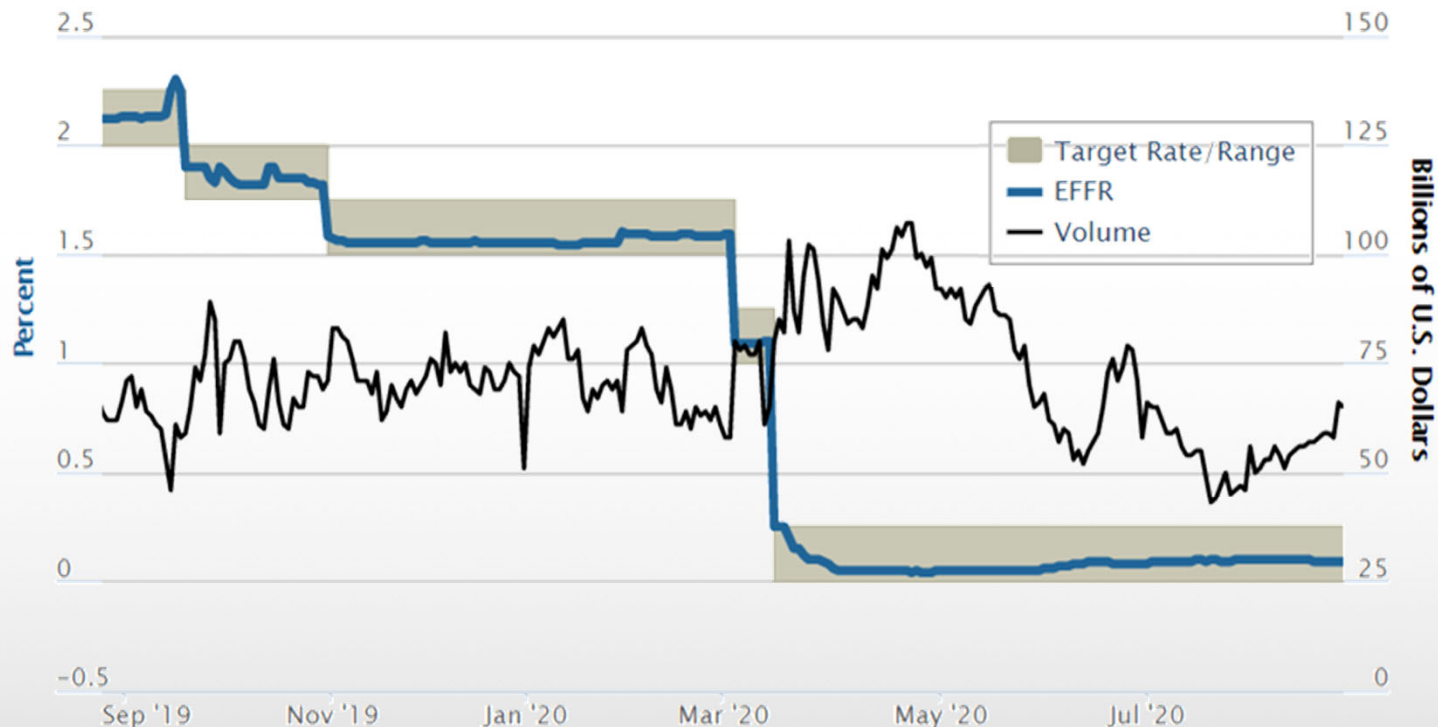
If they had followed this policy five years ago, they likely would not have increased interest rates in 2015

<https://www.wsj.com/articles/feds-powell-headlines-virtual-jackson-hole-economic-conference-11598486400>



What does the new monetary policy regime mean?

- First, the sharp reversal in the effective federal funds rate has created issues in the fixed income markets.
- Mr. Powell said (at the recent Virtual Jackson Hole Economic event) the changes reflected lessons the central bank officials had learned in recent years about how inflation didn't rise as anticipated when unemployment fell to historically low levels.

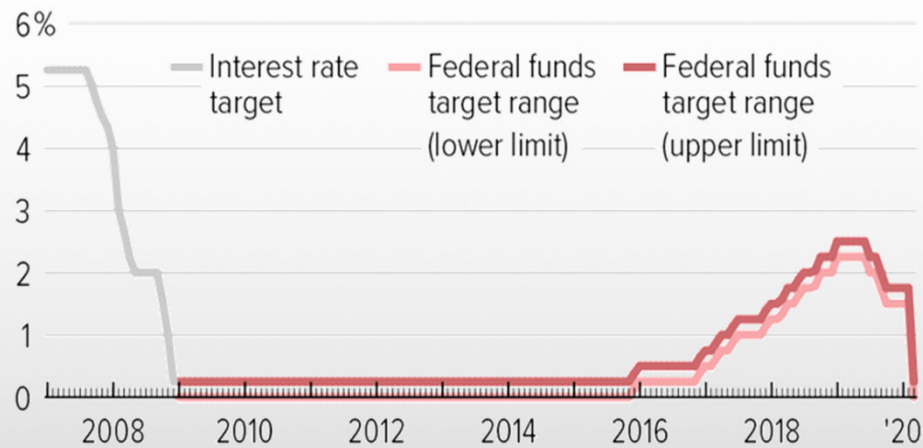
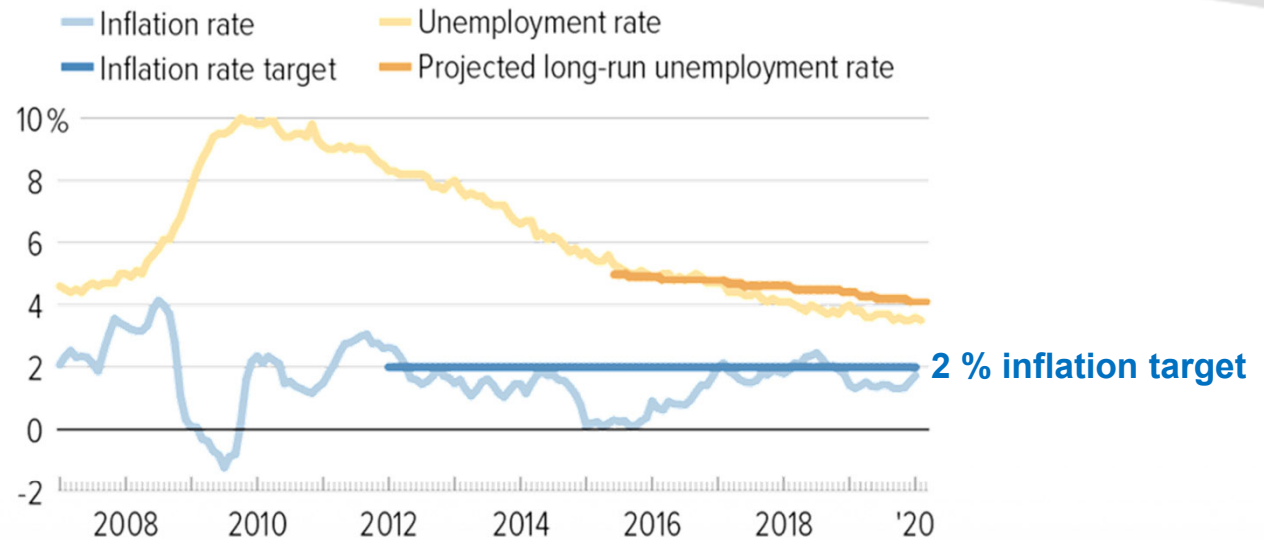


Source: <https://apps.newyorkfed.org/markets/autorates/fed%20funds>



The Federal Reserve Rarely Meet Its Inflation Target.

Inflation, unemployment, and federal reserve monetary policy



Source: <https://www.cbpp.org/federal-reserve-has-seldom-met-its-inflation-target-in-this-expansion-has-lowered-longer-term>

Price Puzzle

Inflation during the expansion phase of the business cycle has trended lower, on average.



“It reflects our view that a robust job market can be sustained without causing an outbreak of inflation,” said Mr. Powell.

Note: Core inflation excludes food and energy
Source: Commerce Department

<https://www.wsj.com/articles/feds-powell-headlines-virtual-jackson-hole-economic-conference-11598486400>



Fed's Outlook

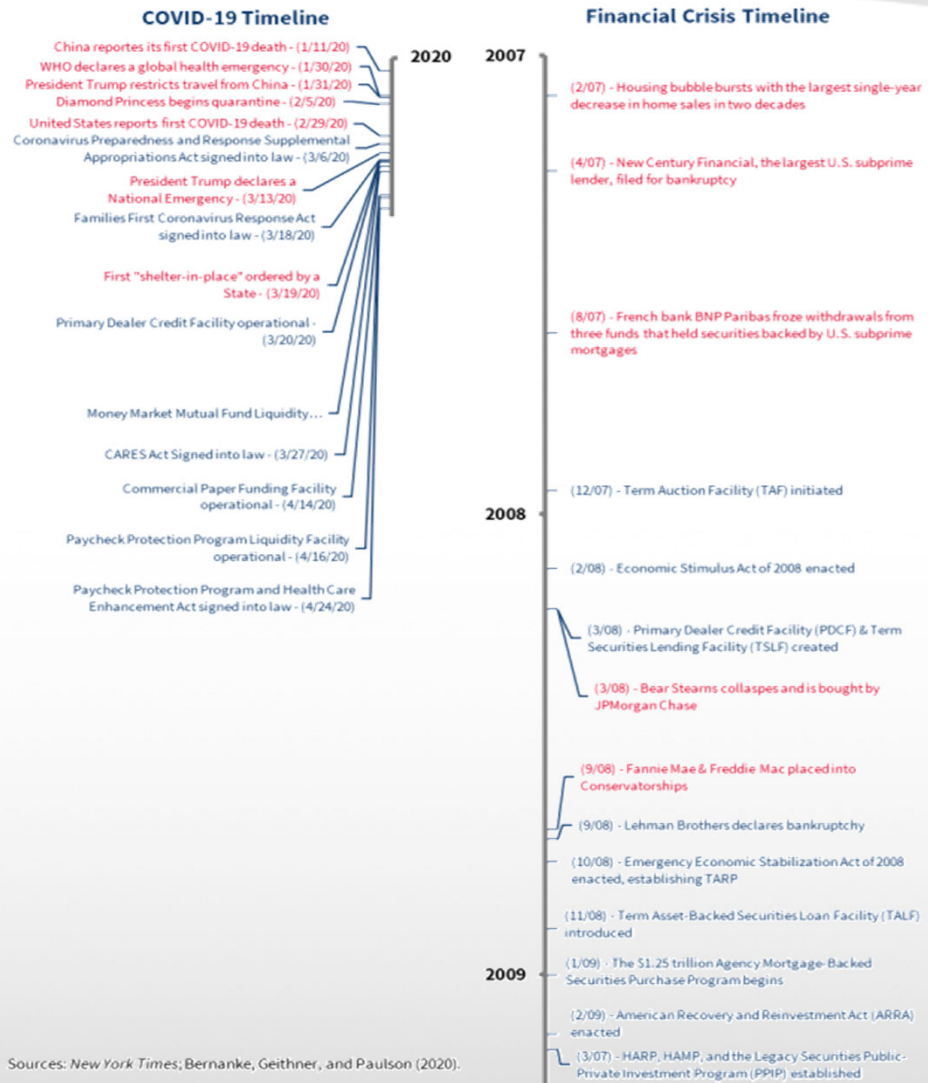
"I didn't know that?" - MacDonald

“The path of the economy will depend significantly on the course of the virus” — an acknowledgement that uncertainty about when the health crisis might be solved has complicated the Fed's ability to set interest rate policy. It's an observation that Chair Jerome Powell has made, in one way or another, for months as most states have succeeded only fitfully in controlling the virus and the ability of businesses to stay open.



Figure 40. Fiscal and Monetary Responses to COVID-19 and the Financial Crisis

Recognition, Fiscal and Monetary response comparisons between the Financial Crisis and COVID-19. Months versus years.



Regardless whether Coronavirus is a big deal or not, its impact is and will continue to be!!

- Extreme low rates will create havoc on bank profits and retires.
- Travel, hospitality, restaurants, bars and movie theater industries are in trouble.
- The dependence and deterioration of the U.S. and China trade relationship will have a long-term impact on GDP.
- The Fed is worried about liquidity and so should the banking industry.



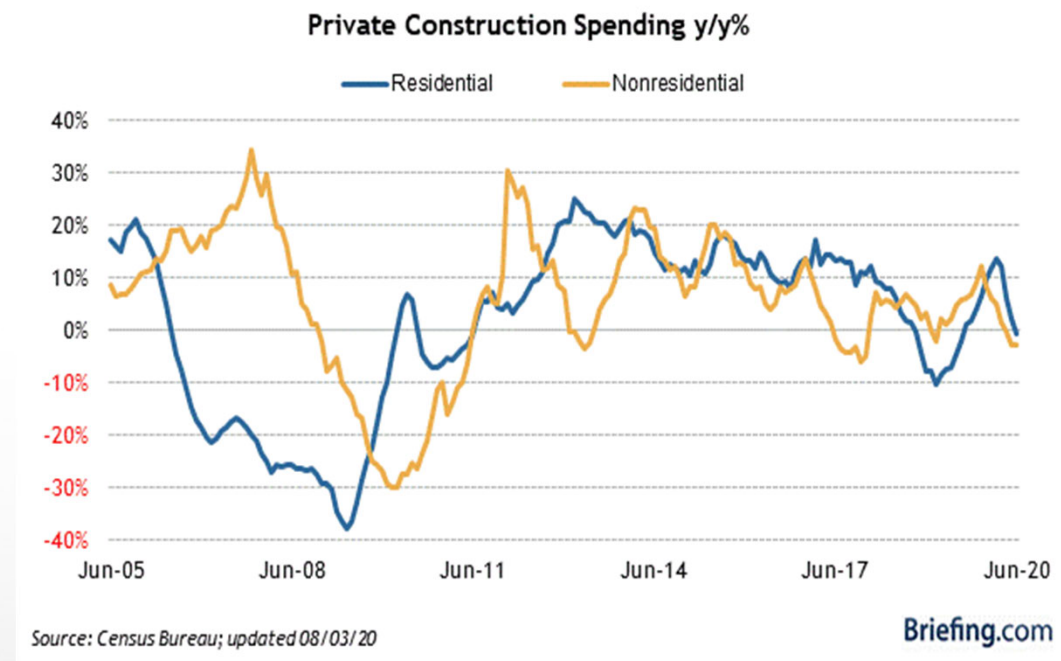
Construction spending

Although holding up relatively, the impact from stay at home orders is beginning to show on some larger projects, such as DFW Airport renovations and expansions.

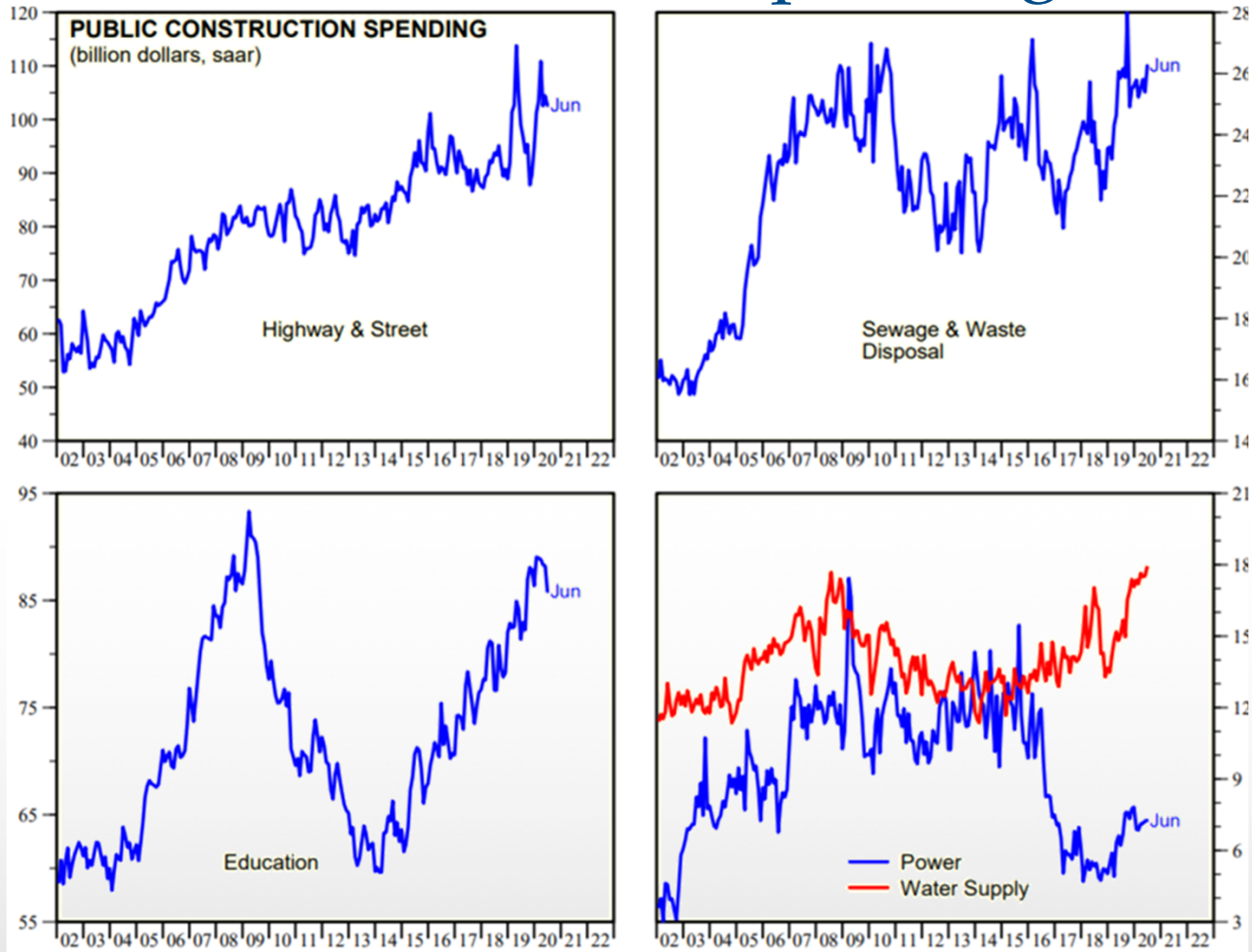


June Construction Spending

- Total construction spending declined 0.7% m/m in June (Briefing.com consensus +1.3%) on the heels of an upwardly revised 1.7% decline (from -2.1%) in May.
- Total private construction spending was down 0.7% and total public construction spending was also down 0.7%.
- The key takeaway from the report is that total construction spending was up 0.1% yr/yr despite the adverse effects of the pandemic, bolstered by the strength of nonresidential public construction spending (+5.7% yr/yr).



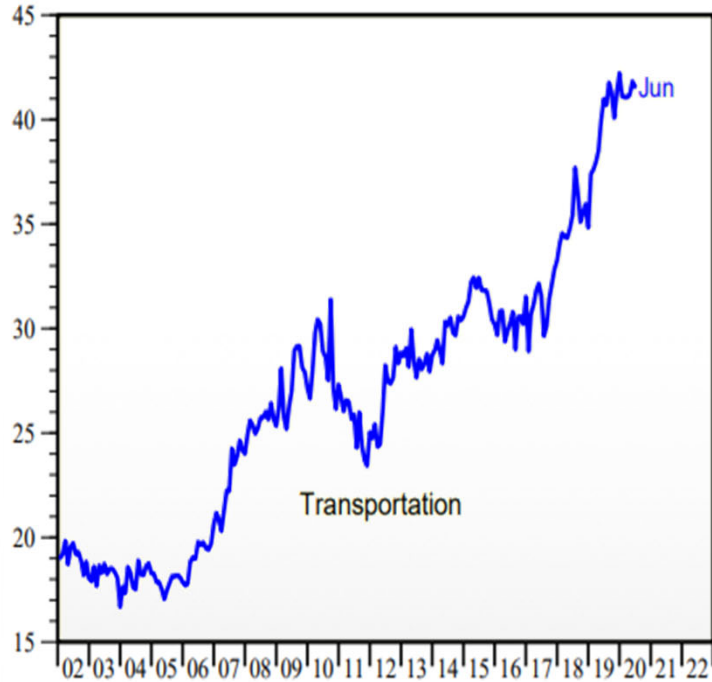
Public Construction Spending



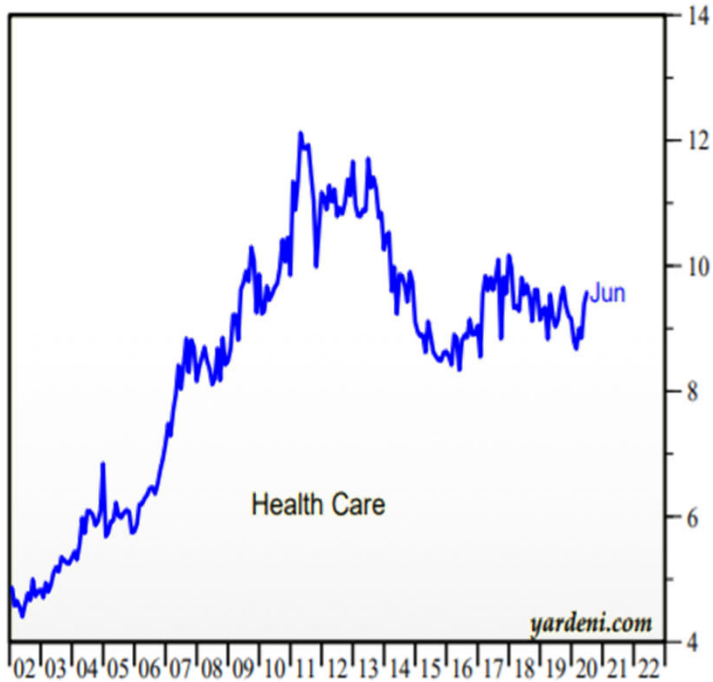
Source: <https://www.yardeni.com/pub/eoindconssp.pdf>



Public Construction Spending (continued)



Source: Census Bureau and Haver Analytics.

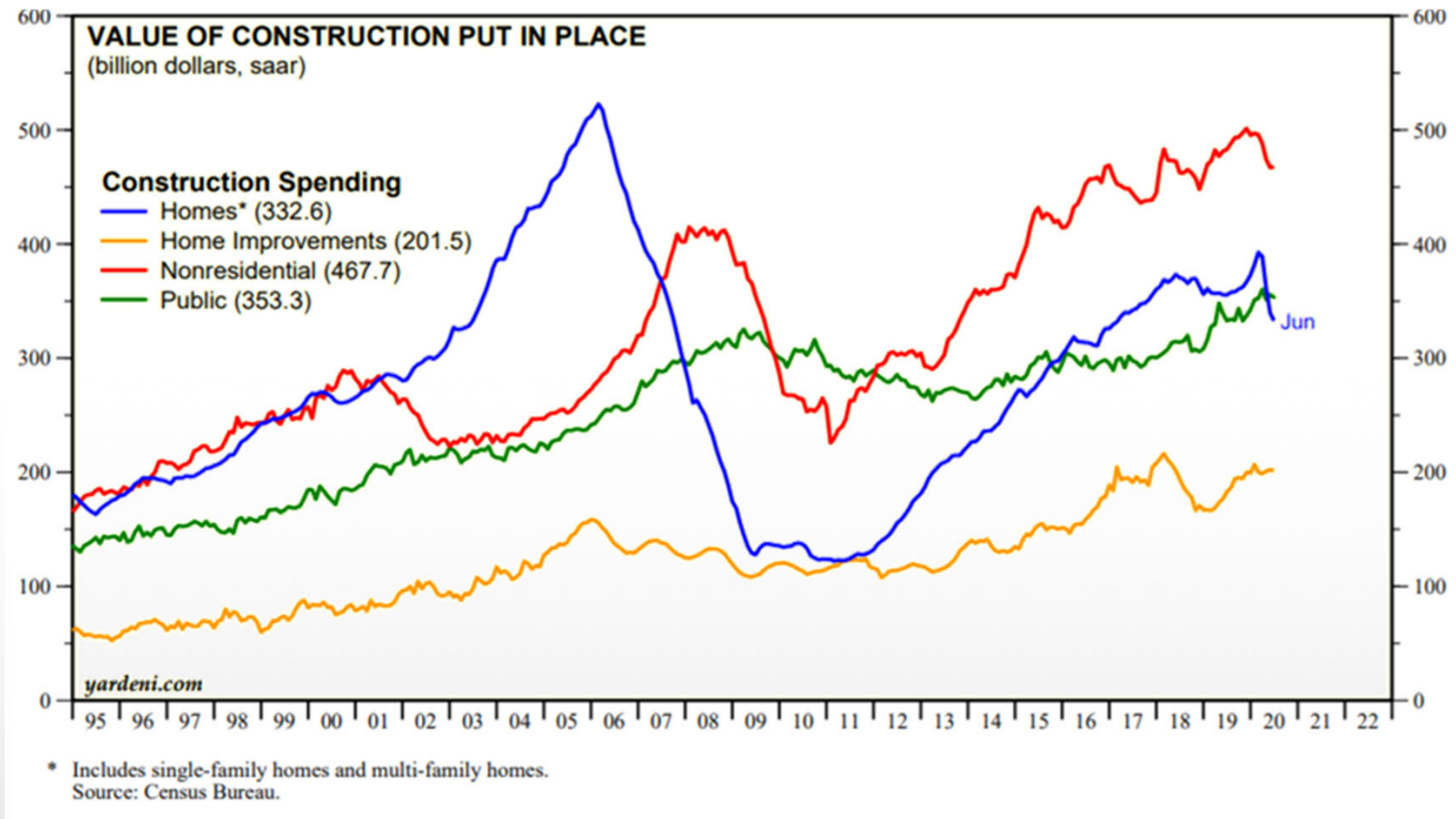


yardeni.com

Source: <https://www.yardeni.com/pub/ecoindconssp.pdf>



Value of Construction Put in Place



How things might change

No doubt COVID-19 will have a lasting and permanent impact upon our lives, the economy, travel and hospitality, and office space. All impacting the need for CRE and major construction projects.



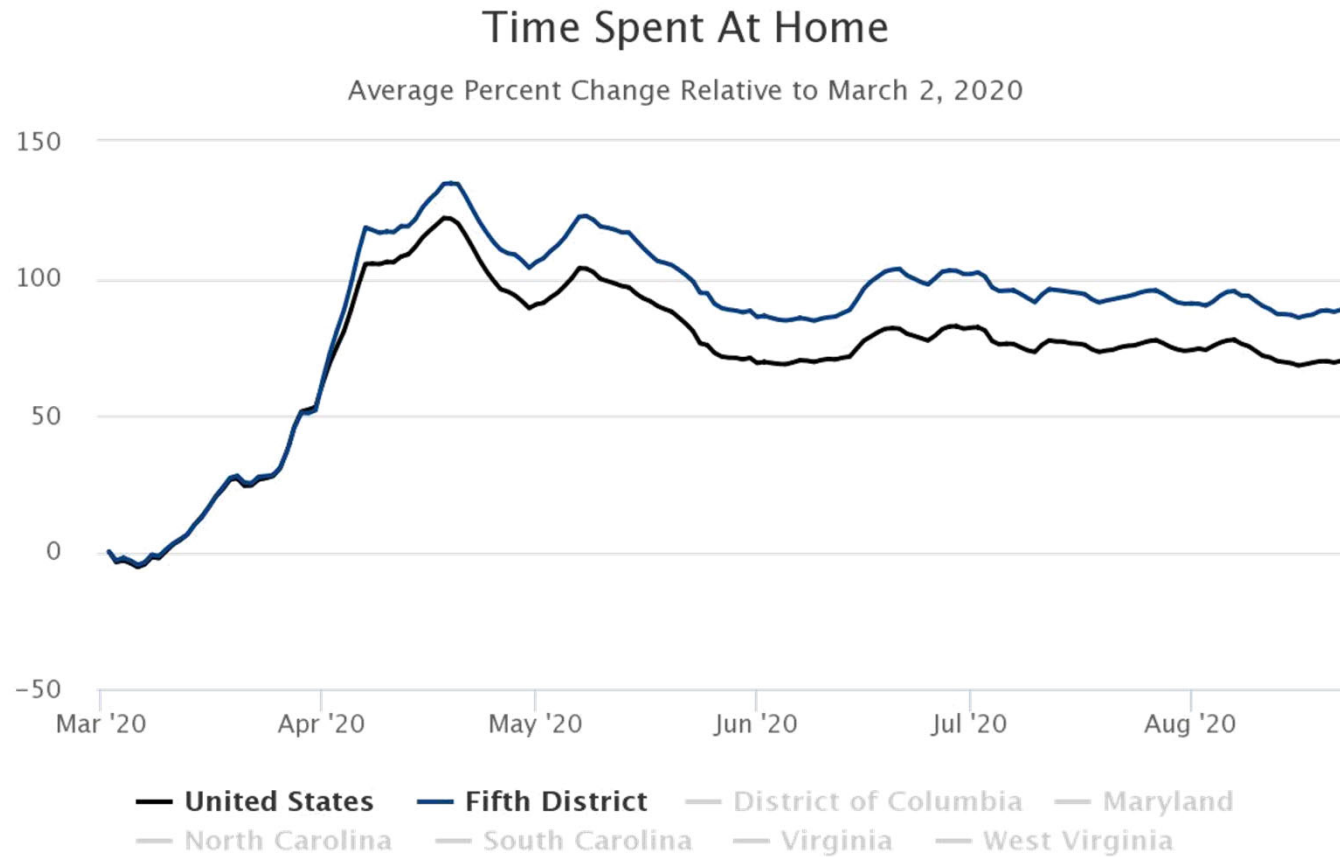
What will be the next “new normal?”

- I remember when we would be “cashless.”
- I remember when we would be “professorless,” after the invention of the VCR.
- I remember when we would be “wireless.”
- I remember when we would be “mall-less.”
- I remember when we would be “stay-at-home” after 9-11.
- I remember when we would be in a “new normal” economy after the financial crisis.
- I remember when we would be in a new “new normal” after the pandemic.

This time it is different???



Time Spend at Home.



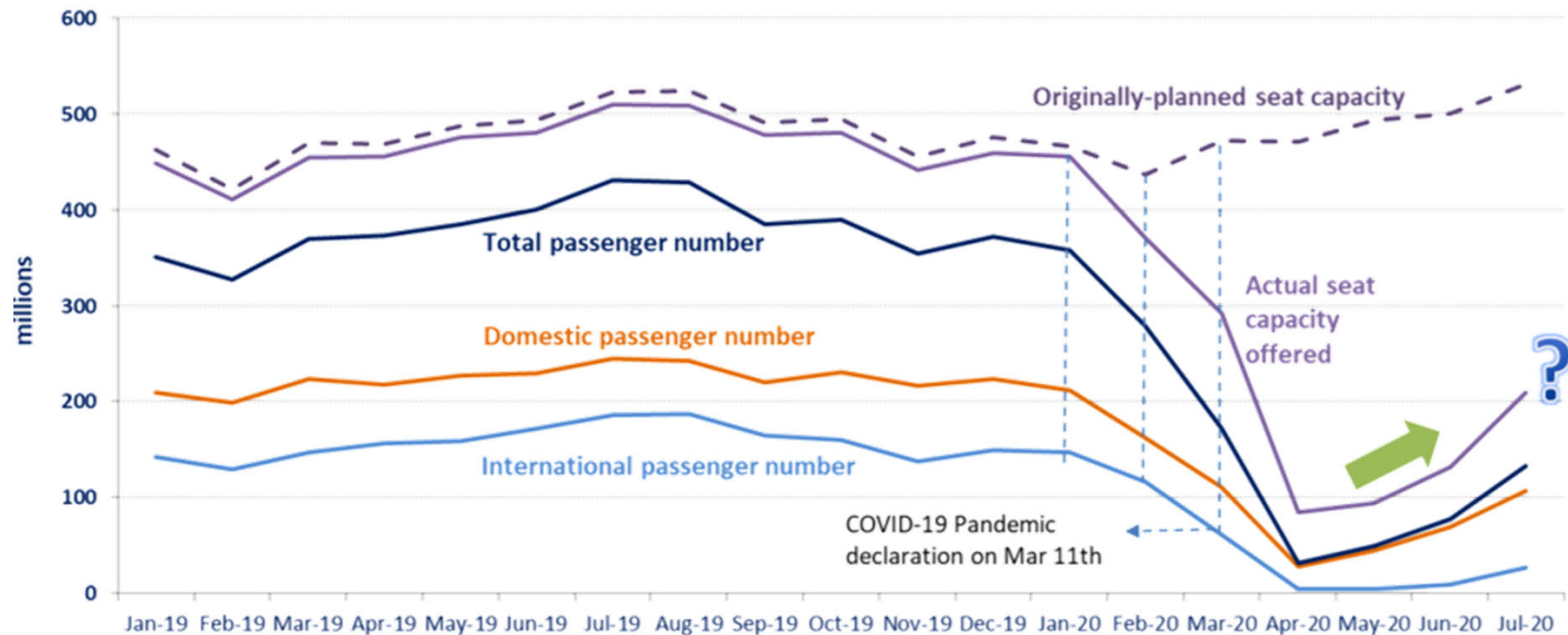
Source: Richmond Fed calculations using data from Safegraph

<https://www.richmondfed.org/publications/research/coronavirus>



Drastic capacity cut along with dramatic drop in demand the travel industry

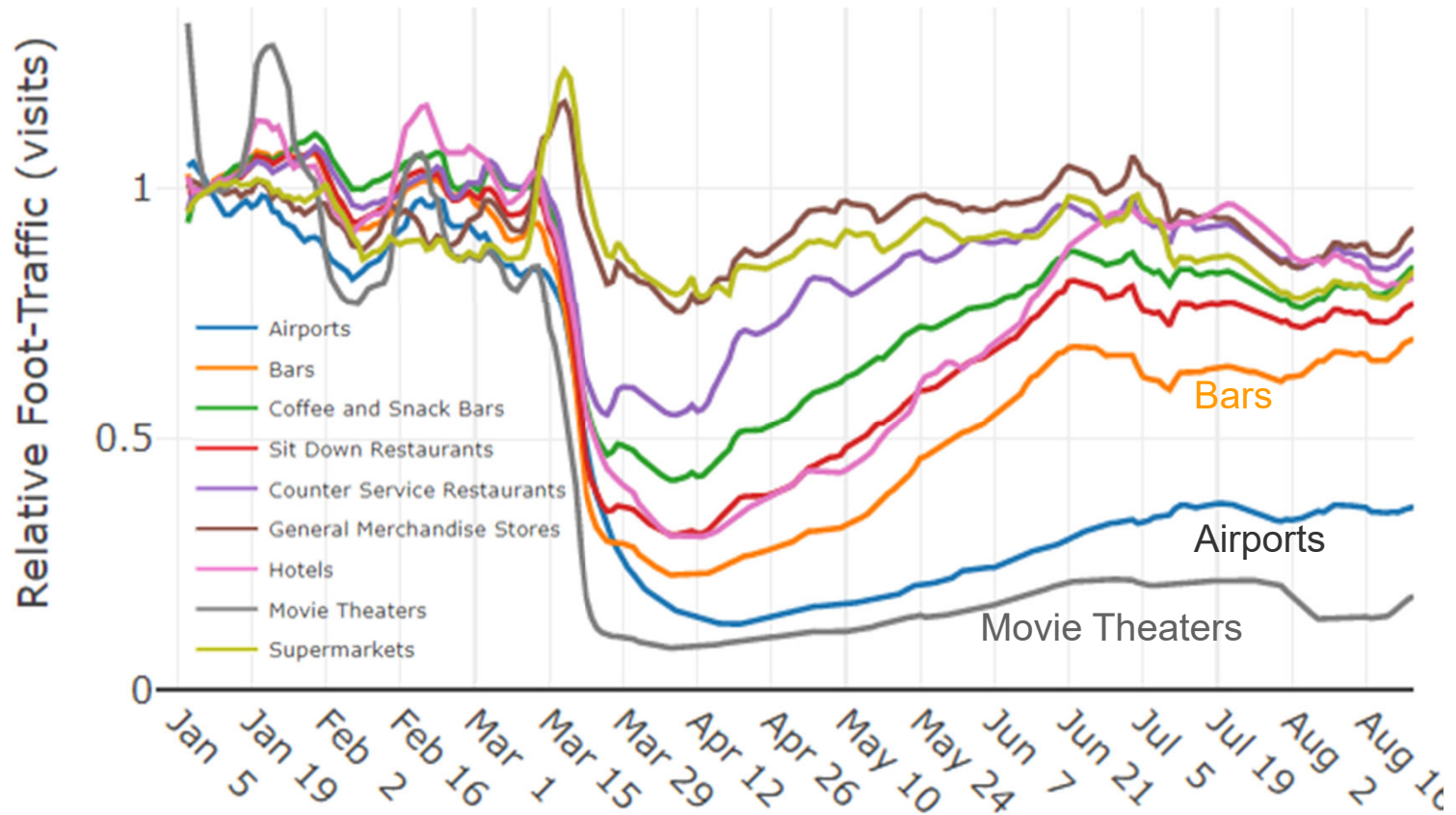
Comparison of passenger numbers and capacity (Domestic travel is leading the recovery)



https://www.icao.int/sustainability/Documents/COVID-19/ICAO_Coronavirus_Econ_Impact.pdf



Industry Level Patterns, compared to prior year.

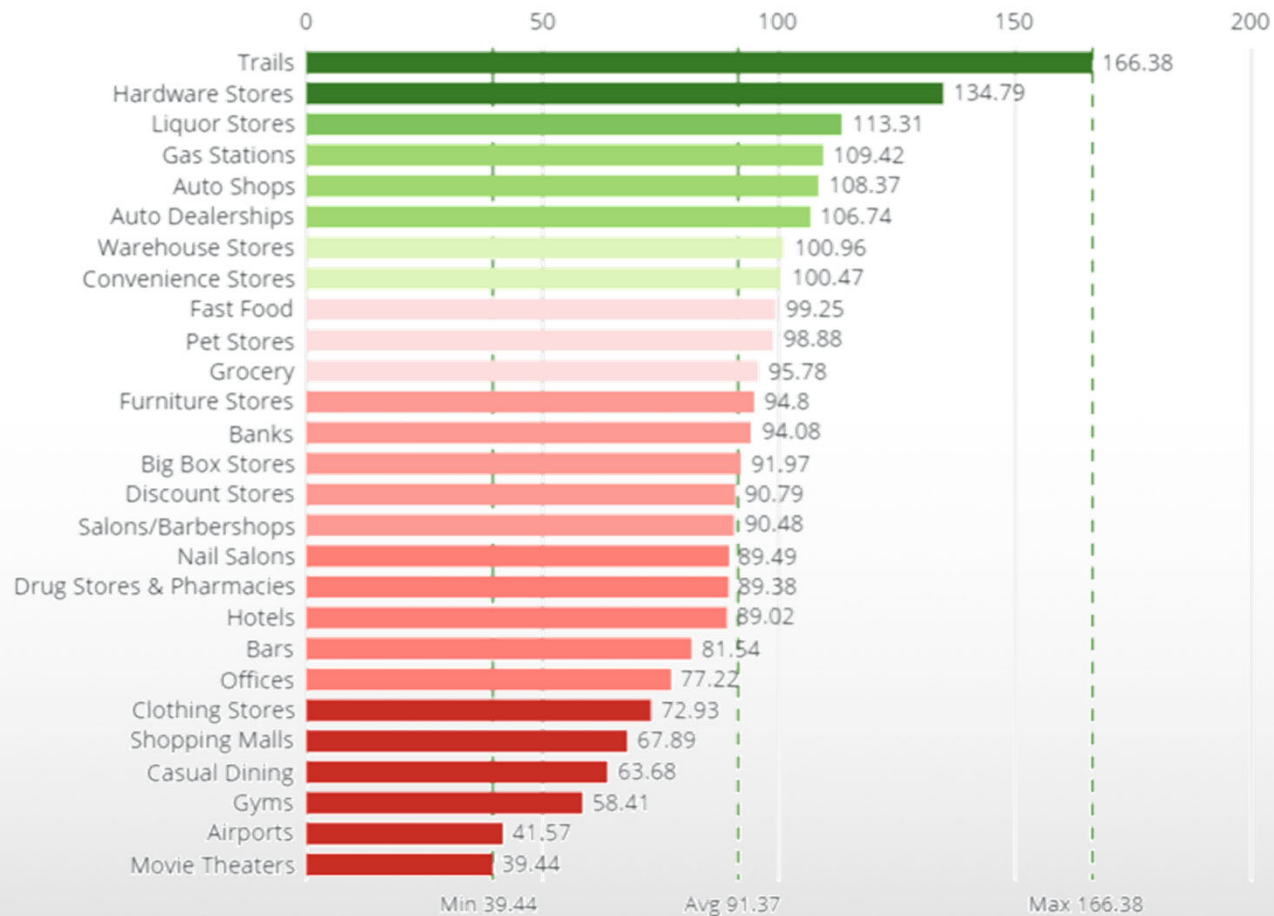


<https://www.safegraph.com/dashboard/covid19-commerce-patterns>



What businesses are people still visiting?

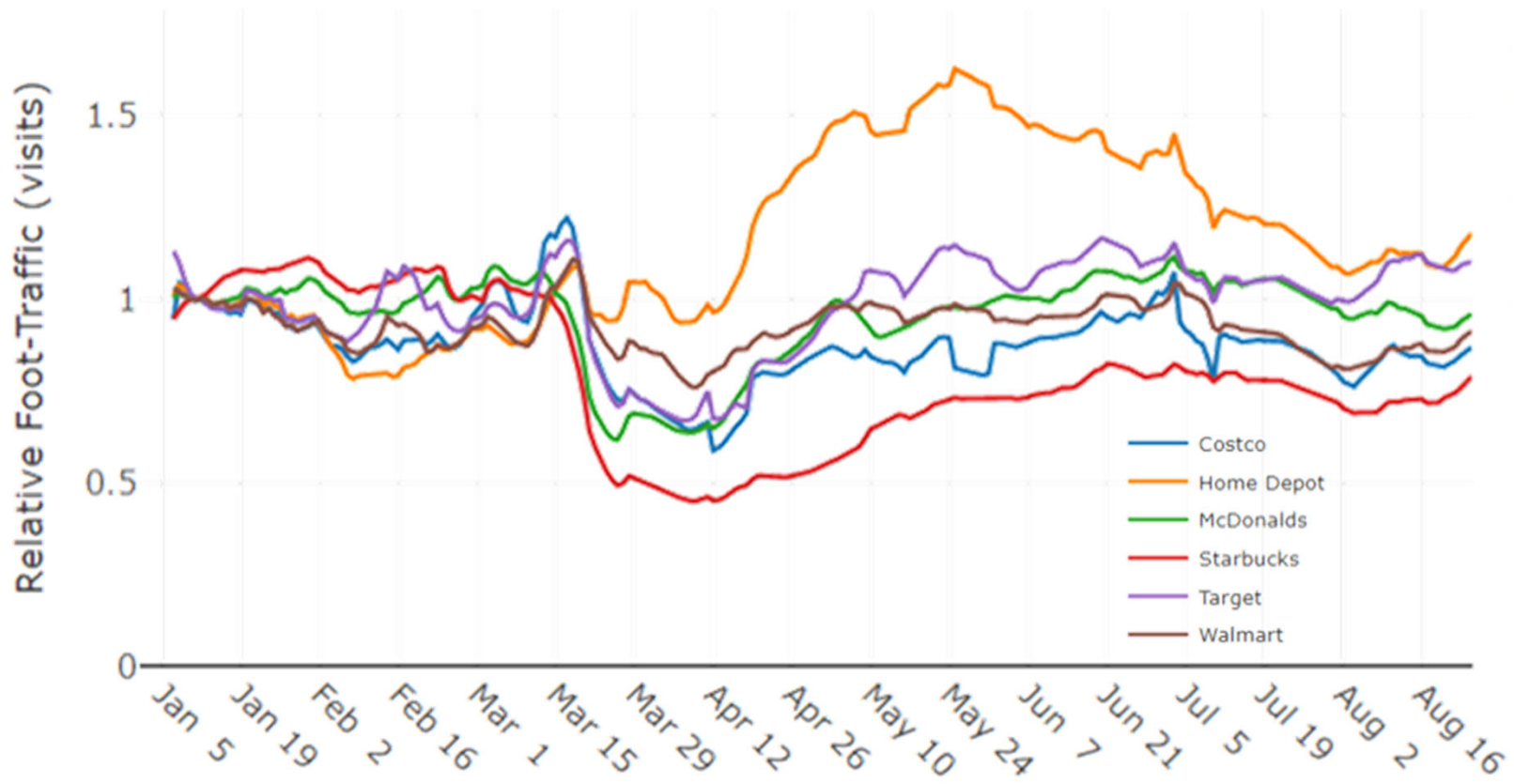
91.3 Avg Foursquare Index (latest date)



<https://www.domo.com/covid19/economy/>



Brand Specific Patterns, compared to prior year.



We opened back up when cases were low but growing?

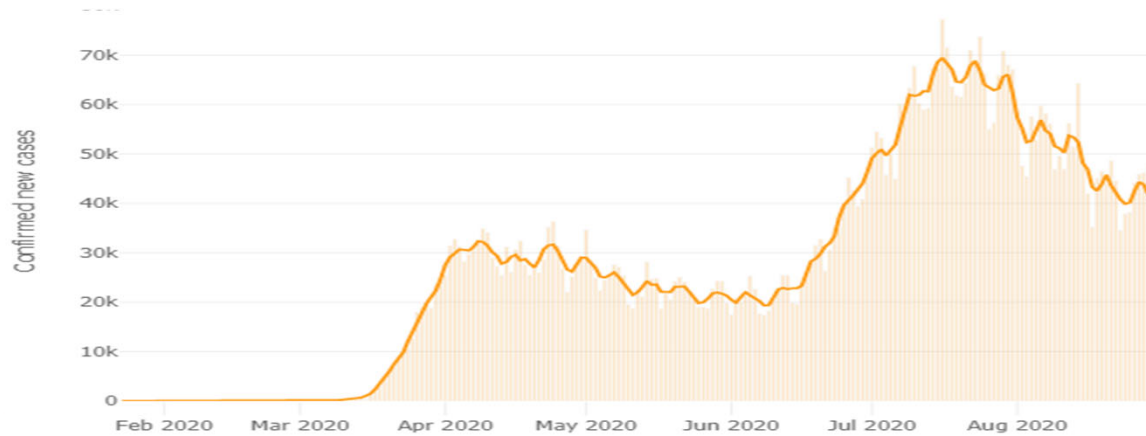
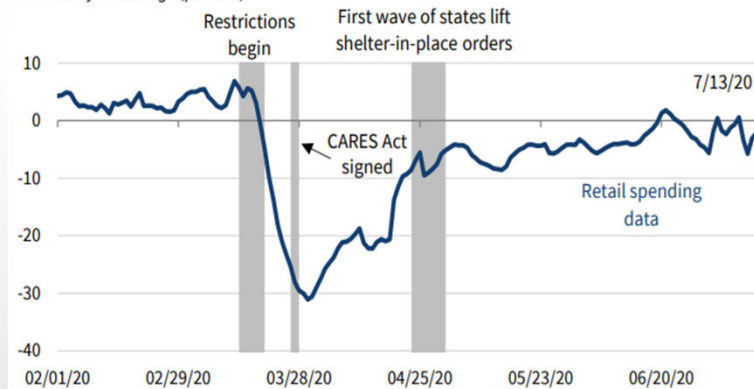


Figure 2. Retail Spending, Seven-Day Average, 2020

Year-over-year change (percent)

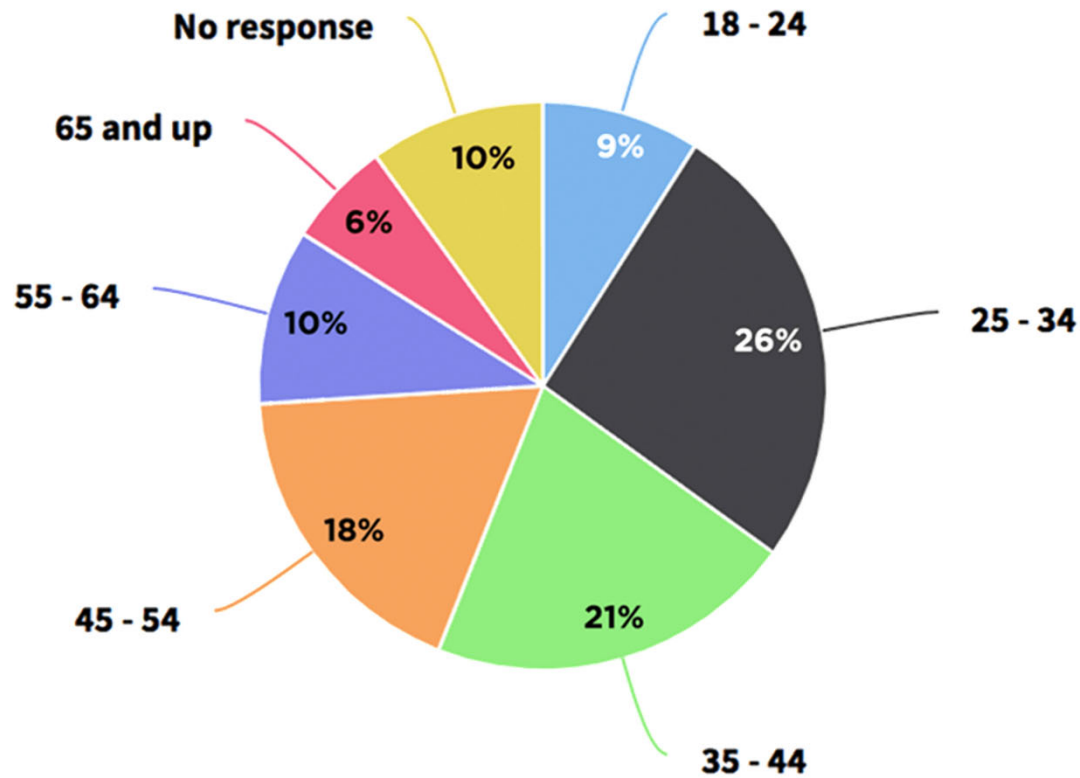


Source: Proprietary spending data.

Note: "Restrictions" refer to shelter-in-place and dining restrictions. The CARES Act was signed into law on March 27, 2020.



Percent who wiped out savings due to Covid-19 by age.



<https://www.cnn.com/2020/09/01/nearly-14percent-of-americans-have-wiped-out-emergency-savings-during-pandemic.html>



The Health of the Banking Industry, Today!

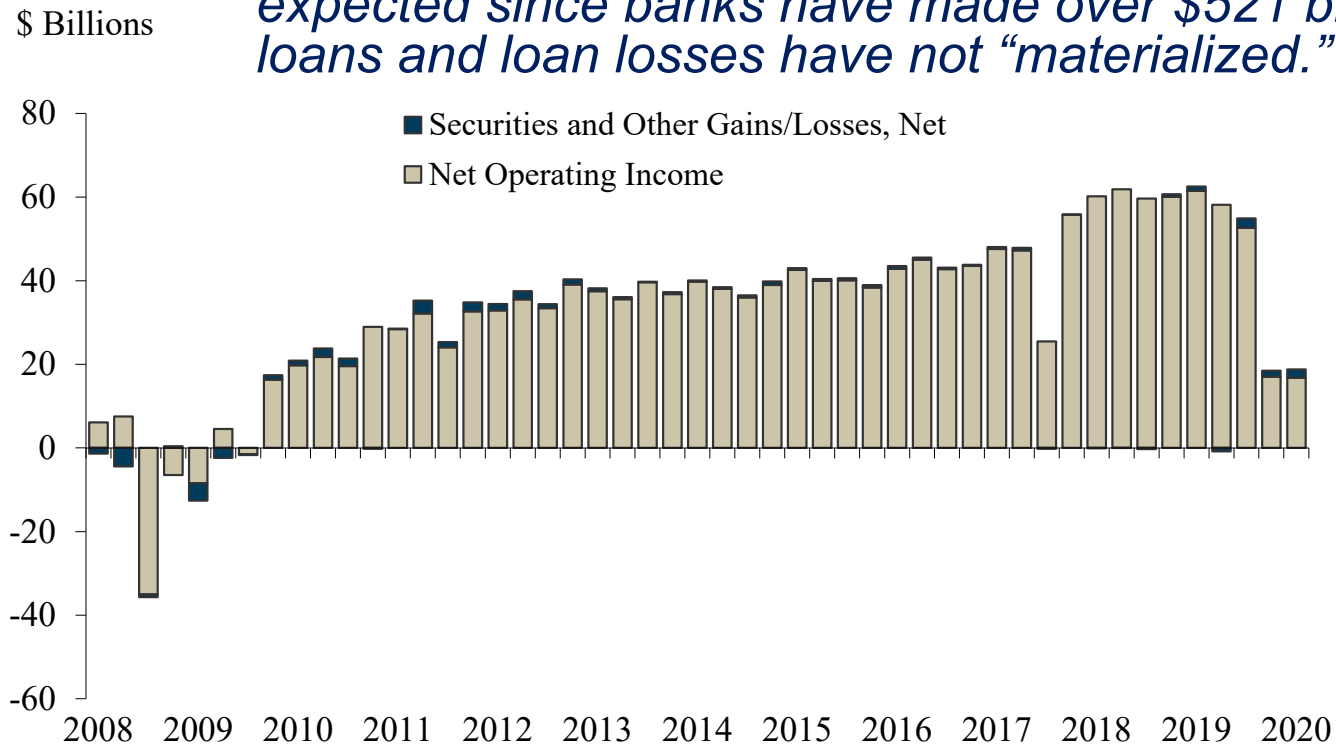
$$\textit{Return on Equity} = \frac{\textit{Net Income}}{\textit{Total Equity}}$$

Holding up surprisingly well, but pretend and extend
may be the rule of the day.



Quarterly Net Income All FDIC-Insured Institutions

Net income has not fallen as much as might have been expected since banks have made over \$521 billion PPP loans and loan losses have not “materialized.”



Source: FDIC.



So, what's changed since the financial crisis: 2019 vs. 2006

* <i>Bank Size in Total Assets-----></i>	2019 National Industry Average: Full Year						2006 National Industry Average				
	All	< \$100	\$100 - \$100	\$100 - \$100	\$100 - \$100	> \$100	All	< \$100	\$100 - \$100	\$100 - \$100	> \$100
	Insured Inst.	\$100 Mil	\$100 - \$100 Mil - \$1 Bil	\$100 - \$100 Bil	\$100 - \$100 Bil	\$100 - \$100 Bil	Comm Banks	\$100 Mil	\$100 - \$100 Mil - \$1 Bil	\$100 - \$100 Bil	\$100 - \$100 Bil
Number of institutions reporting	5177	1155	3226	656	130	10	8,681	3,633	4,399	530	119
Performance ratios (%)											
Return on equity	11.4	7.15	10.9	10.9	11.4	11.6	12.34	7.10	11.32	11.47	12.77
Pretax ROE	14.40	8.19	12.6	13.5	14.8	14.7	17.87	9.13	15.29	16.48	18.71
Return on assets	1.29	1.02	1.3	1.3	1.35	1.26	1.28	0.93	1.17	1.22	1.32
Pretax ROA	1.63	1.17	1.51	1.63	1.75	1.58	1.88	1.19	1.59	1.81	1.95
Equity capital ratio	11.32	14.3	12	12	11.9	10.8	10.52	13.03	10.40	10.98	10.42
Net interest margin	3.36	3.83	3.81	3.72	3.71	3	3.31	4.11	4.03	3.69	3.12
Yield on earning assets	4.33	4.59	4.72	4.71	4.82	3.89	6.45	6.62	6.91	6.73	6.33
Cost of funding earn assets	0.97	0.75	0.91	0.98	1.11	0.89	3.14	2.51	2.88	3.04	3.21
Earning assets to total assets	90.48	92.6	93.3	92.6	91.6	89.1	87.15	91.82	91.85	90.66	85.83
Efficiency ratio	56.63	74.1	66.3	60.6	53.3	56.9	56.79	72.52	63.62	57.14	55.46
Burden ratio	1.11	2.27	1.94	1.66	1.21	0.86	0.81	2.43	1.96	1.37	0.52
Noninterest inc to earn assets	1.47	1.42	1.27	1.15	1.44	1.56	2.12	1.18	1.24	1.40	2.38
Noninterest exp to earn assets	2.58	3.69	3.21	2.81	2.65	2.42	2.93	3.61	3.20	2.77	2.90
Net charge-offs to LN&LS	0.52	0.21	0.14	0.21	0.7	0.51	0.38	0.17	0.16	0.20	0.46
Asset Quality (%)											
Net charge-offs to LN&LS	0.52	0.21	0.14	0.21	0.7	0.51	0.38	0.17	0.16	0.20	0.46
Loss allow to Noncurr LN&LS	129.7	111	151	152	127	125	136.8	137.9	163.1	170.9	127.8
LN&LS provision to net charge-off	105.6	129	152	125	105	102	109.8	165.0	164.0	135.0	104.3
Loss allowance to LN&LS	1.18	1.4	1.23	1.06	1.23	1.15	1.07	1.31	1.15	1.16	1.04
Net LN&LS to deposits	71.5	70.8	81.3	87.3	78.1	63.1	91.45	75.30	85.43	94.39	92.48
Noncurr assets + OREO to capital	4.86	6.58	5.83	4.73	5.31	4.46	5.04	5.60	5.67	4.64	4.99
Capital Ratios											
Core capital (leverage) ratio	9.66	13.9	11.6	11	10.1	8.87	8.23	13.00	9.99	9.40	7.69
Tier 1 risk-based capital ratio	13.29	22.5	16.1	14.2	13.2	12.7	10.52	19.22	13.50	12.29	9.69
Total risk-based capital ratio	14.63	23.5	17.2	15.1	14.5	14.3	12.99	20.28	14.62	13.57	12.54

50 basis points on assets is leveraged by 10 times to shareholders

Source: FDIC Quarterly Banking Profile



So, what's changed since last year: 2019 vs. 2020.2

	2019						2020.2					
	All Insured Inst.	< \$100 Mil	\$100 - \$1 Bil	\$1 - \$10 Bil	\$10 - \$250 Bil	> \$250 Bil	All Insured Inst.	< \$100 Mil	\$100 - \$1 Bil	\$1 - \$10 Bil	\$10 - \$250 Bil	> \$250 Bil
* National Industry Average: Full Year												
Bank Size in Total Assets----->												
Number of institutions reporting	5177	1155	3226	656	130	10	5066	1010	3153	755	135	13
Performance ratios (%)												
Return on equity	11.4	7.15	10.9	10.9	11.4	11.6	3.52	6.7	10.2	8.23	1.06	3.34
Pretax ROE	14.40	8.19	12.6	13.5	14.8	14.7	4.43	7.8	12.3	10.7	2.11	3.66
Return on assets	1.29	1.02	1.3	1.3	1.35	1.26	0.37	0.94	1.19	0.94	0.12	0.33
Pretax ROA	1.63	1.17	1.51	1.63	1.75	1.58	0.45	1.06	1.38	1.16	0.23	0.35
Equity capital ratio	11.32	14.3	12	12	11.9	10.8	10.16	13.6	11.2	10.8	10.9	9.56
Net interest margin	3.36	3.83	3.81	3.72	3.71	3	2.97	3.6	3.65	3.48	3.49	2.54
Yield on earning assets	4.33	4.59	4.72	4.71	4.82	3.89	3.53	4.3	4.39	4.2	4.21	2.98
Cost of funding earn assets	0.97	0.75	0.91	0.98	1.11	0.89	0.56	0.71	0.74	0.72	0.72	0.44
Earning assets to total assets	90.48	92.6	93.3	92.6	91.6	89.1	90.98	92.6	93.8	93	92.1	89.8
Efficiency ratio	56.63	74.1	66.3	60.6	53.3	56.9	58.59	75.1	65.4	60.8	54.4	59.8
Burden ratio	1.11	2.27	1.94	1.66	1.21	0.86	1.13	2.18	1.81	1.53	1.56	0.78
Noninterest inc to earn assets	1.47	1.42	1.27	1.15	1.44	1.56	1.38	1.33	1.24	1.19	1.29	1.47
Noninterest exp to earn assets	2.58	3.69	3.21	2.81	2.65	2.42	2.51	3.51	3.05	2.72	2.85	2.25
Net charge-offs to LN&LS	0.52	0.21	0.14	0.21	0.7	0.51	0.56	0.15	0.12	0.22	0.75	0.57
Asset Quality (%)												
Net charge-offs to LN&LS	0.52	0.21	0.14	0.21	0.7	0.51	0.56	0.15	0.12	0.22	0.75	0.57
Loss allow to Noncurr LN&LS	129.7	111	151	152	127	125	205.3	105	147	151	212	219
LN&LS provision to net charge-o	105.6	129	152	125	105	102	377.2	158	334	360	298	458
Loss allowance to LN&LS	1.18	1.4	1.23	1.06	1.23	1.15	2.21	1.36	1.25	1.3	2.39	2.48
Net LN&LS to deposits	71.51	70.8	81.3	87.3	78.1	63.1	63.4	68.5	79.5	85.2	76.3	51.3
Noncurr assets + OREO to capital	4.86	6.58	5.83	4.73	5.31	4.46	5.81	6.7	6.16	6.1	6.8	5.23
Capital Ratios												
Core capital (leverage) ratio	9.66	13.9	11.6	11	10.1	8.87	8.77	13.4	11	10.2	9.41	7.97
Tier 1 risk-based capital ratio	13.29	22.5	16.1	14.2	13.2	12.7	13.49	21.6	15.6	13.9	13.4	13.3
Total risk-based capital ratio	14.63	23.5	17.2	15.1	14.5	14.3	15.01	22.7	16.7	15.1	14.9	14.9

Source: FDIC Quarterly Banking Profile



Although the stock market has done well, fixed income rates are hurting the elderly.

Fidelity

Fixed Income & Bond Yields

View by: **Highest Yield** | Median Yield

Understanding This Table	3mo	6mo	9mo	1yr	2yr	3yr	5yr	10yr	20yr	30yr+
CDs (New Issues)	0.05%	0.05%	--	0.10%	0.20%	0.30%	0.45%	1.15%	1.15%	--
BONDS										
U.S. Treasury	0.11%	0.10%	0.12%	0.12%	0.13%	0.17%	0.30%	0.71%	1.25%	1.47%
U.S. Treasury Zeros	-0.00%	0.04%	0.07%	0.07%	0.12%	0.17%	0.38%	0.87%	1.38%	1.52%
Agency/GSE	0.16%	0.18%	0.15%	0.16%	0.20%	0.46%	0.63%	1.39%	2.00%	2.09%
Corporate (Aaa/AAA)	--	0.12%	0.16%	0.10%	--	0.24%	0.68%	1.27%	2.22%	3.09%
Corporate (Aa/AA)	0.22%	0.19%	0.27%	0.27%	0.30%	0.70%	0.61%	1.66%	2.69%	3.74%
Corporate (A/A)	0.33%	0.36%	0.32%	0.41%	0.79%	0.75%	1.24%	2.54%	3.62%	4.23%
Corporate (Baa/BBB)	0.50%	1.65%	1.41%	1.99%	1.55%	4.68%	4.33%	4.76%	5.37%	5.66%
Municipal (Aaa/AAA)	0.20%	--	0.30%	0.36%	0.42%	0.52%	1.14%	1.73%	2.08%	2.23%
Municipal (Aa/AA)	0.24%	0.40%	0.45%	0.41%	0.66%	1.13%	1.22%	2.08%	2.53%	2.43%
Municipal (A/A)	0.13%	0.14%	0.60%	0.70%	0.85%	1.18%	1.32%	2.41%	2.89%	2.58%
Taxable Municipal*	--	0.24%	--	0.85%	0.75%	1.92%	1.95%	2.60%	3.65%	3.87%

AS OF 2:57 PM ET 09/07/2020. YIELDS MAY BE DELAYED UP TO 15 MINUTES.



Credit Markets

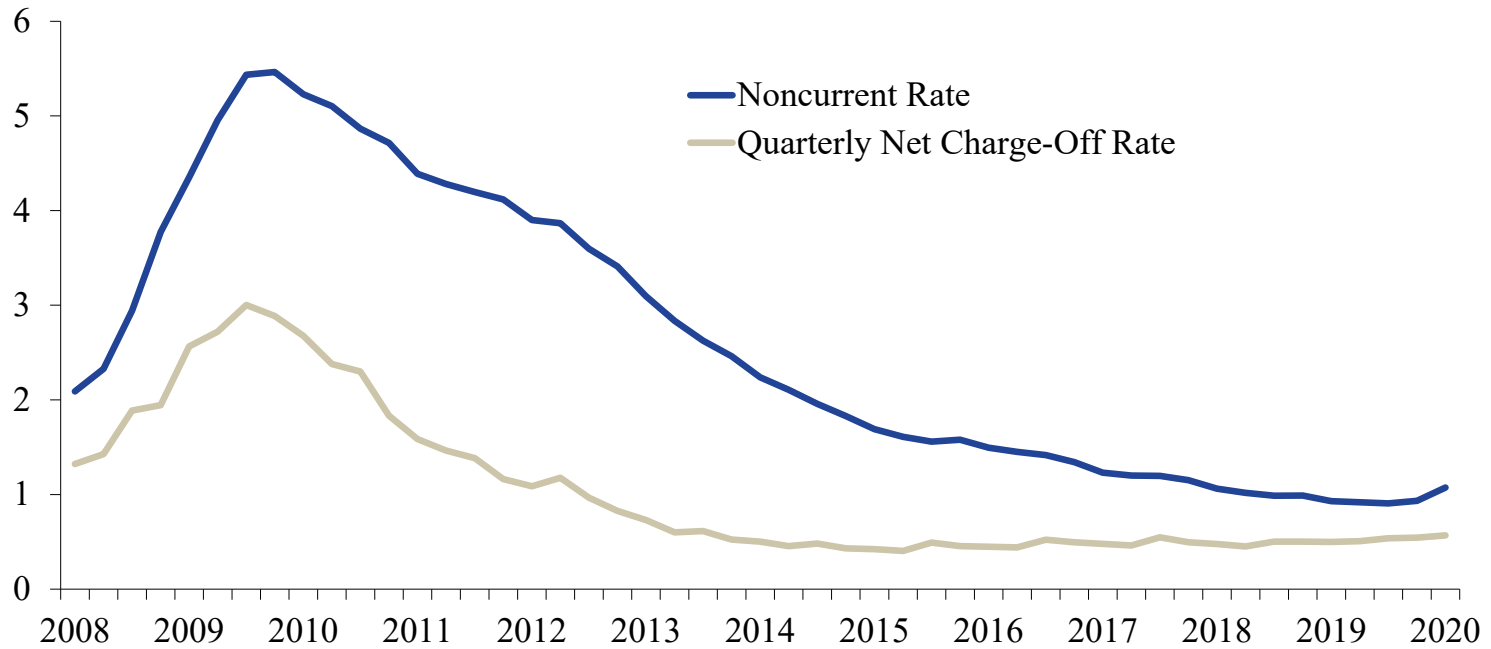
How has COVID-19 impacted us to date?



Noncurrent Loan Rate and Quarterly Net Charge-Off Rate.

All FDIC-Insured Institutions

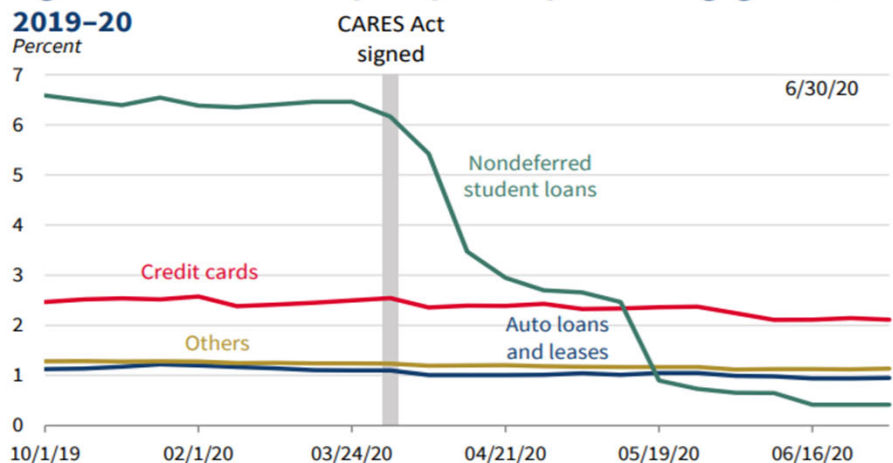
Percent



Source: FDIC.



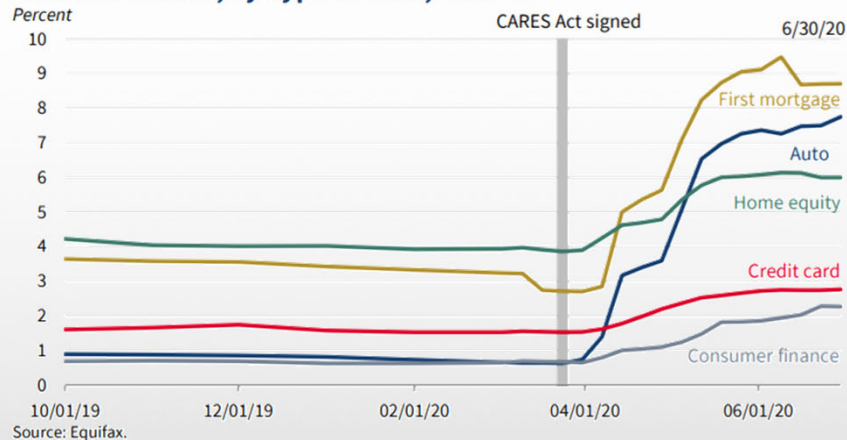
Figure 31. Severe Delinquency Rate by Nonmortgage Products, 2019–20



Sources: Equifax; CEA calculations.
 Note: Since these are weekly data, and the CARES Act was signed March 27, it is presented the week of March 31, 2020.

Loans are not delinquent until you say they are!!!

Figure 34. Percentage of Loans Reported with Possible Accommodation, by Type of Loan, 2019–20



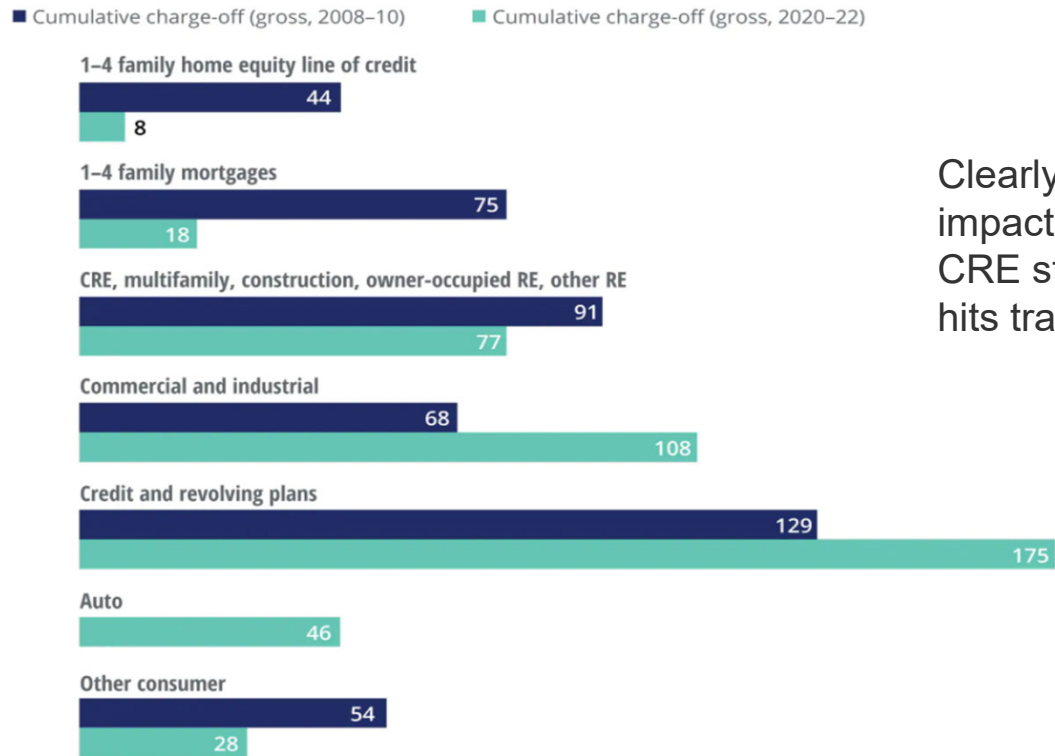
Source: Equifax.

<https://www.whitehouse.gov/wp-content/uploads/2020/08/Evaluating-the-Effects-of-the-Economic-Response-to-COVID-19.pdf>



Gross Charge-offs Comparison of 2008-2010 and Covid-19 Estimates.

Cumulative gross charge-offs in US\$B: Comparison of GFC versus COVID-19 baseline scenario



Clearly, the Financial Crisis impacted residential and CRE strongly. COVID-19 hits travel, leisure and retail.

Source: Deloitte Center for Financial Services analysis; S&P Global Market Intelligence.

https://www2.deloitte.com/content/dam/insights/us/articles/-6828_fs-sector-forecast-series-installment-5-banking-long-covid/figures/6828_Installment-5-Figure4.jpg



Summary of PPP Approved Lending

Loan Count	Net Dollars	Lender Count
4,885,388	\$521,483,817,756	5,461

Lender Size	Lender Count	Loan Count	Net Dollars	% of Amount
>\$50 B in Assets	34	1,639,892	\$189,773,791,634	36%
\$10 B to \$50 B in Assets	89	739,912	\$100,724,547,553	19%
<\$10 B in Assets	5,338	2,505,584	\$230,985,478,569	44%

<https://www.sba.gov/sites/default/files/2020-07/PPP%20Results%20-%20Sunday%20FINAL.pdf>



PPP Loan by Industry (NAICS) Sector

NAICS Sector Description	Loan Count	Net Dollars	% of Amount
Health Care and Social Assistance	506,263	\$67,356,500,071	12.92%
Professional, Scientific, and Technical Services	638,221	\$66,430,801,754	12.74%
Construction	466,221	\$64,568,137,994	12.38%
Manufacturing	229,591	\$54,002,922,769	10.36%
Accommodation and Food Services	367,502	\$42,099,336,178	8.07%
Retail Trade	450,181	\$40,355,657,949	7.74%
Other Services (except Public Administration)	531,572	\$31,145,678,051	5.97%
Wholesale Trade	167,237	\$27,726,783,463	5.32%
Administrative and Support and Waste Management and Remediation Services	240,947	\$26,482,972,198	5.08%
Transportation and Warehousing	191,609	\$17,088,399,318	3.28%
Real Estate and Rental and Leasing	245,697	\$15,631,026,225	3.00%
Finance and Insurance	168,462	\$12,205,158,596	2.34%
Educational Services	81,387	\$11,998,270,955	2.30%
Unclassified Establishments	222,096	\$9,901,564,953	1.90%
Information	69,106	\$9,264,147,642	1.78%
Arts, Entertainment, and Recreation	118,332	\$7,996,562,961	1.53%
Agriculture, Forestry, Fishing and Hunting	139,150	\$7,908,693,255	1.52%
Mining	21,570	\$4,510,946,138	0.87%
Public Administration	13,423	\$1,733,982,305	0.33%
Management of Companies and Enterprises	8,893	\$1,581,110,997	0.30%
Utilities	7,928	\$1,495,163,987	0.29%



Its more about the unknow than the
known!

**COVID-19 and 2020 will potentially have a significant
impact for years to come.**



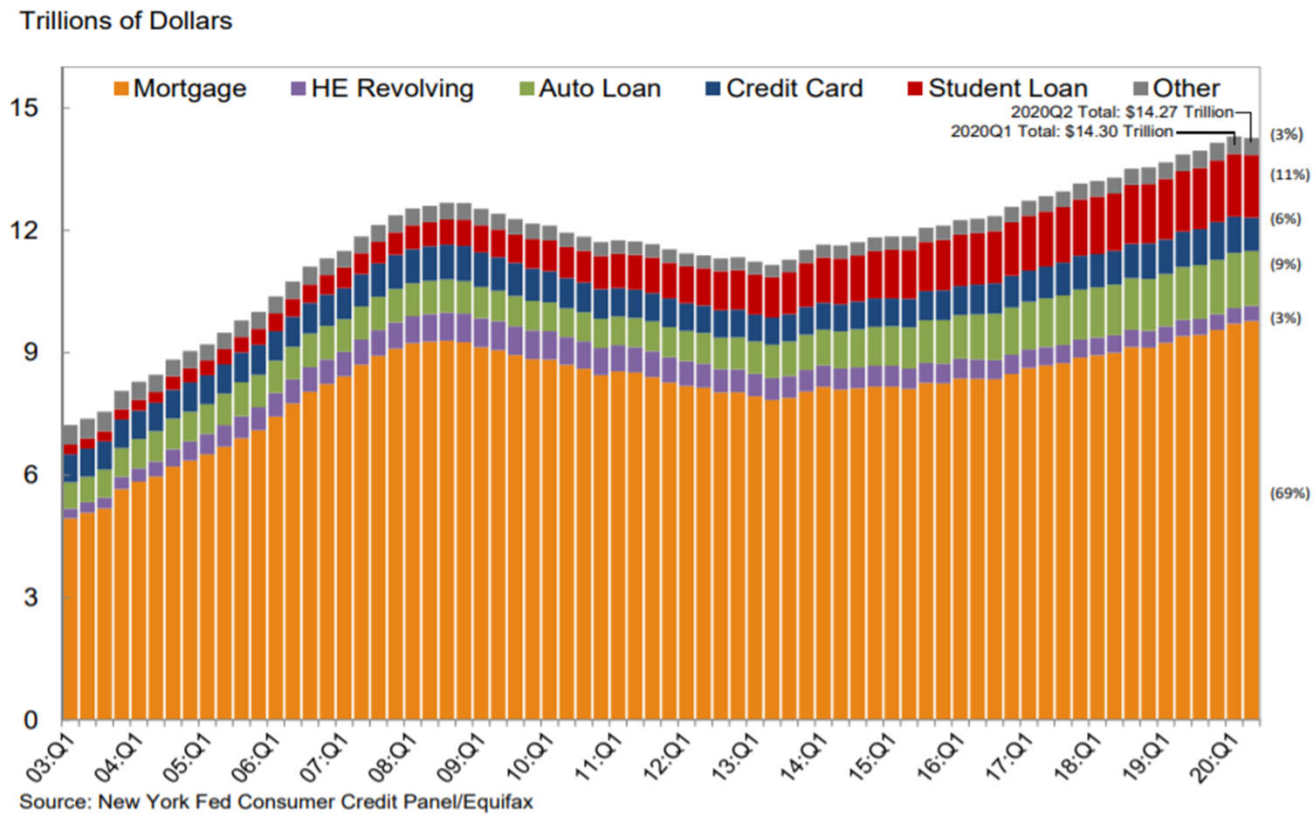
Life exists beyond Corona!

If we figure this out, then what do we have to look forward to?



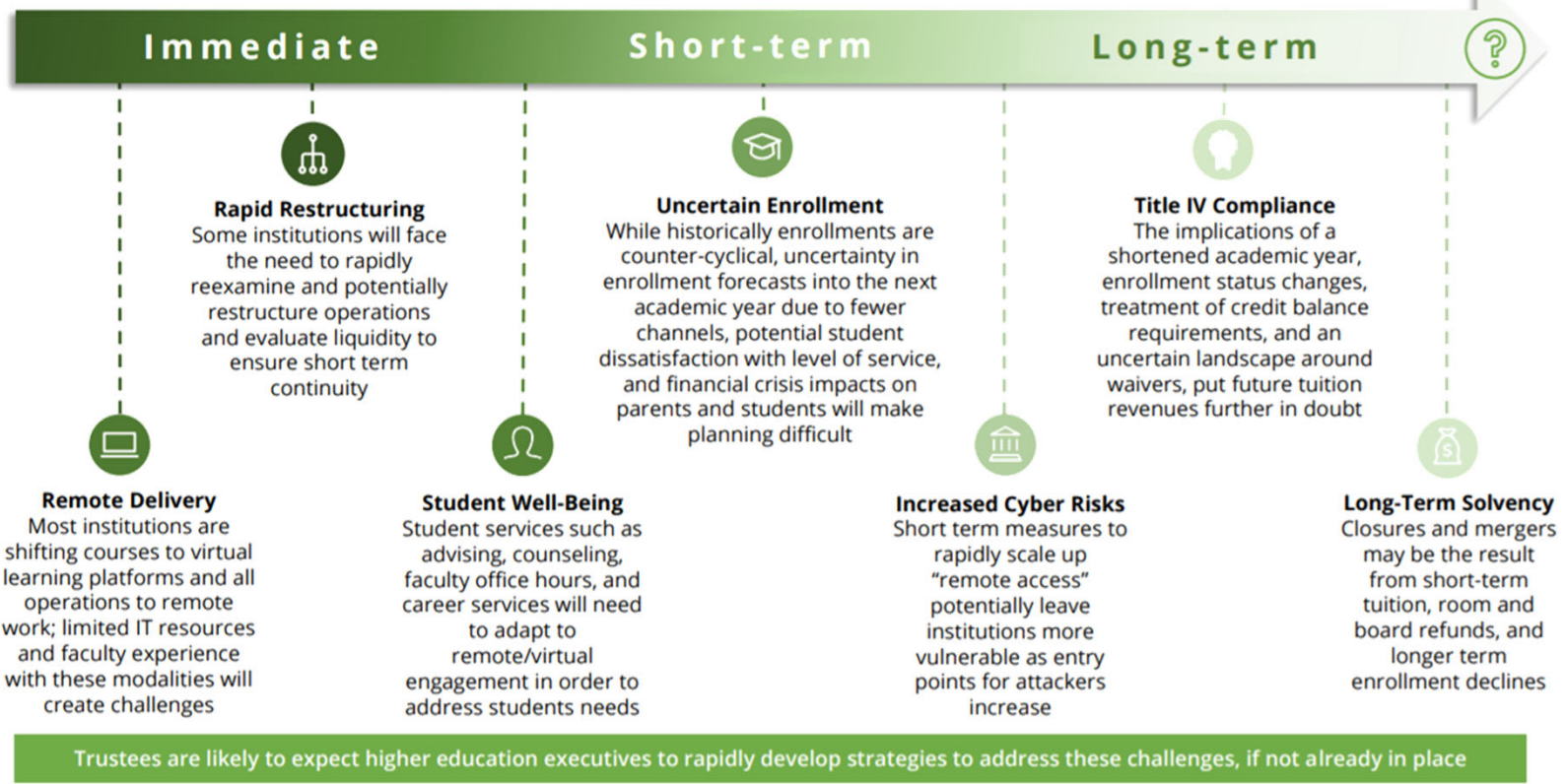
Student debt, jobs market, and the impact on Universities.

Total Debt Balance and its Composition



Higher Education in a Post-COVID-19 World

While uncertainty pervades all aspects of higher education right now (e.g. virtual learning, remote work, uncertain financial conditions, constrained enrollment) it is inevitable that many colleges and universities will be operating in a very different environment in a post-COVID-19 world.



<https://www2.deloitte.com/us/en/pages/public-sector/articles/covid-19-impact-on-higher-education.html>

