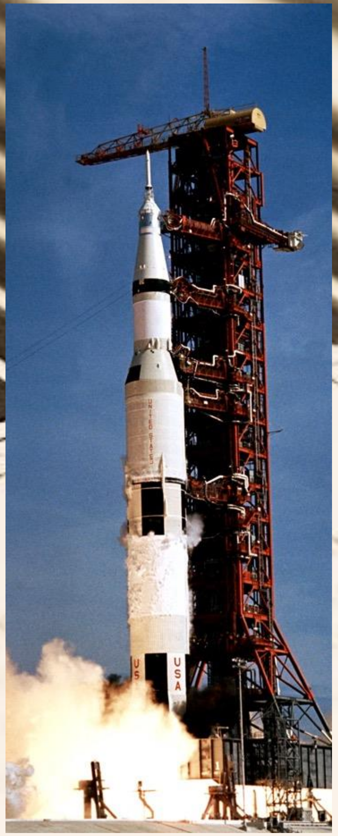
BANK OF NEVADA

FIRST INDEPENDENT BANK

Welcome to the 2021 Virtual Economic Forum

BEACON ECONOMICS



The Post-Covid Economy

Prepare for acceleration…

March 2021

Christopher Thornberg, PhD

Founding Partner, Beacon Economics

Director, UCR SoBA Center for Economic Forecasting and Development

BANK OF NEVADA — A division of Western Alliance Bank. Member FDIC.

FIRST INDEPENDENT BANK — A division of Western Alliance Bank. Member FDIC.

4 Big Themes

1. The Covid pandemic was a tragic natural disaster, but the pandemic - led recession was not as severe as the Great Recession, nor will it have any of the long-run consequences
2. Fiscal and monetary policy reactions to the downturn have been excessive and regressive. This will ensure a very rapid recovery, but will also introduce dangerous instabilities into the next expansion
3. The pandemic will not change the economy, but it will accelerate trends that were already in place before it happened
4. Politics in the nation continues to be driven by extreme narratives on both sides of the aisle, and as such we will see little of the long run reforms the nation desperately needs

1. Miserabilism and the Pandemic

- Covid-19: A global natural disaster
  - Approaching 120 million cases and 2.5 million deaths, ~20% here in the US
  - Vaccine roll outs in progress
- The Economic Debate
  - The macro debate, “U”, “V”, or whatever… most called “U”—slow recovery
  - Our outlook ”V”—This is not the great recession situation
- The Pandemic Business Cycle
  - The recession ended in April
  - 70% recovery in economic activity since trough even with last surge
  - Plenty of dry powder for post-Covid economic surge even without stimulus plans 2 & 3

Coronavirus to cause worst economic downturn since Great Depression, IMF forecasts

30-40 Million People in America Could Be Evicted from Their Homes by the End of 2020

Aug 07, 2020

JPMorgan now sees economy contracting by 40% in second quarter, and unemployment reaching 20%

Economy

CBO: Coronavirus pandemic will scar U.S. labor market for the next decade

The agency is predicting that the unemployment rate in the fourth quarter of 2030 will be 4.4 percent, compared with 3.5 percent in February of this year.

Home prices rose in June, but they’ll likely fall in 2021: CoreLogic

As many as 30% of Americans with home loans — about **15 million** households — could stop paying if the U.S. economy remains closed through the summer or beyond, according to an estimate by Mark **Zandi**, chief economi

‘Make no mistake…the pandemic morphed into a Depression-like crisis,’ says UCLA economist, who predicts U.S. economy won’t recover from coronavirus until 2023

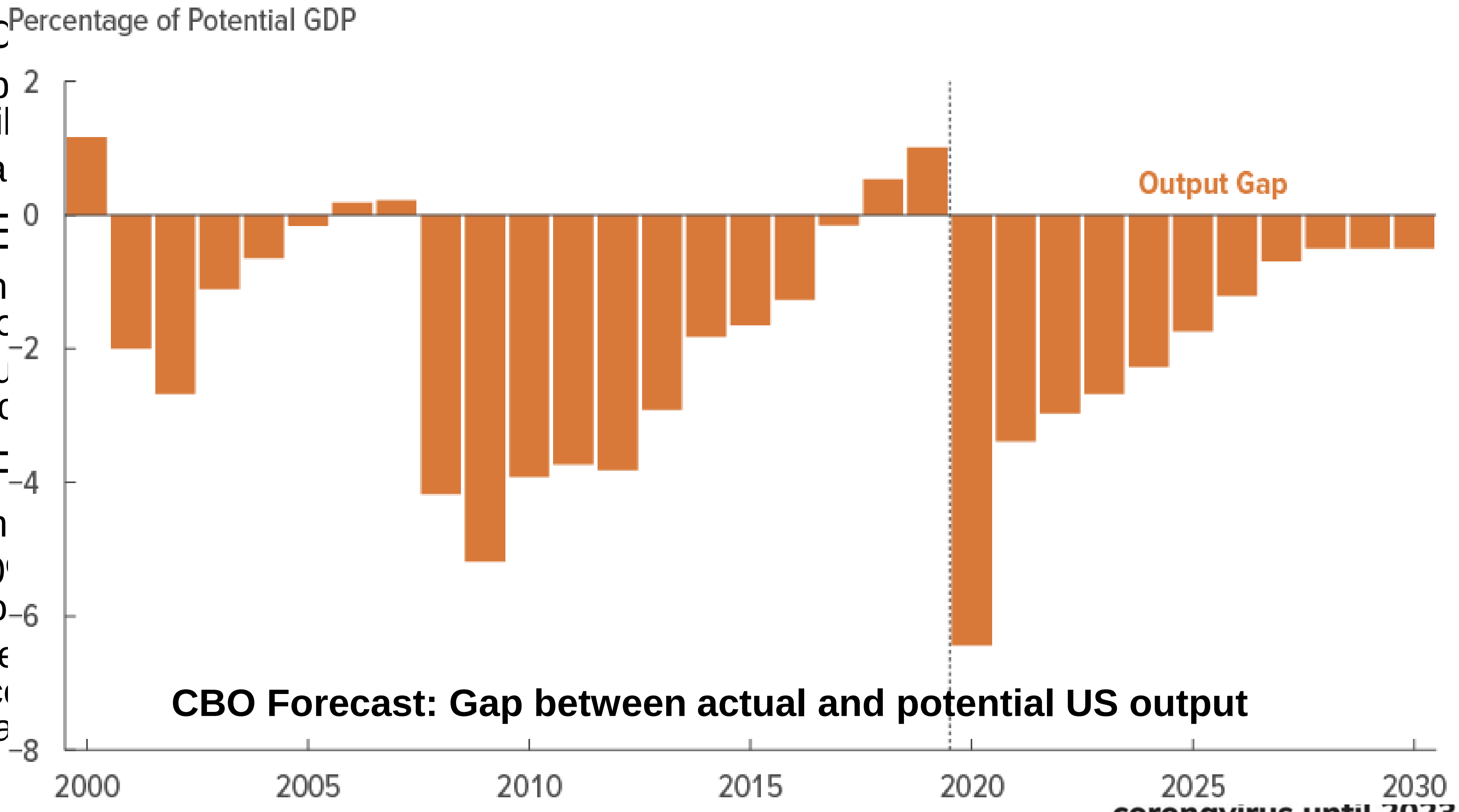
Published: June 26, 2020 at 7:55 a.m. ET

1. Miserabilism and the Pander

- Covic
  - Ap mil
  - Va
- The E
  - Th mc
  - Ou rec
- The F
  - Th
  - 70' tro
  - Ple eco pla

Coronavirus to cause worst economic downturn since Great Depression, IMF forecasts

30-40 Million People in America



ıtracting by 40% in
ıt reaching 20%

ɔr market for

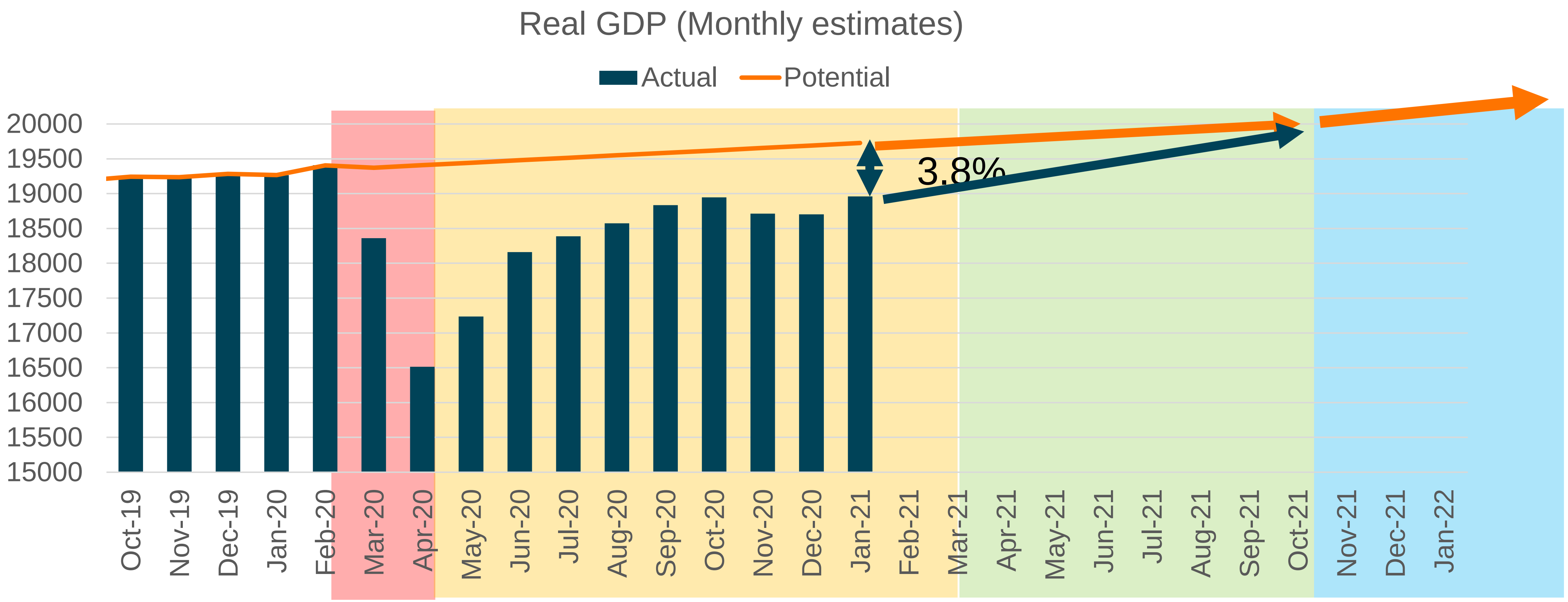
ıred with 3.5 percent in February of

ıe, but they'll
.ogic

ɔandemic
ɛion-like crisis,'
who predicts
over from
coronavirus until 2023

Published: June 26, 2020 at 7:55 a.m. ET

Stages of the Pandemic Business Cycle



1. Recession
Fear of the Unknown

2. Recovery Part 1
Mitigation

3. Recovery Part 2
Post-Covid

4. Expansion
A New Normal?

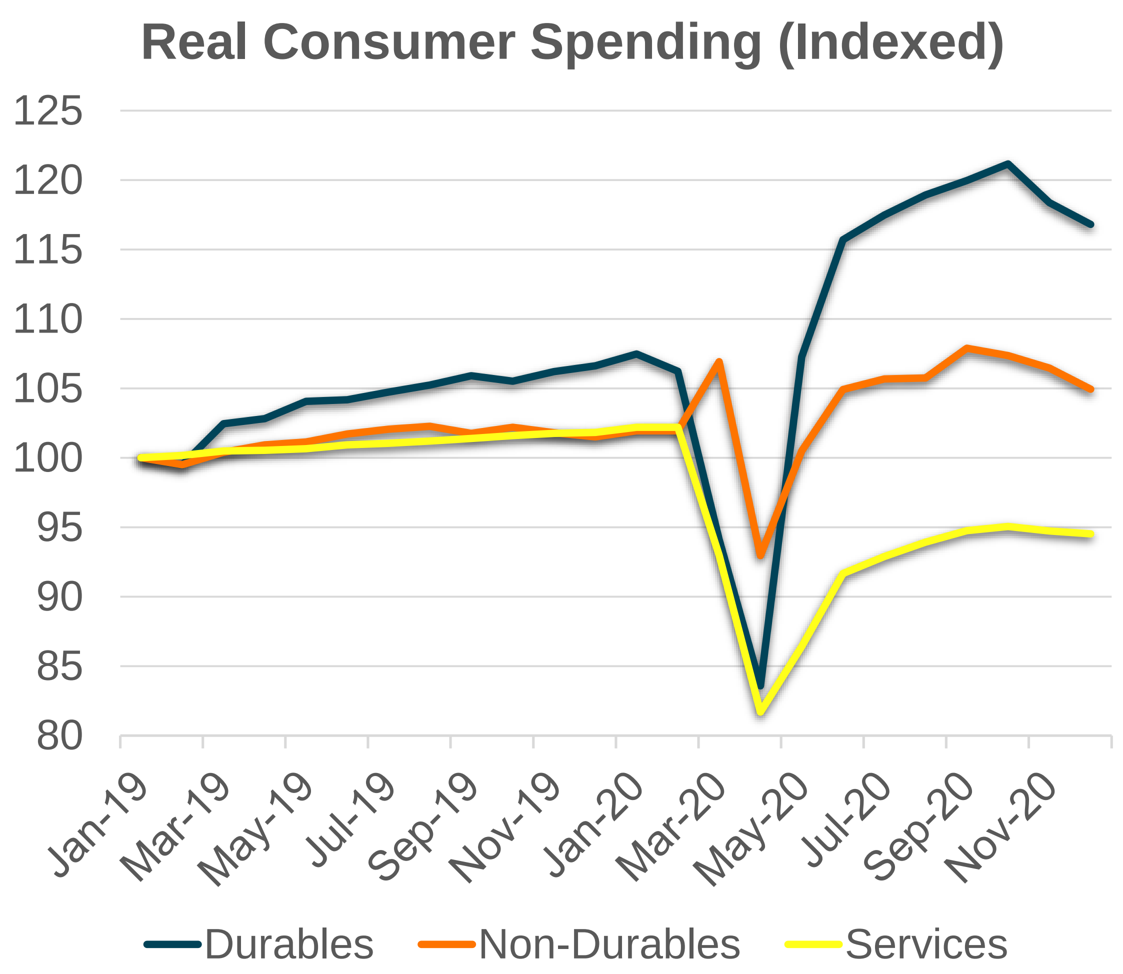
The Great Recession vs Today

	Then	Now
The Pre-Recession Economy	Over-heated by sub-prime lending bubble	Slow steady growth due to labor shortages / trade disruptions
Consumer Finances	Record high debt / income, record low savings	Record low FOR, 30 year high in savings rates
Housing	Record high share housing for sale / rent, massive HPI growth	Record low share housing for sale / rent, slowing HPI growth
Recession Driver	Demand shock caused by collapse in wealth, flow-stock issues	Supply shock driven by fear and health mandates
Government Stimulus	Too little, too late	Too much, too soon

What happened in 2020?

	Contributions to Growth			Growth
	2018	2019	2020	Q4 to Q4
GDP	3.00	2.20	-3.50	-2.5%
Consumption	1.85	1.64	-2.63	-2.6%
Durable goods	0.48	0.34	0.45	11.9%
Nondurable goods	0.38	0.44	0.36	4.4%
Services	0.98	0.86	-3.44	-6.8%
Investment	1.08	0.30	-0.94	3.2%
Structures	0.11	-0.02	-0.32	-14.1%
Equipment	0.45	0.12	-0.29	3.4%
IPP	0.34	0.29	0.07	1.4%
Residential	-0.02	-0.07	0.23	13.7%
Inventories	0.20	-0.02	-0.63	
Net exports	-0.25	-0.18	-0.13	
Exports	0.36	-0.01	-1.47	-11.0%
Imports	-0.62	-0.16	1.33	-0.6%
Government	0.32	0.40	0.19	-0.6%
Federal	0.18	0.26	0.29	2.5%
State and local	0.13	0.14	-0.09	-2.5%

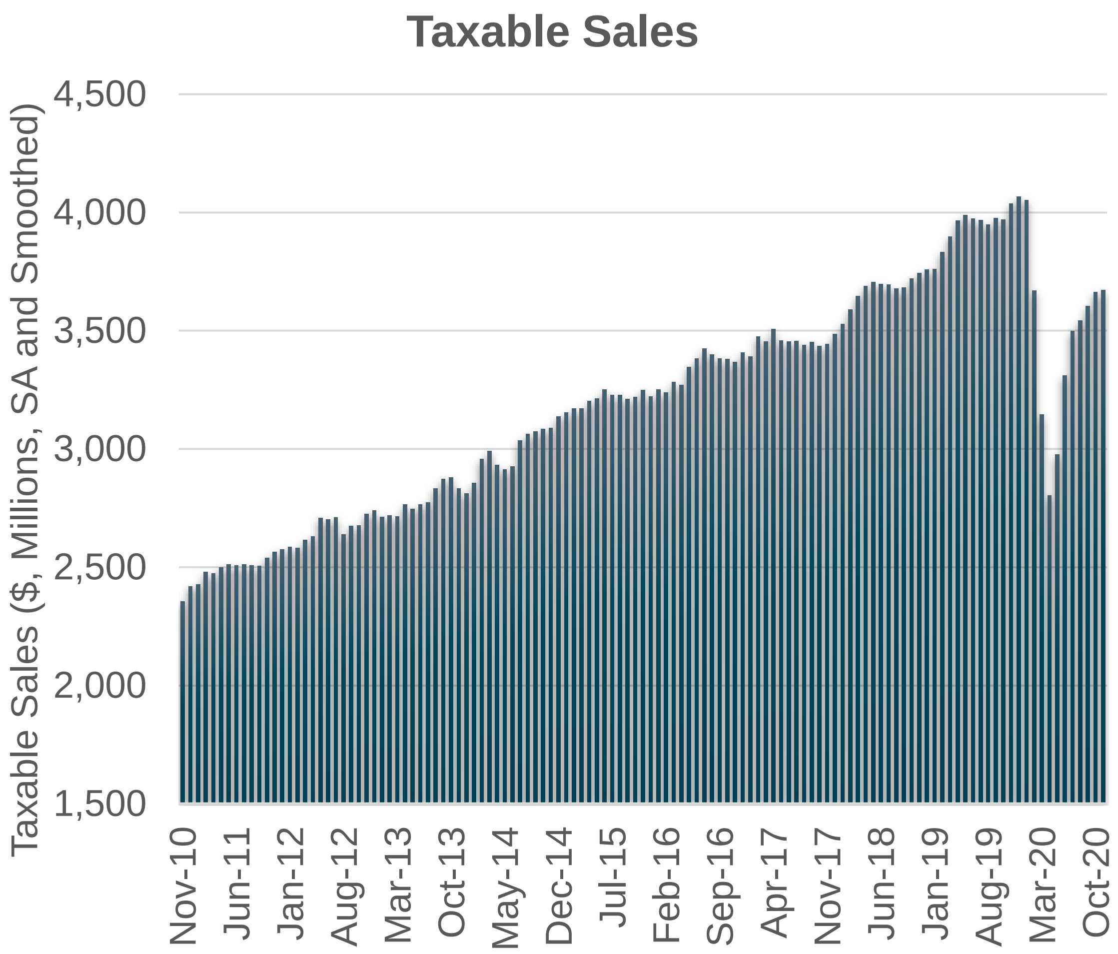
A Winner / Loser Recovery



Retail Sales Numbers

	Jan-21	YoY
Nonstore retailers	87897	28.7%
Sporting / Hobby	8165	22.5%
Hardware	40055	19.0%
Motor vehicle & parts dealers	118836	13.0%
Food & beverage stores	72020	11.8%
Furniture & home furn. stores	11348	11.7%
Miscellaneous store retailers	12809	7.3%
Health & personal care stores	31886	6.2%
General merchandise stores	63518	5.9%
Electronics & appliance stores	7801	-3.5%
Gasoline stations	39232	-7.8%
Clothing Stores	20014	-11.1%
Food services & drinking places	54634	-16.6%

Taxable Sales and Gaming Revenue



Taxable Sales by Select Categories ($, Mil.)

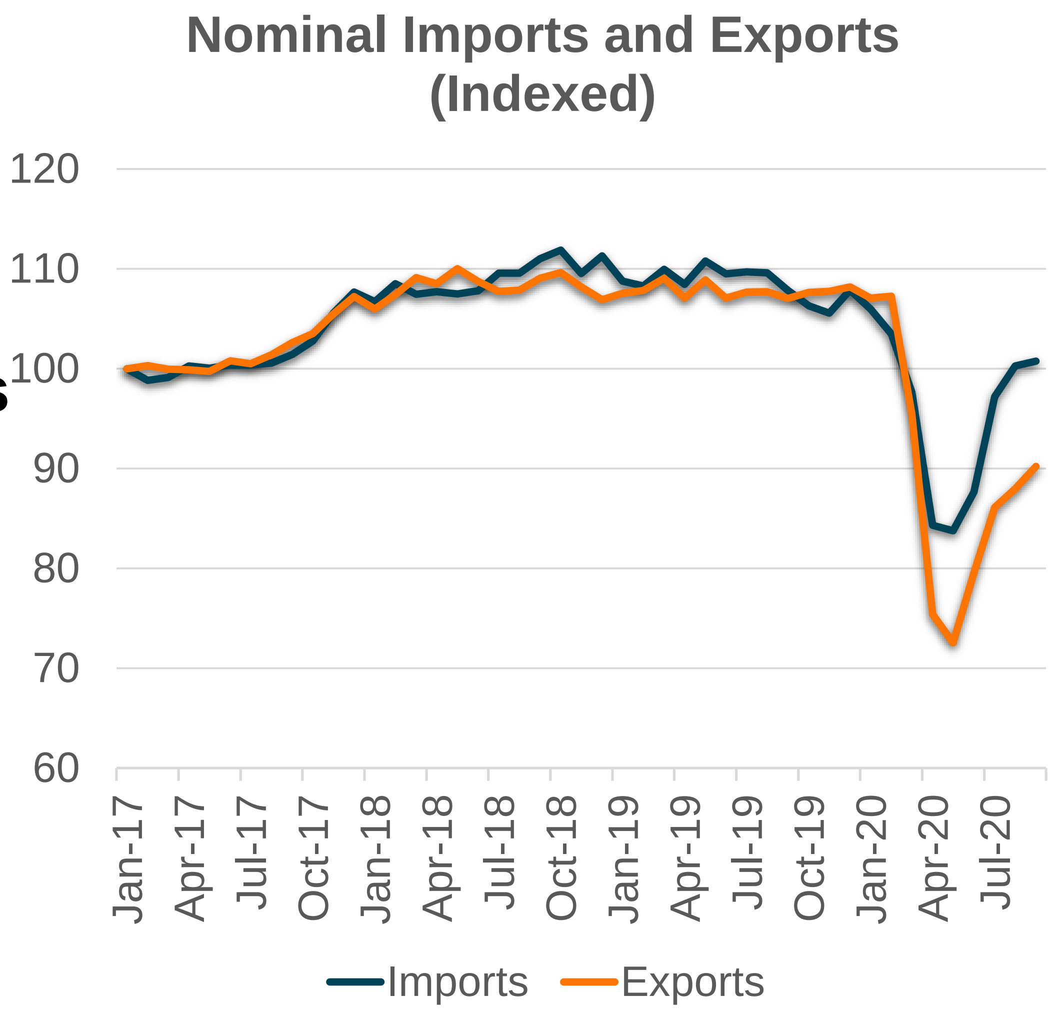
Category	2019	2020	1-Yr % Chg
Total	42,745.7	37,242.5	-12.9
Motor Vehicles	4,650.2	4,412.7	-5.1
Gasoline Sales	782.2	663.0	-15.2

Gaming Revenue ($, Mil.)

Category	2019	2020	1-Yr % Chg
Clark County Revenue	10,355.7	6,540.9	-36.8
Las Vegas Revenue	6,587.5	3,733.4	-43.3

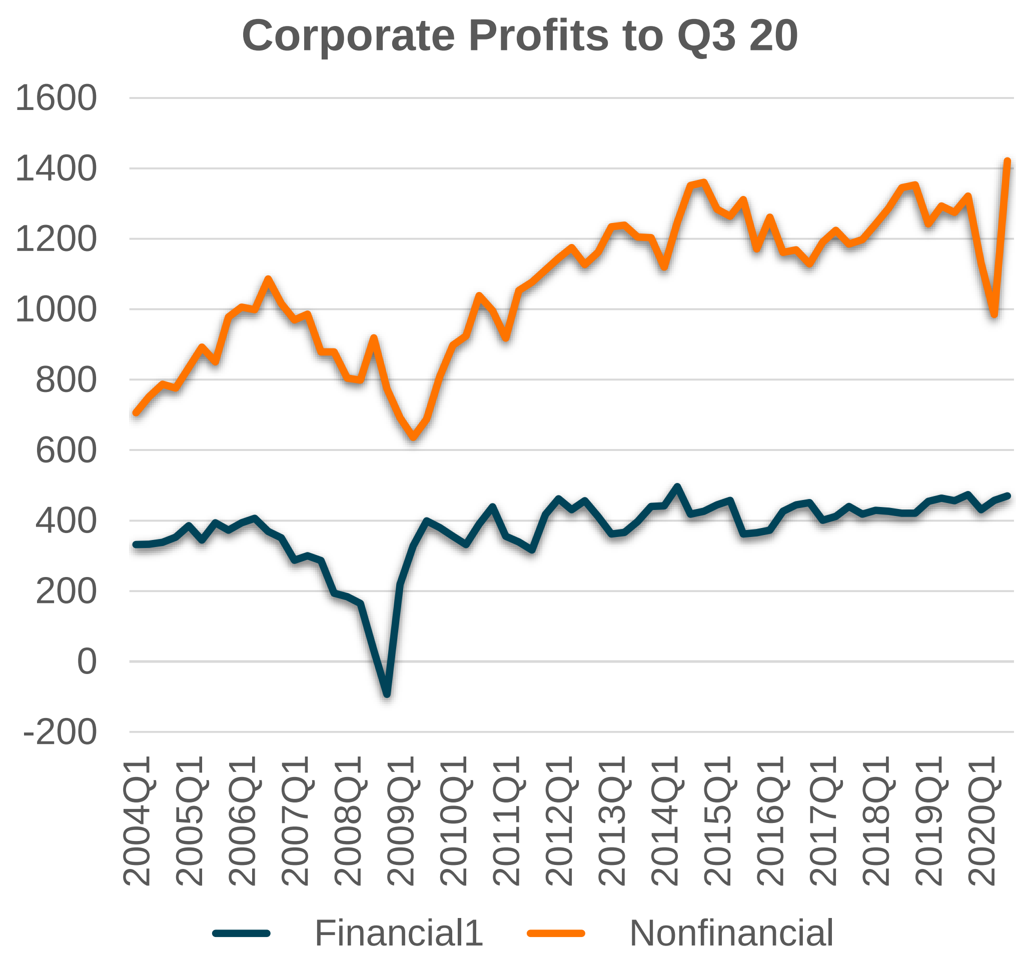
Source: UNLV Center for Business and Economic Research

Production Trends



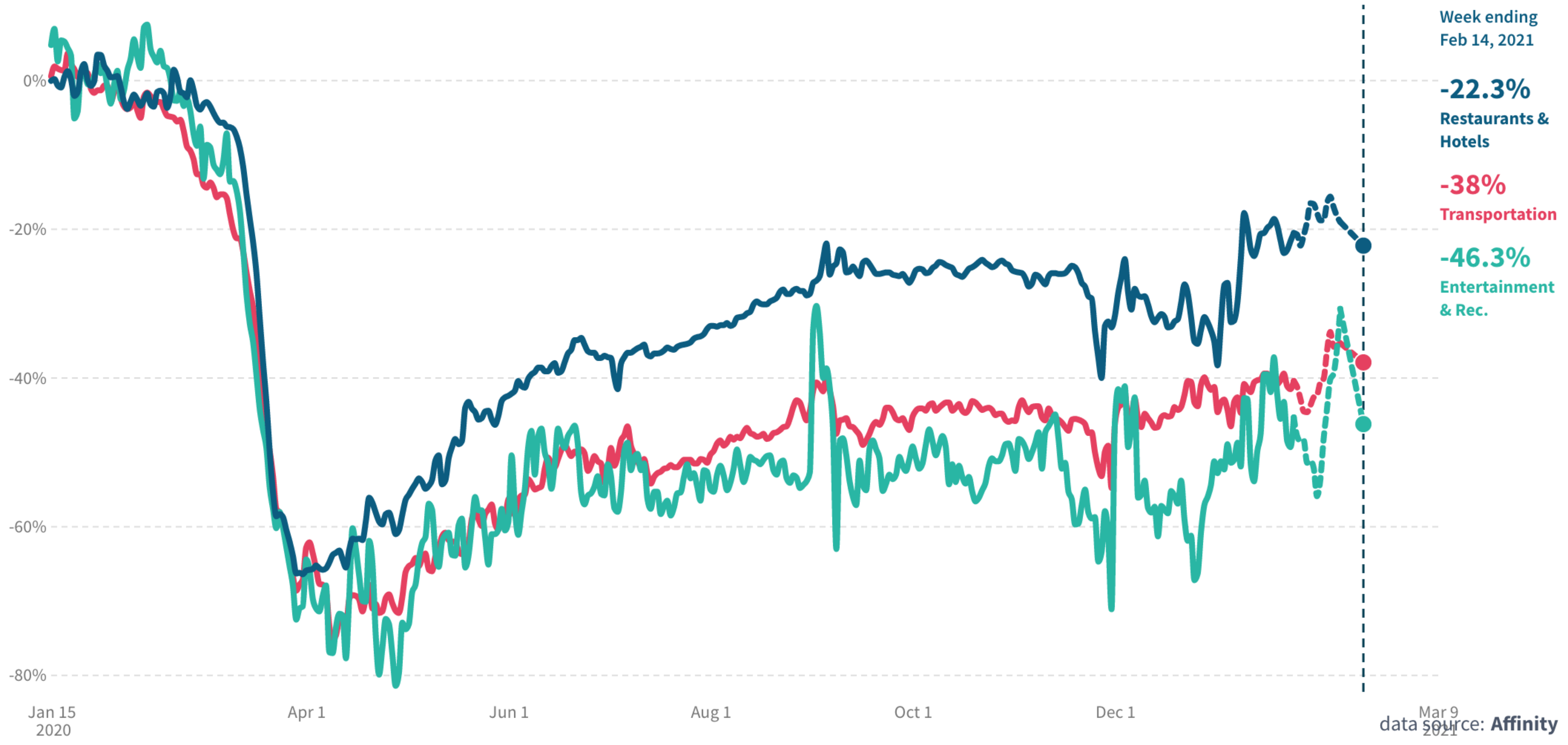
Investment Trends

	Q4	Q4 to Q4 Gr
Private fixed investment	3457.8	2.1%
Information equipment	581.9	18.1%
Residential	693.9	13.7%
Software	485.9	5.2%
Industrial equipment	249.5	1.7%
Other equipment	252.2	1.5%
Research and development	448.2	0.7%
Commercial health structures	156.1	-4.5%
Power communication structures	108.8	-9.4%
Entertainment, literary, artistic	74.4	-11.7%
Transportation equipment	249.2	-11.9%
Manufacturing structures	51.6	-15.8%
Other structures	78.1	-19.0%
Mining exploration, shafts, wells	74	-31.4%

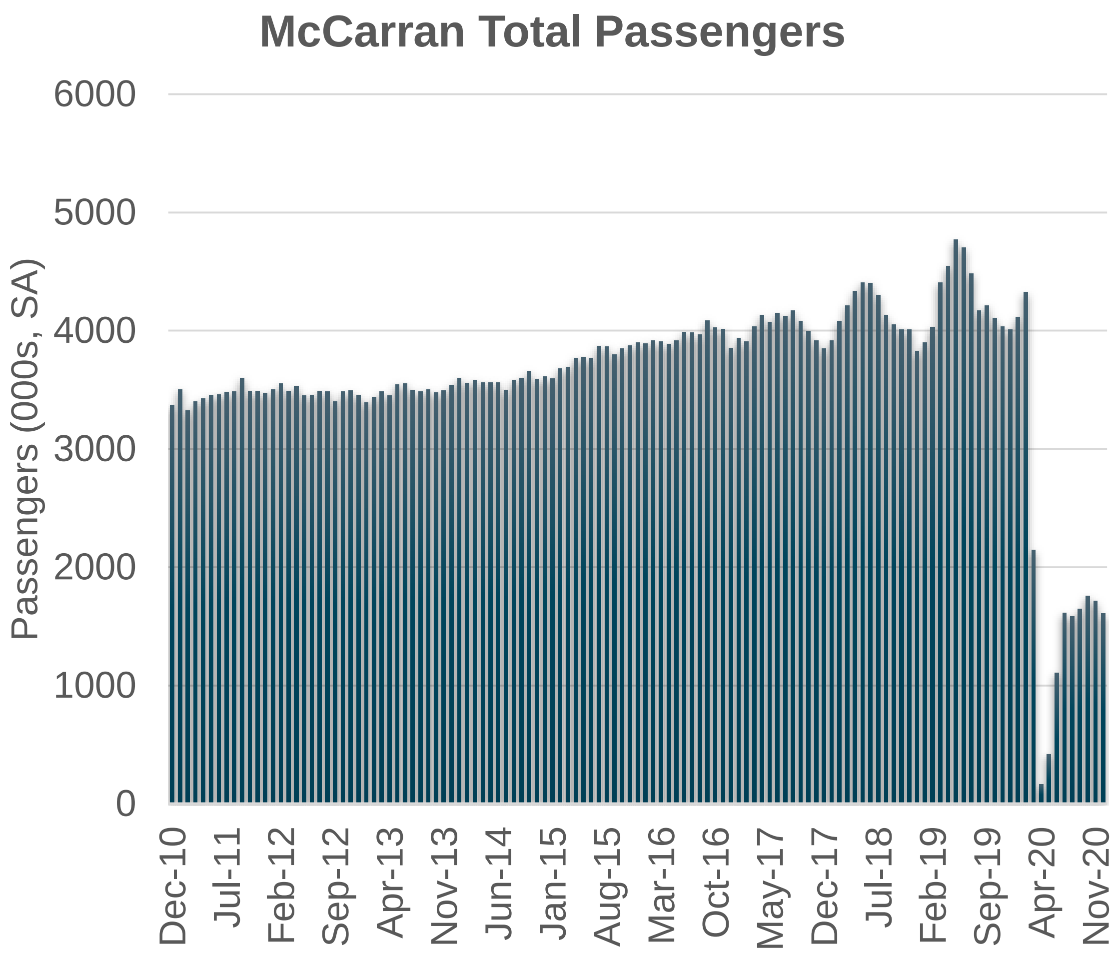


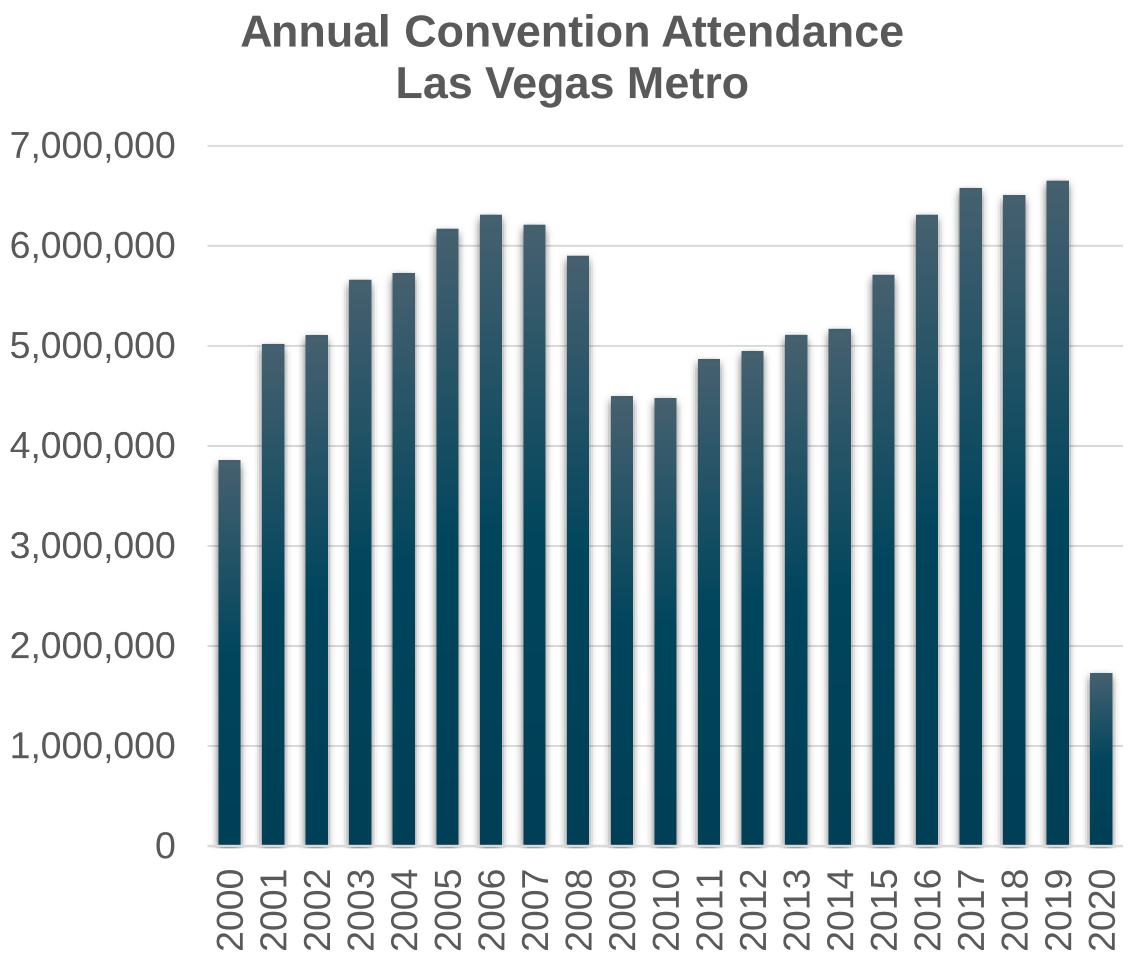
Lagging Sectors

Opportunity Insights Data



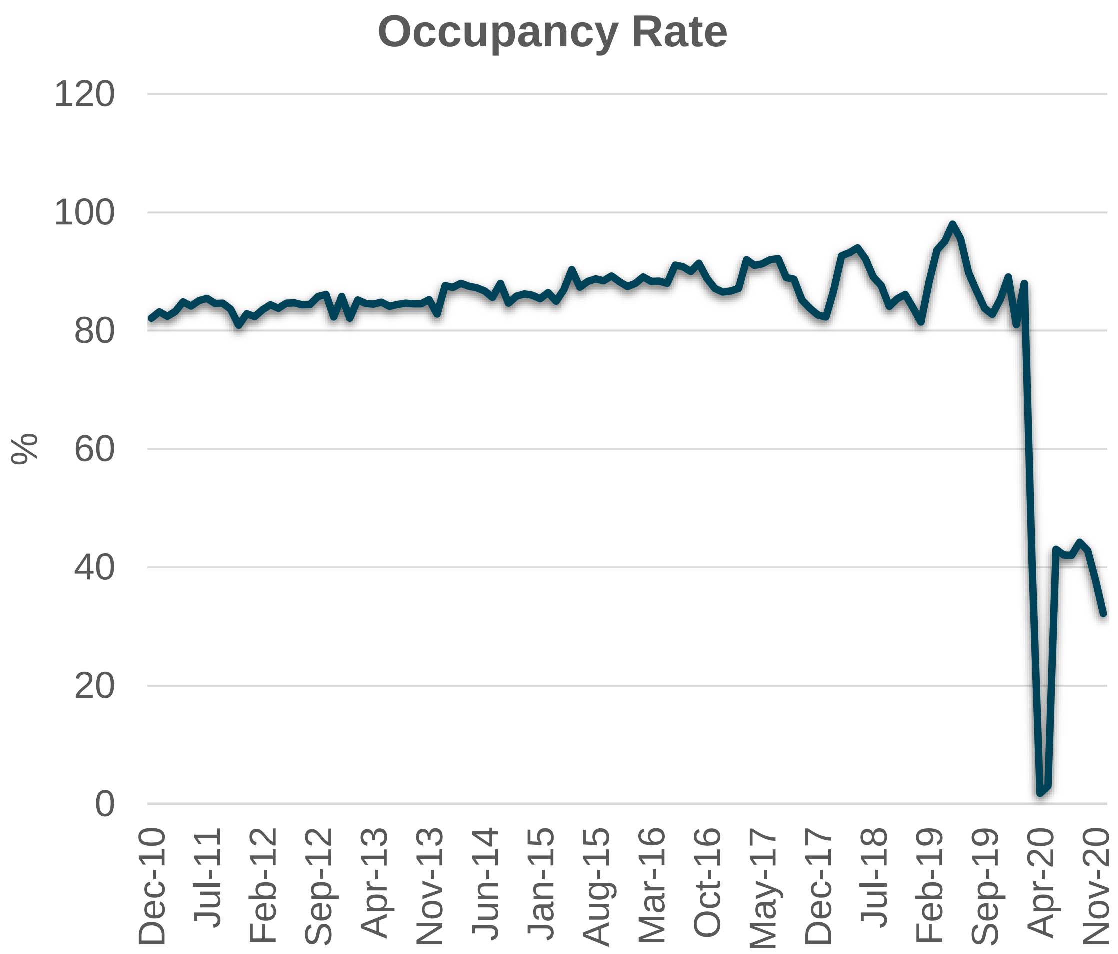
Las Vegas Travel Stats





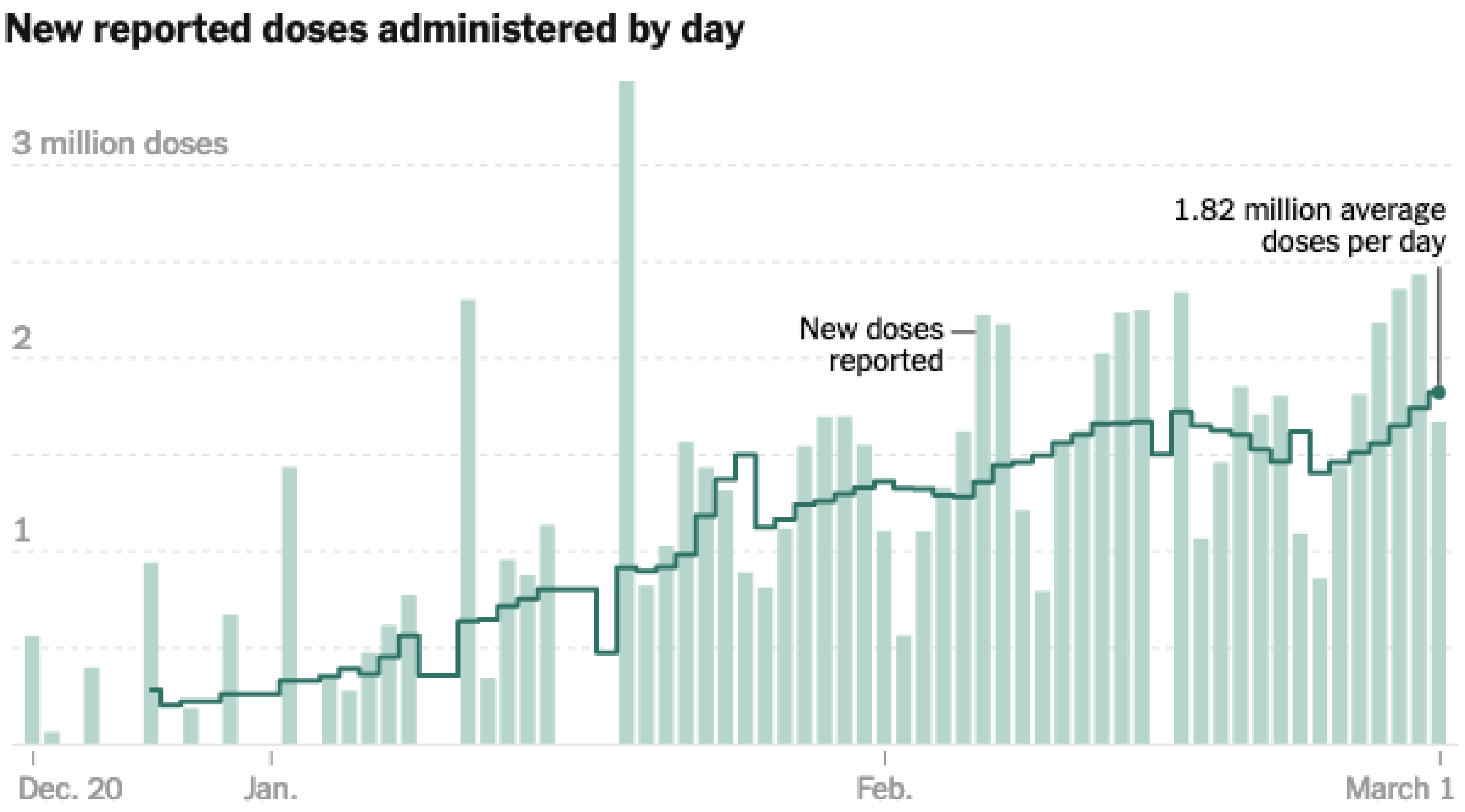
Source: UNLV Center for Business and Economic Research

Las Vegas Hotel Stats



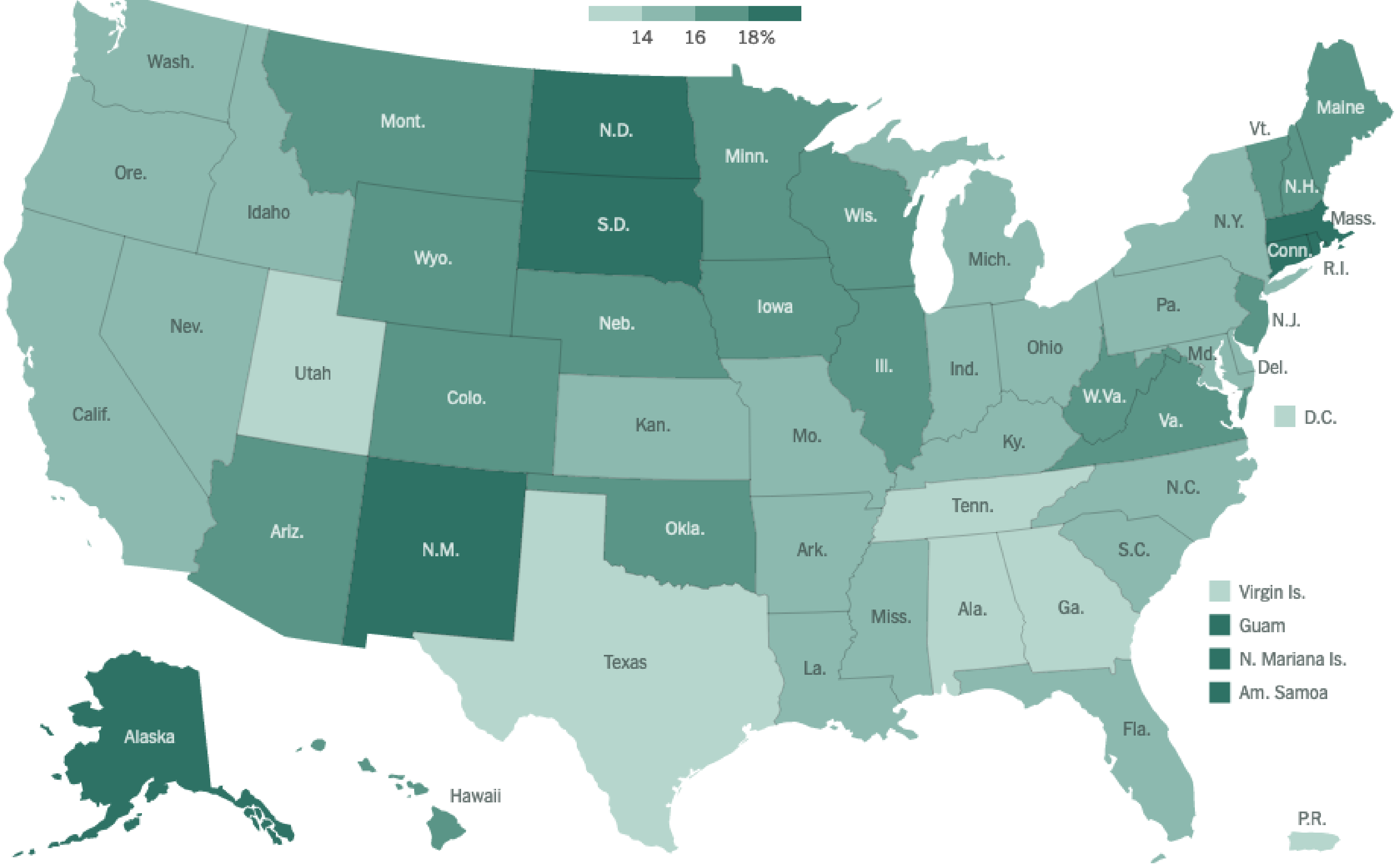
Variable	2020	2019	1-Yr Change
Occupancy	42.1%	88.9%	46.8
Average Daily Rate	$120.3	$132.6	-9.3%
RevPAR	$50.7	$117.9	-57.0%

Moving towards control



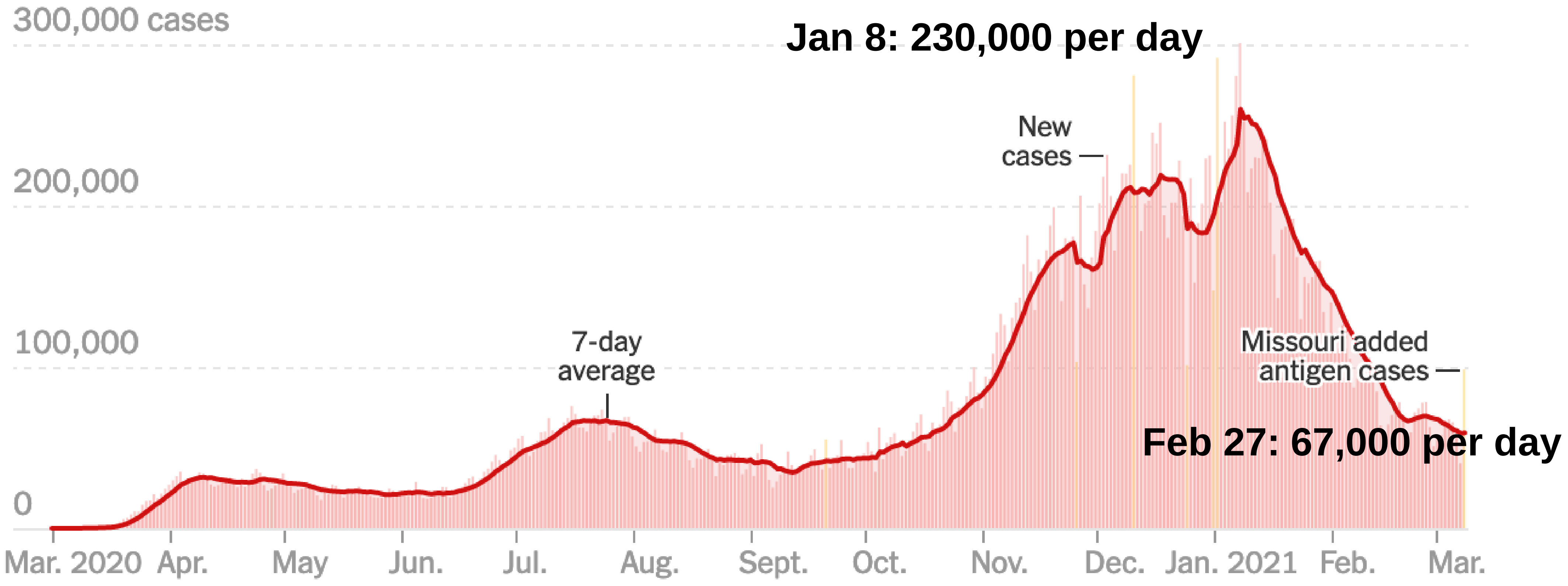
Moving towards control

Share of population that has gotten at least one shot



Source: Centers for Disease Control and Prevention

New Cases Dropping Rapidly



State-level Metrics

Total | **Per 1M people** | **Last 90 days** | Historical

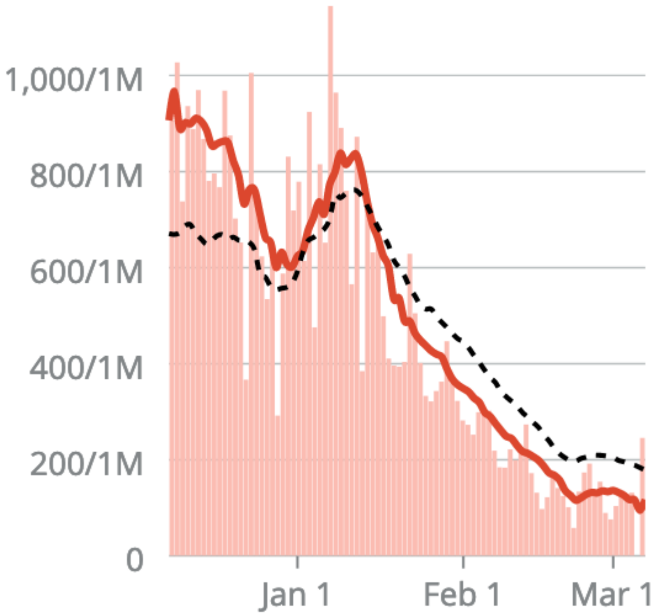
- - - - - - Dashed line represents National 7-day average

——— Solid line represents Nevada 7-day average

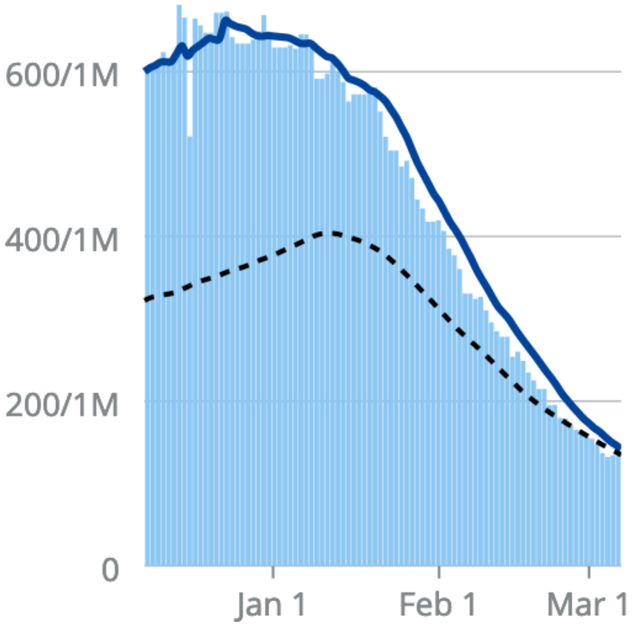
New tests (Notes)

Total PCR tests (test encounters)

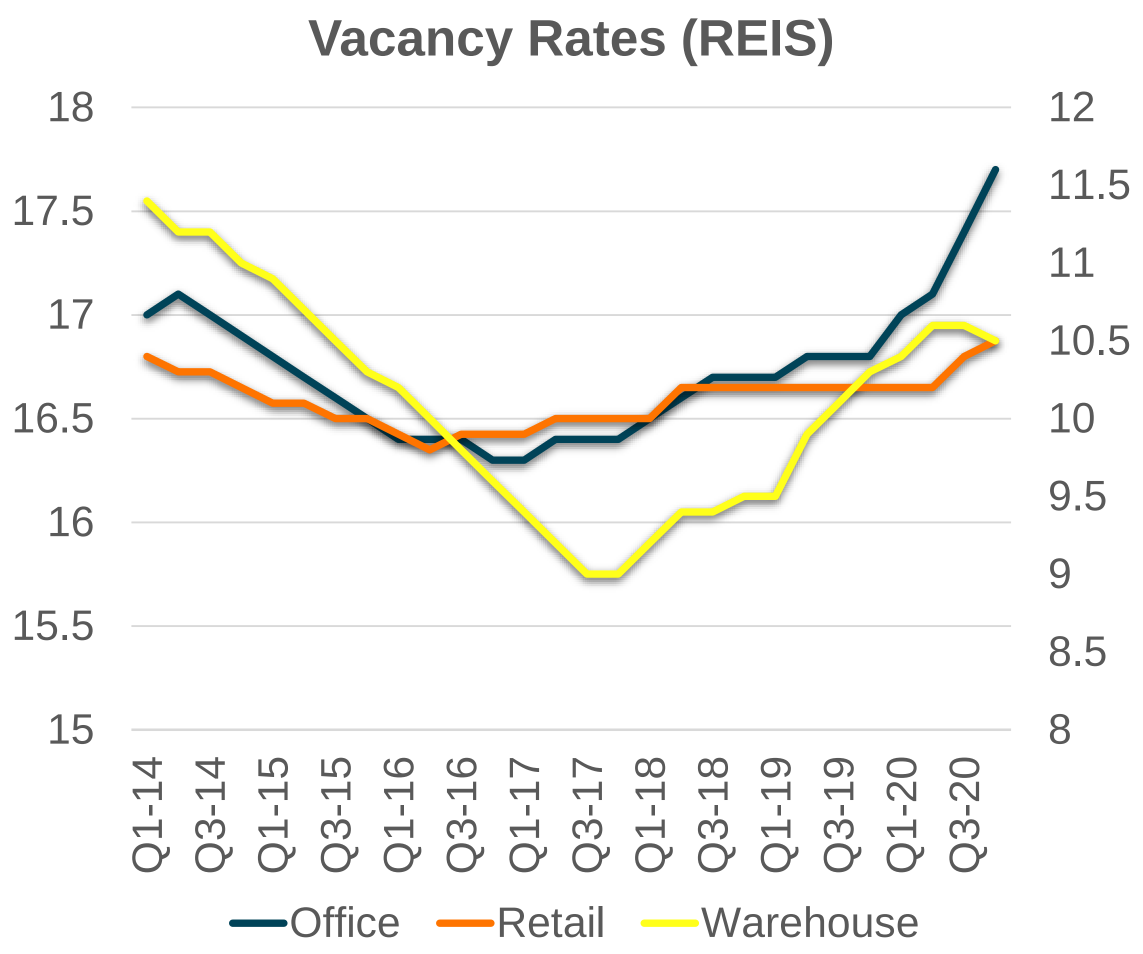
New cases

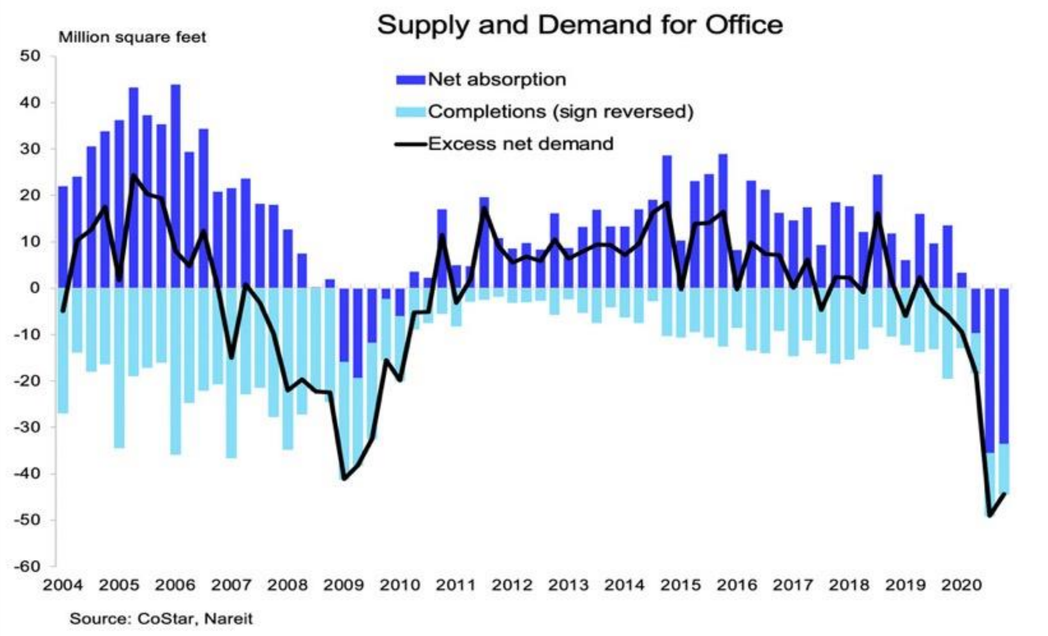


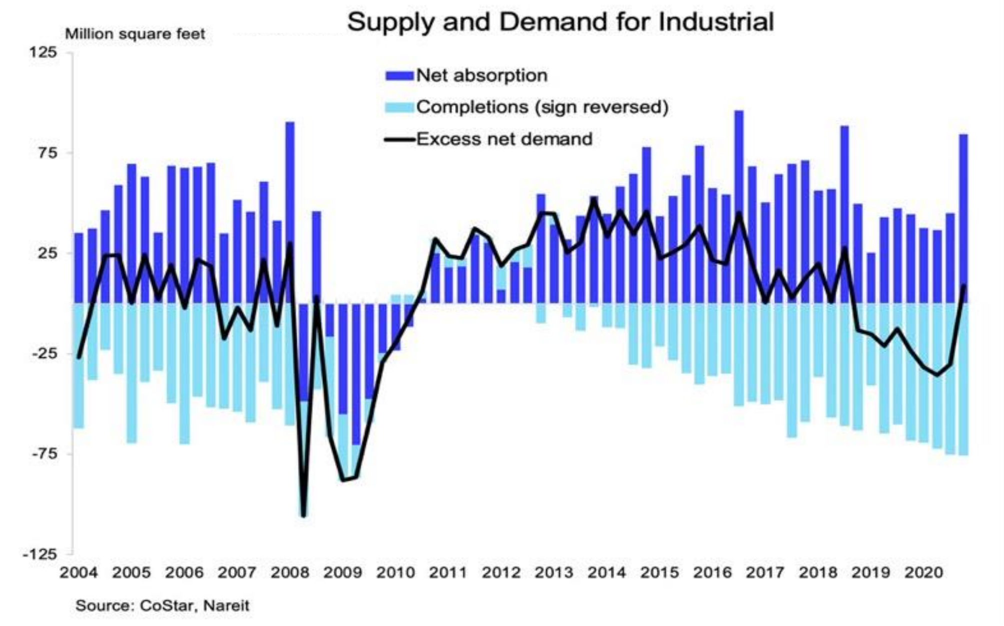
Current hospitalizations



Commercial Real Estate



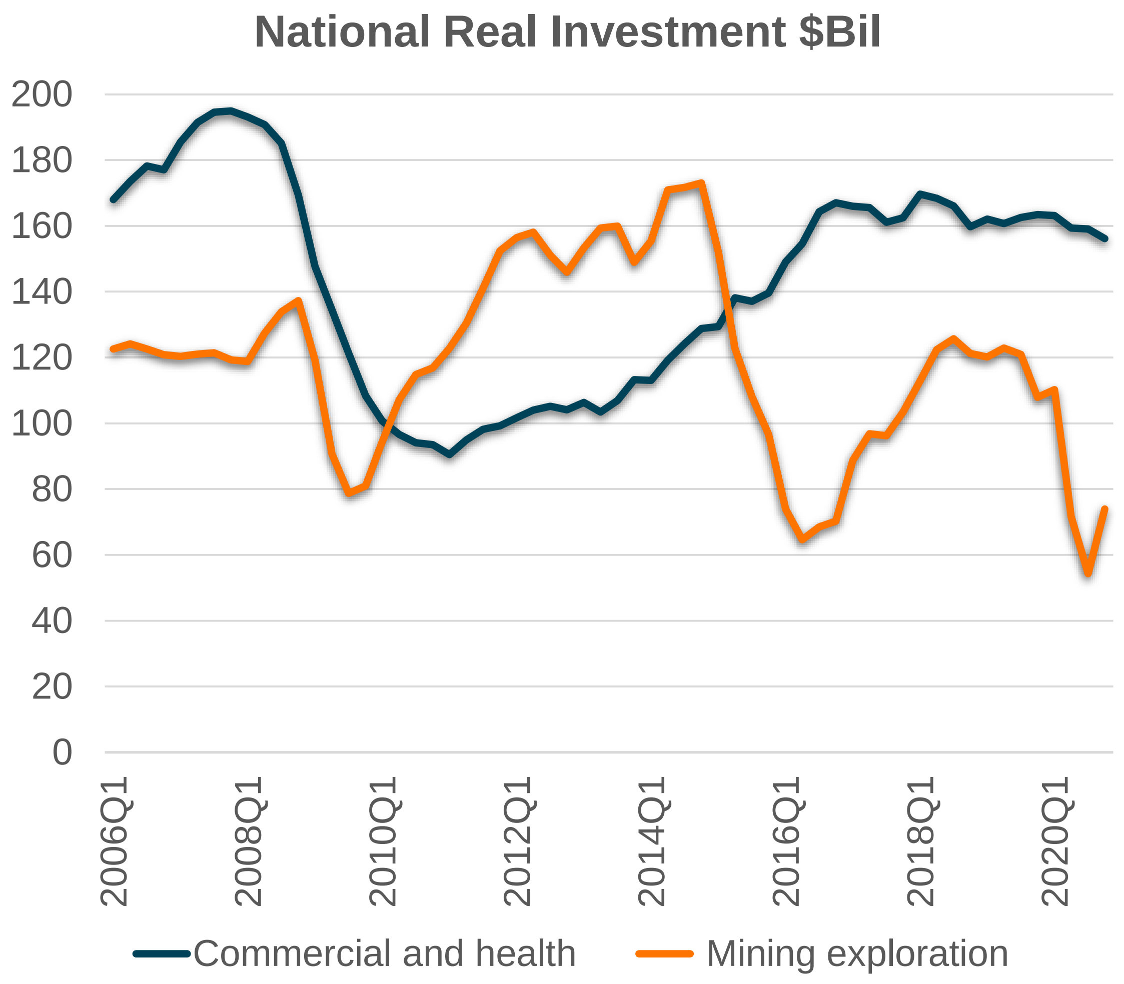


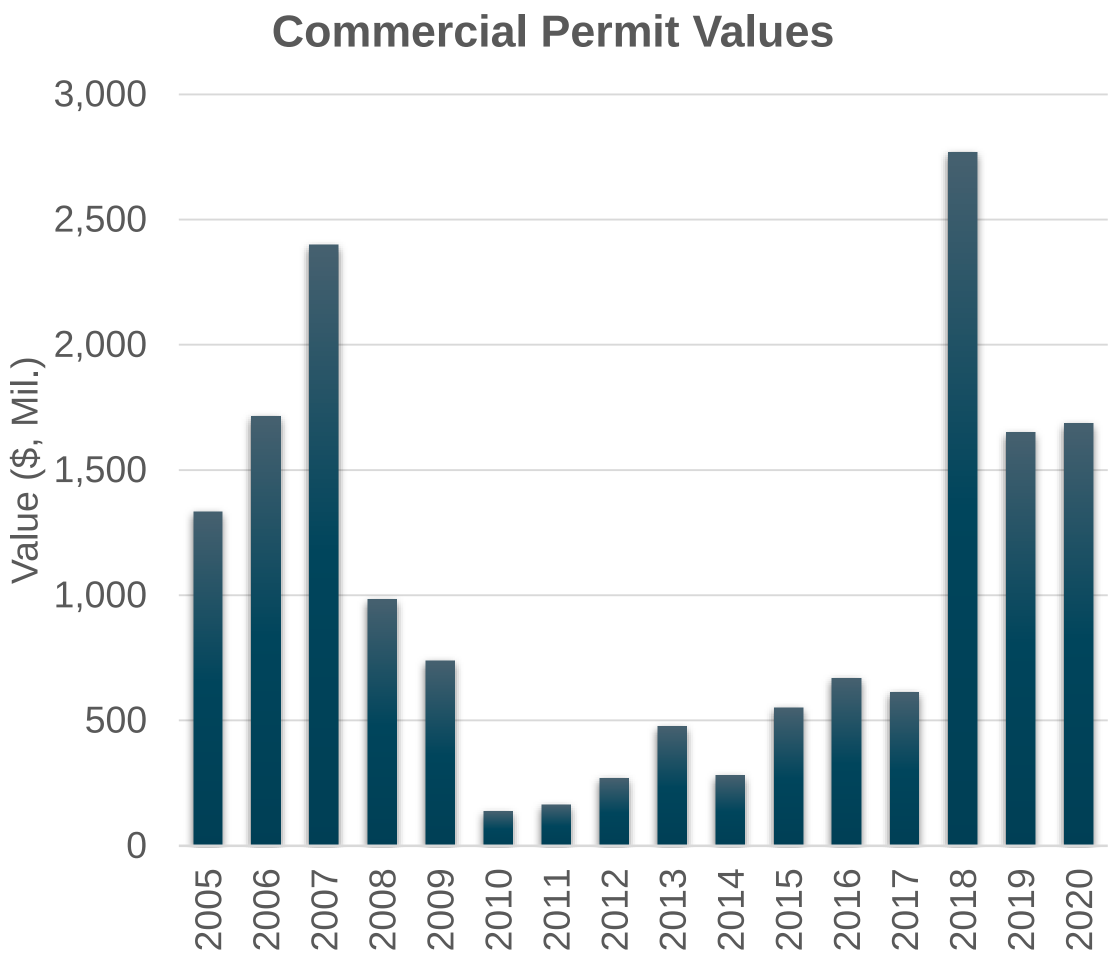


Local Shifts

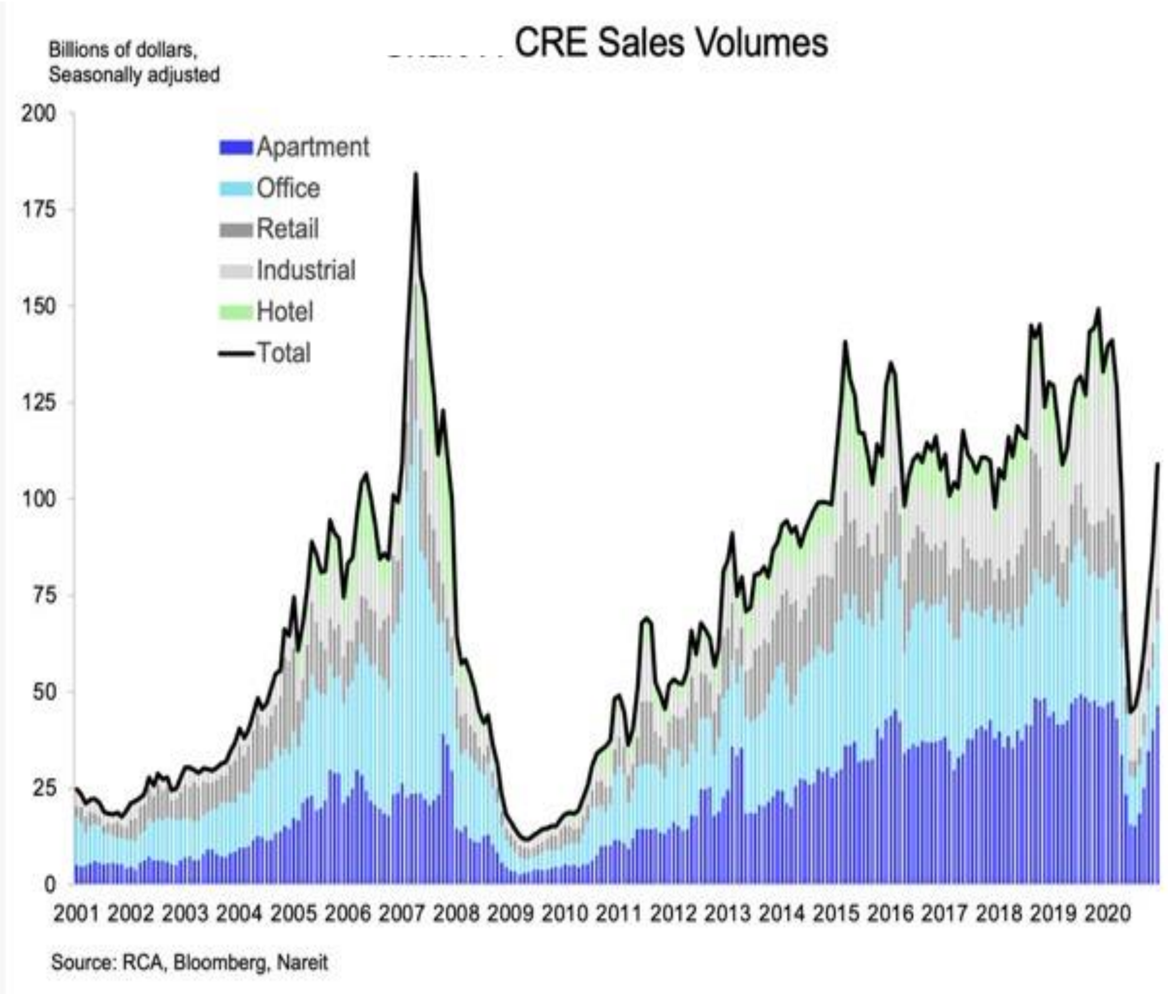
	Office				Warehouse			
	Vacancy		Rent		Vacancy		Rent	
	Q4-20	YoY	Q4-20	YoY	Q4-20	YoY	Q4-20	YoY
United States	17.7	0.9	34.5	0.6%	10.5	0.2	5.7	0.0%
Inland Empire	17.1	0.6	23.3	0.4%	9.9	0.1	5.8	0.0%
Las Vegas	**23.9**	**0.8**	**25.4**	**-0.4%**	**7.6**	**0.8**	**7.0**	**1.4%**
Los Angeles (MD)	15.3	1.1	40.6	0.2%	6.1	0.6	8.0	1.3%
Phoenix	21.5	-0.6	27.1	0.7%	13.4	-0.2	6.3	1.6%
Reno	**23.0**	**1.4**	**20.8**	**-1.4%**	**10.5**	**-0.4**	**4.6**	**0.0%**
Sacramento	19.0	0.5	27.1	0.7%	9.7	-0.1	5.1	0.0%
Salt Lake City	17.4	0.7	20.8	0.5%	5.5	-1.5	6.2	5.1%
San Jose	19.3	1.1	47.5	1.3%	9.1	0.8	8.5	1.2%
Tucson	25.0	3.5	22.1	-0.9%	15.7	0.0	5.6	0.0%

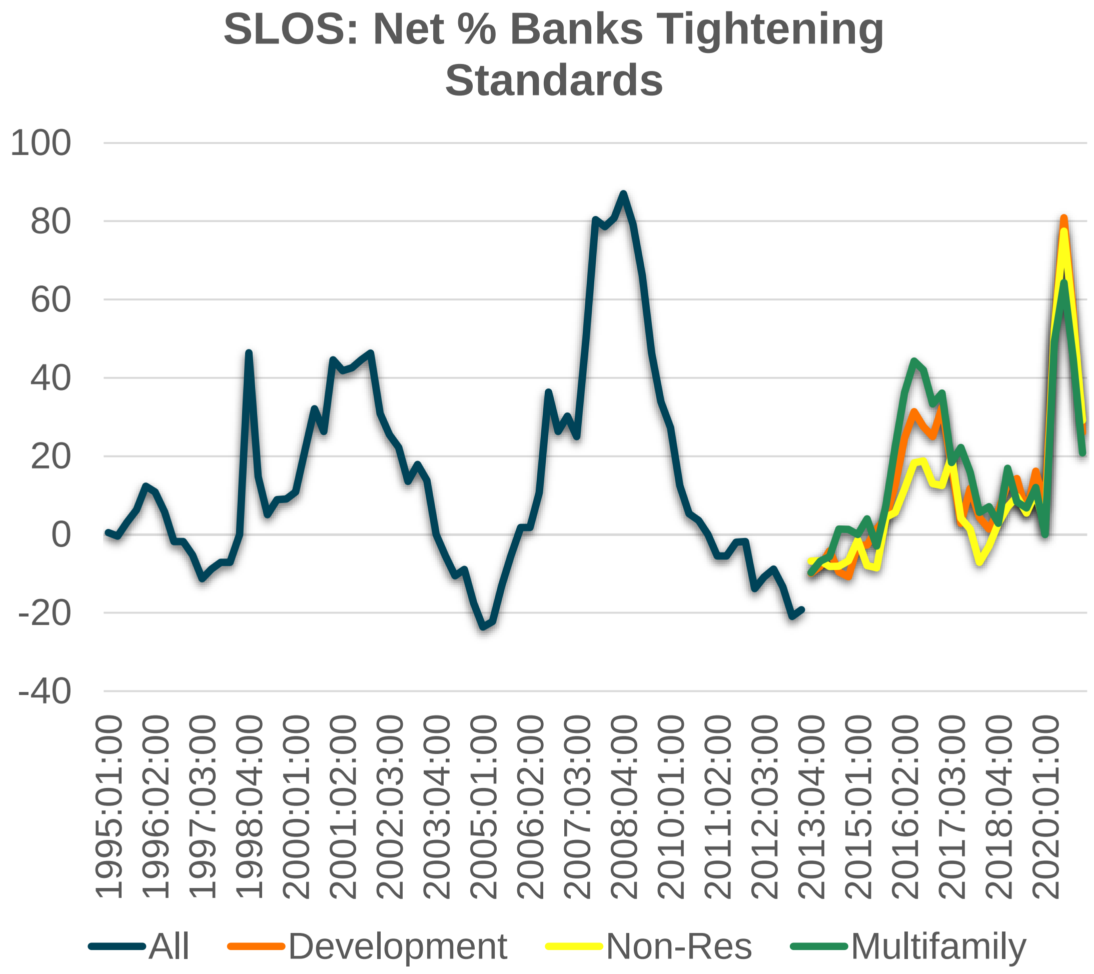
Commercial Construction Trends



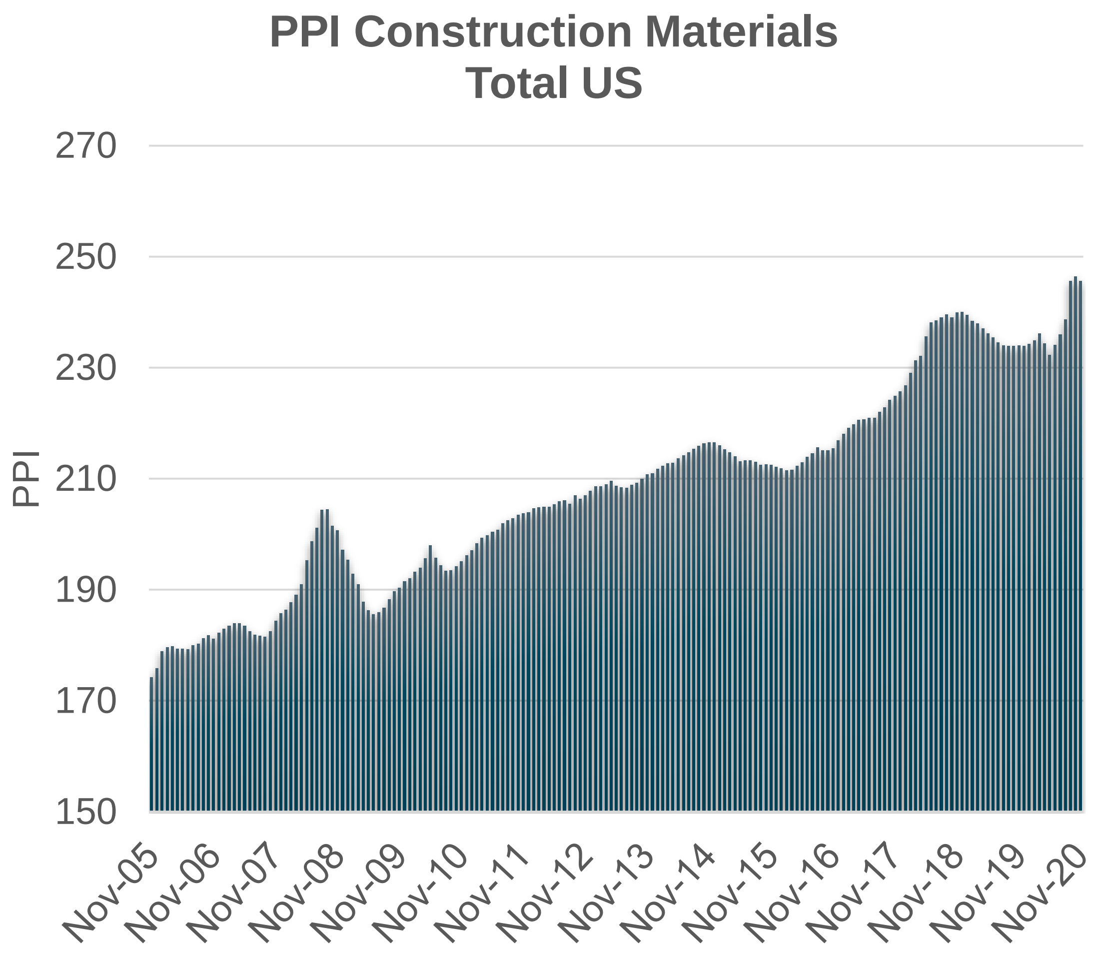


Commercial Sales: Picking Up





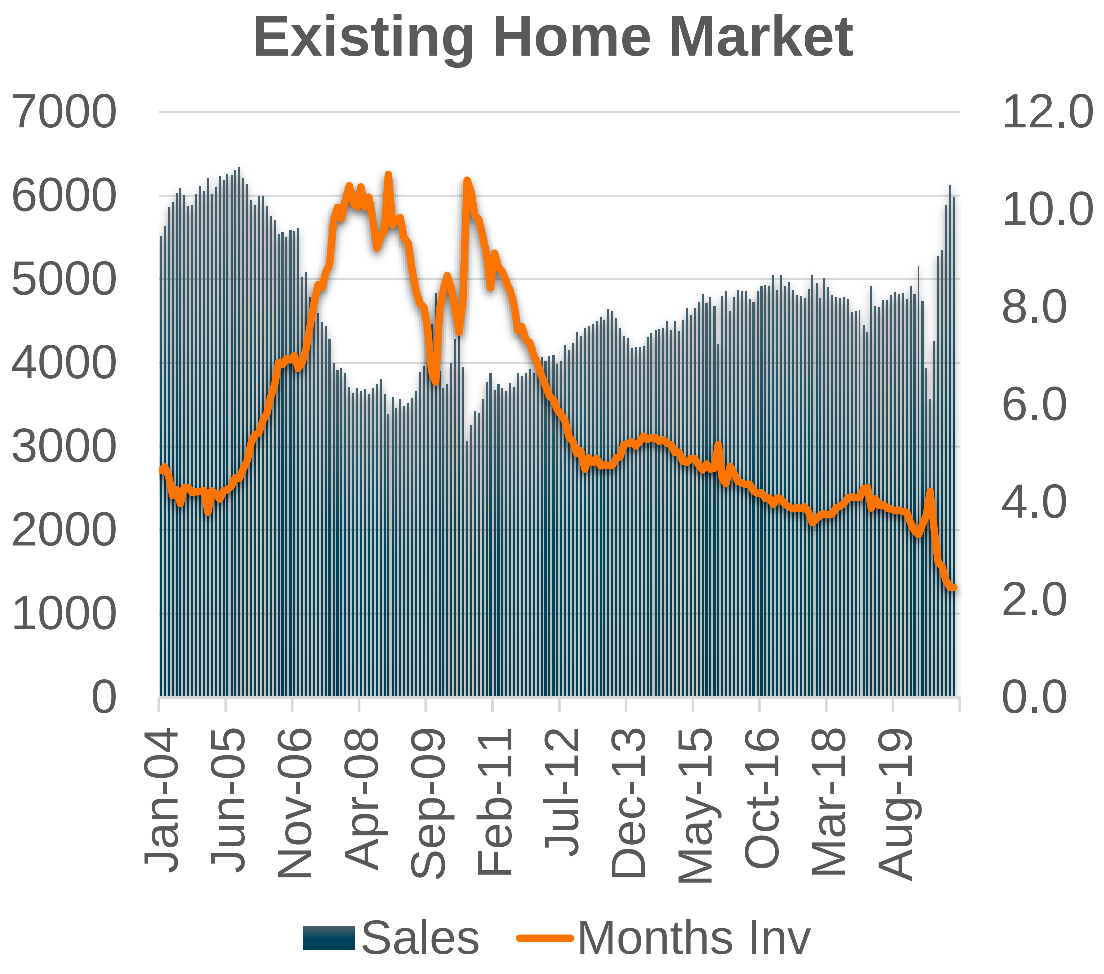
Construction Costs – National

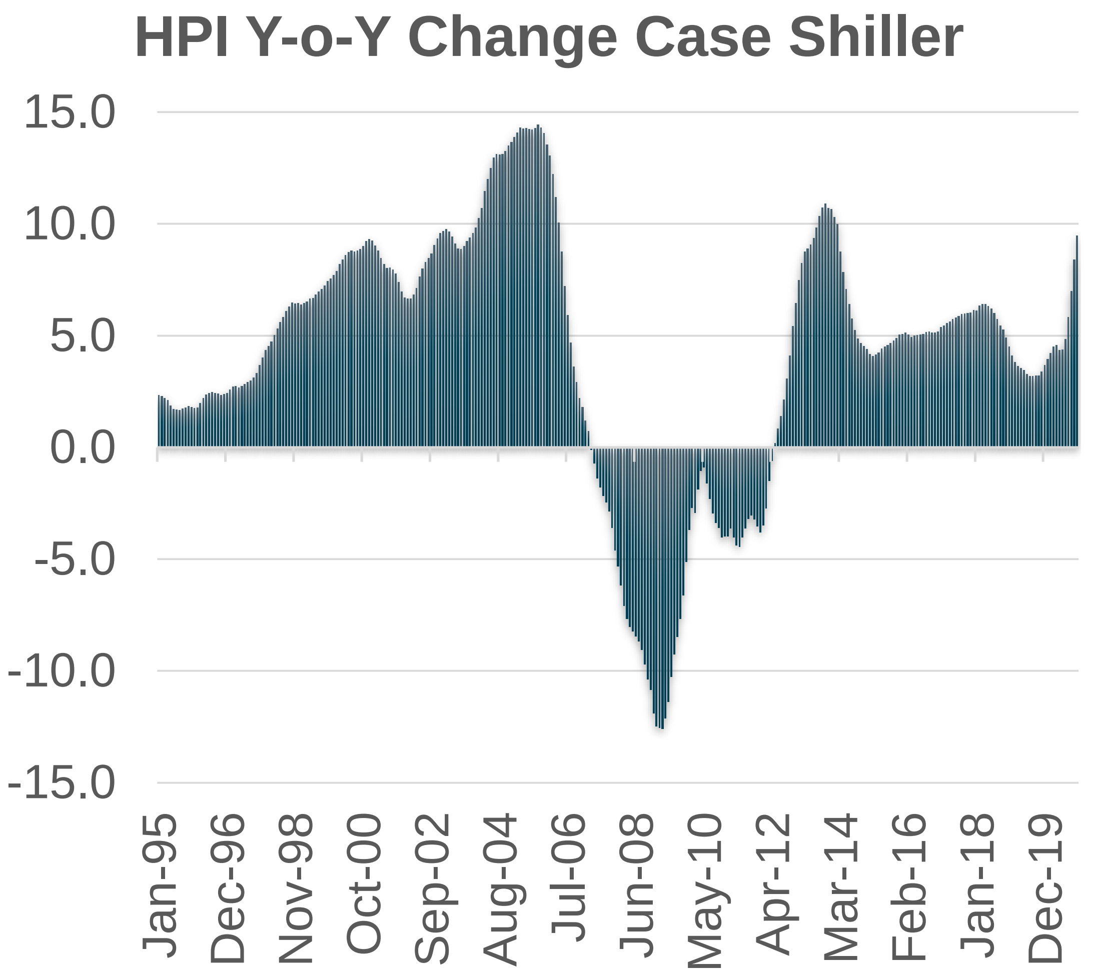


Commodity	PPI Nov-20	% Growth Apr-Nov	% Growth 1-Yr	% Growth 5-Yr
Lumber	264.2	29.2	26.8	35.2
Natural gas	129.7	110.9	19.9	21.0
Iron & steel	210.4	2.8	2.6	20.1
Construction machinery	236.7	0.0	1.2	8.9
Coal	192.7	1.0	-1.3	1.0
Petroleum	147.6	63.5	-23.2	-5.5
Asphalt	148.7	0.5	-25.7	-6.8

Source: BLS

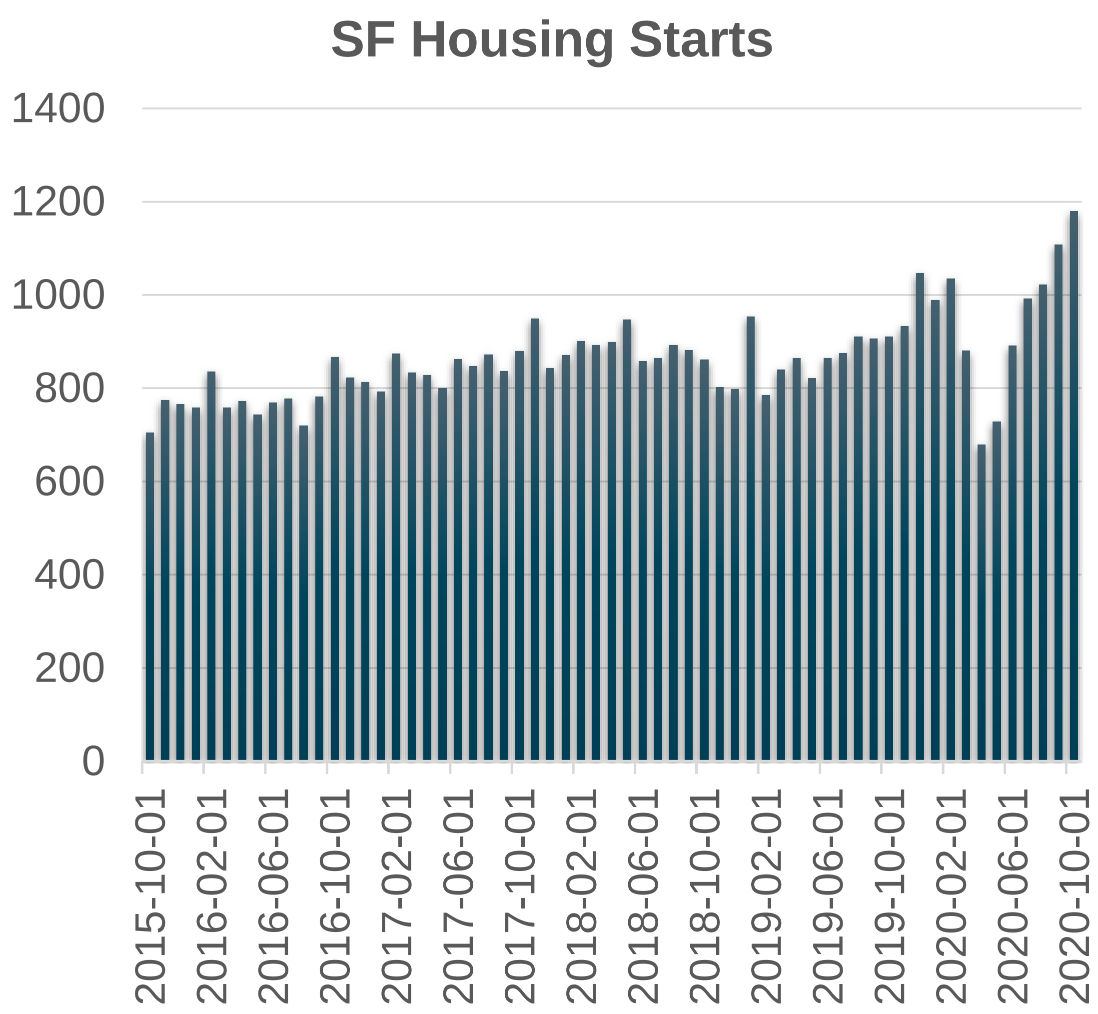
Housing – U.S.

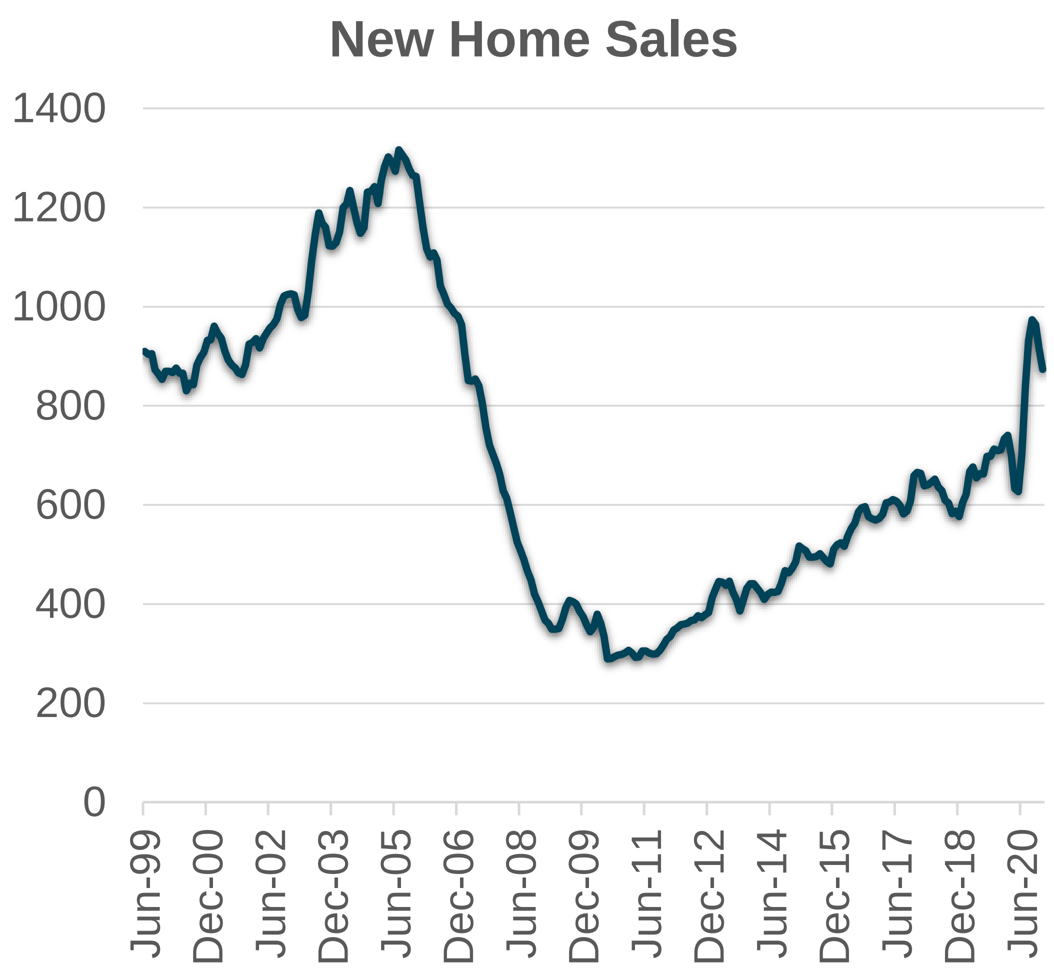




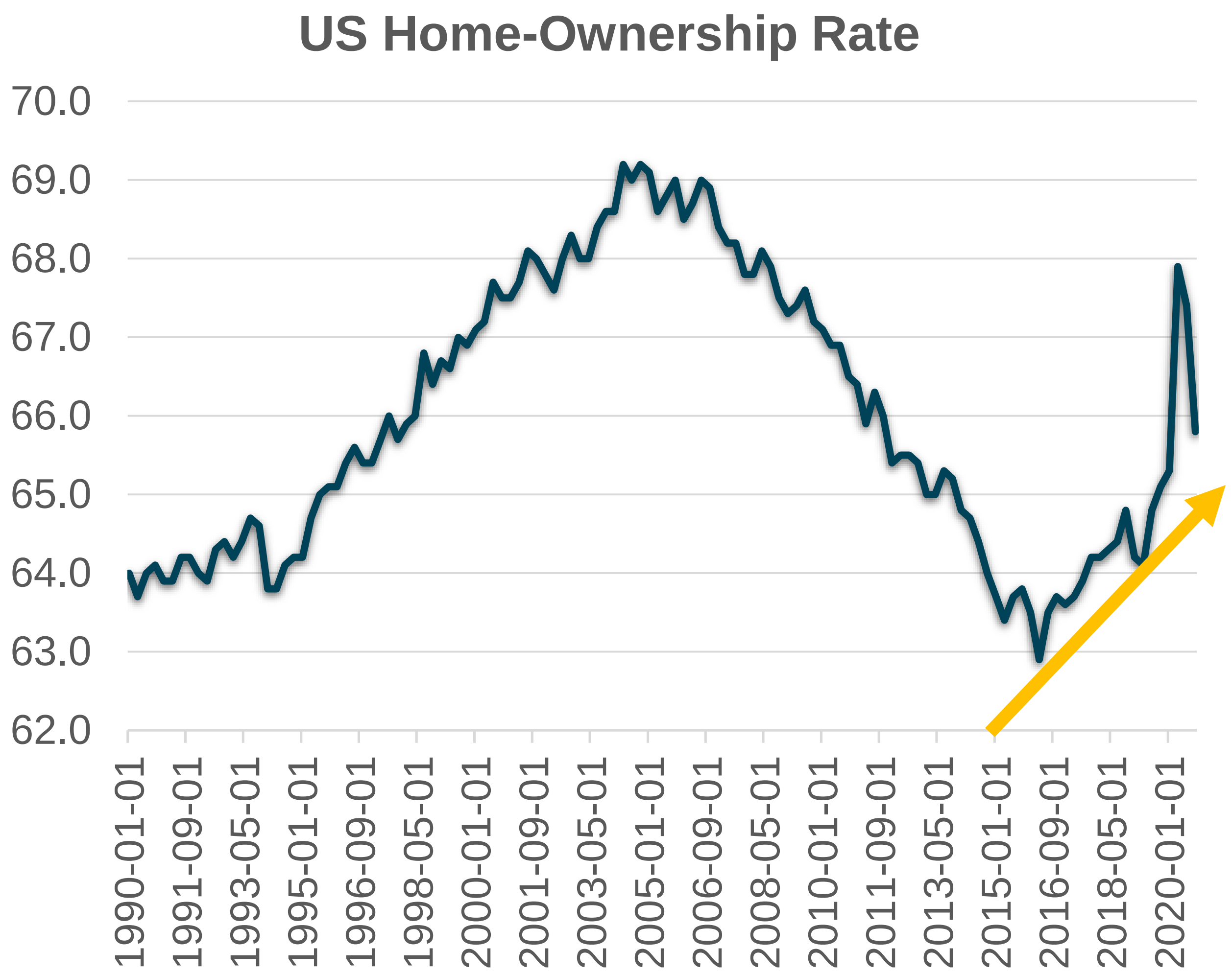
Source: National Association of Realtors, S&P Global

Housing Starts / Sales



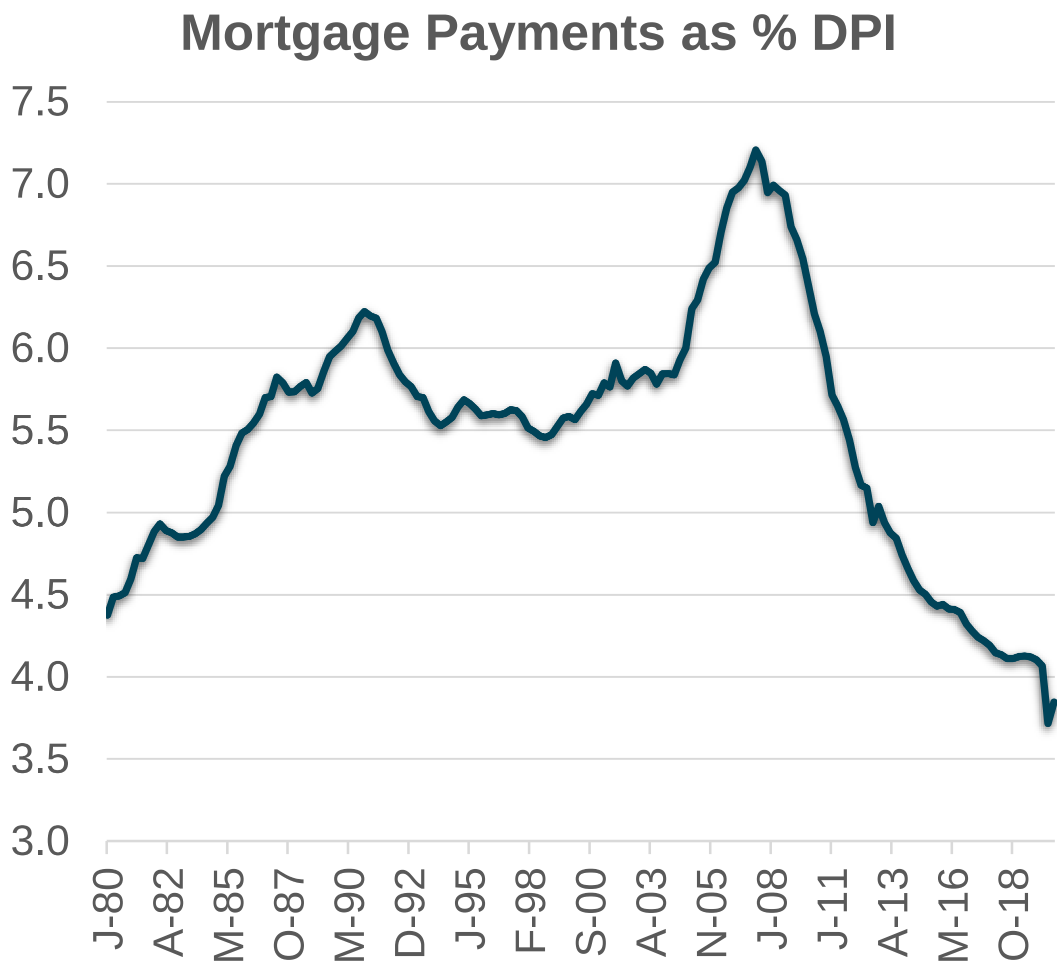


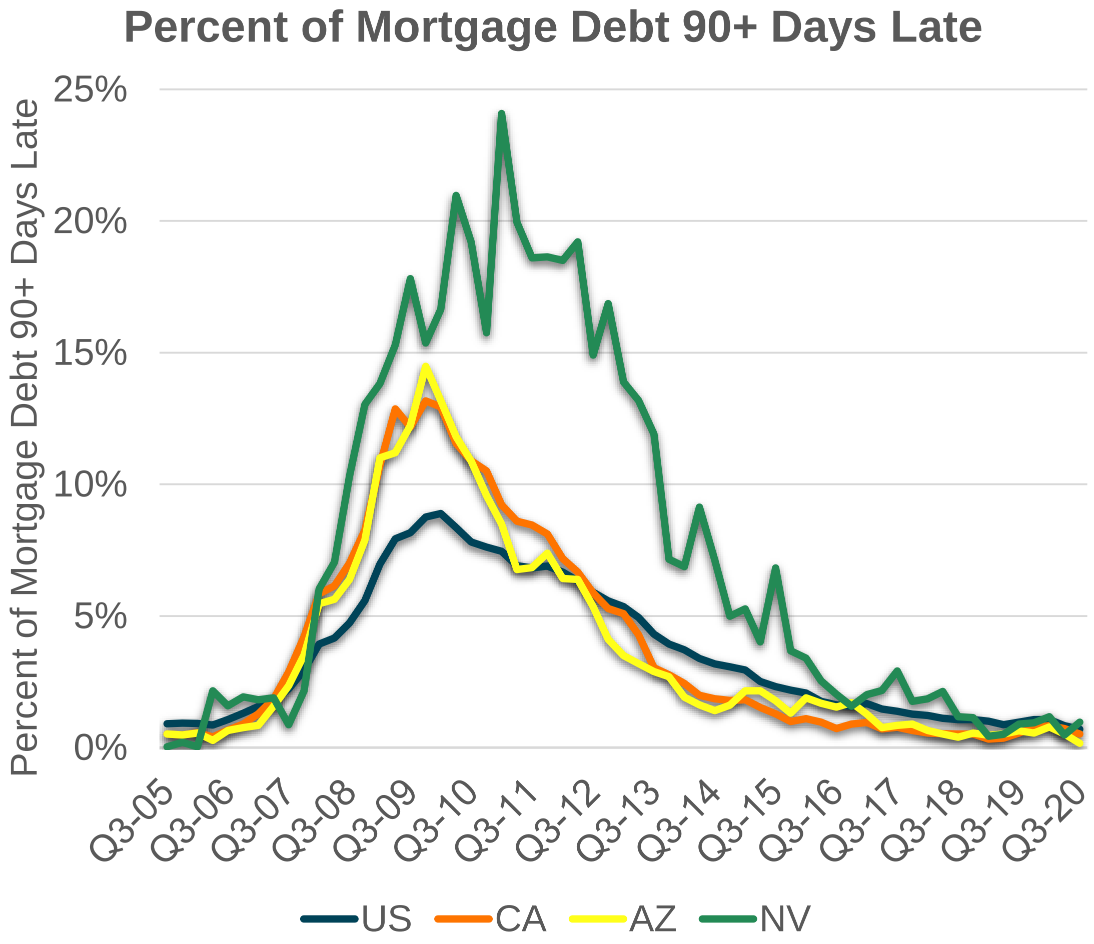
The Big Shift



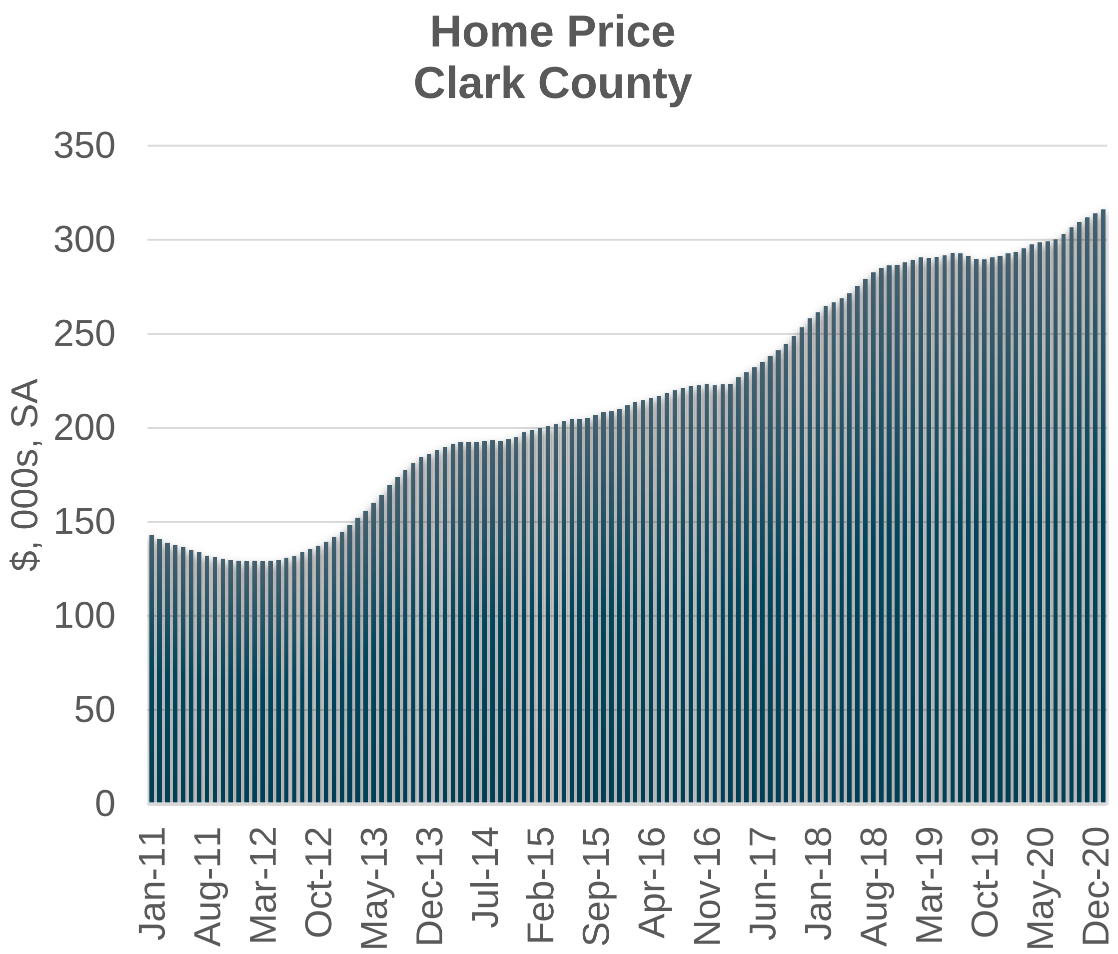
- Drivers of Housing Surge
  - Desire for more space
  - Movement to suburbs
  - Rebound from 2019 lull
  - Low interest rates
  - Cash pumped in system by stimulus
- Fundamentals
  - Tight inventories from slow construction
  - Lots of equity to leverage
  - Low HH debt to income

Bubble Alert? Not yet…



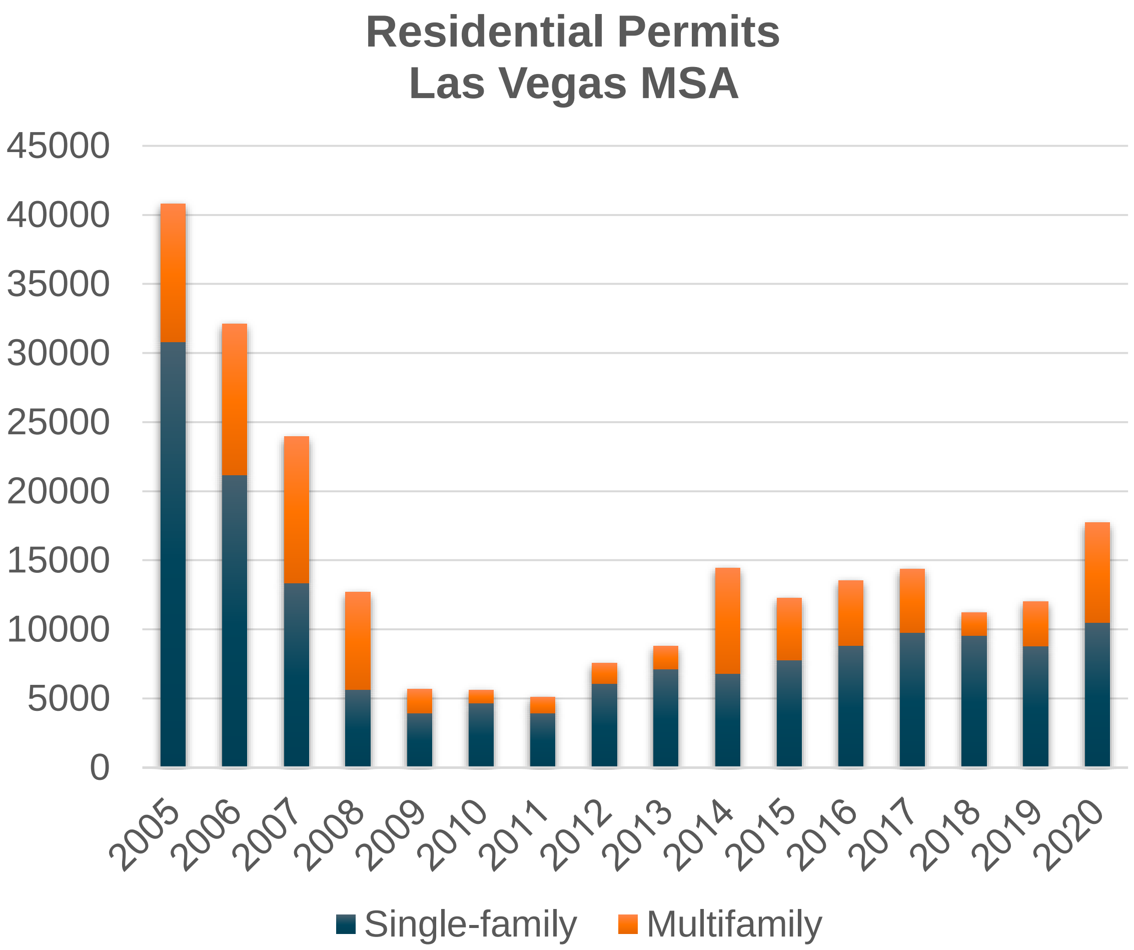


Residential Market Clark County



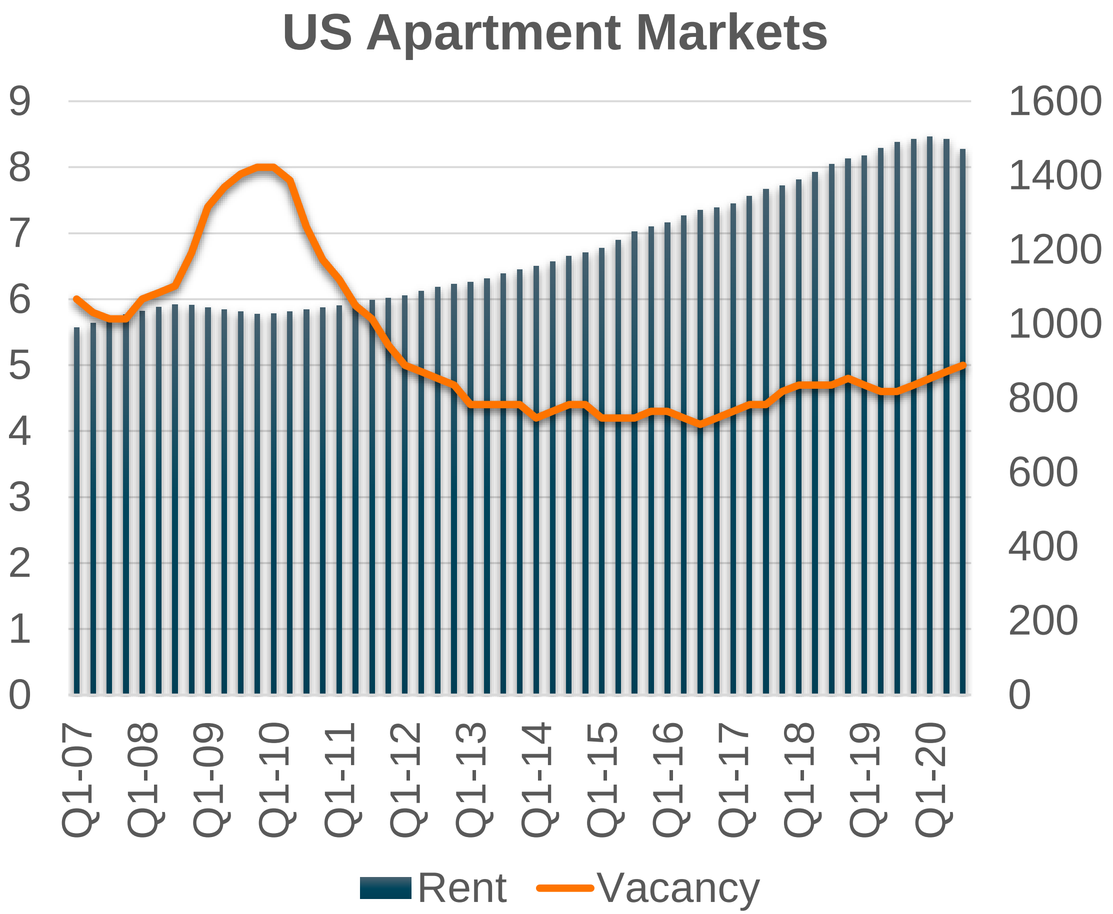
Clark County	Jan. 2020	Jan. 2021	1-Year % Chg
Home Price (000s)	275.0	315.0	14.5%
Sales	3268	3677	12.5%

Residential Permits

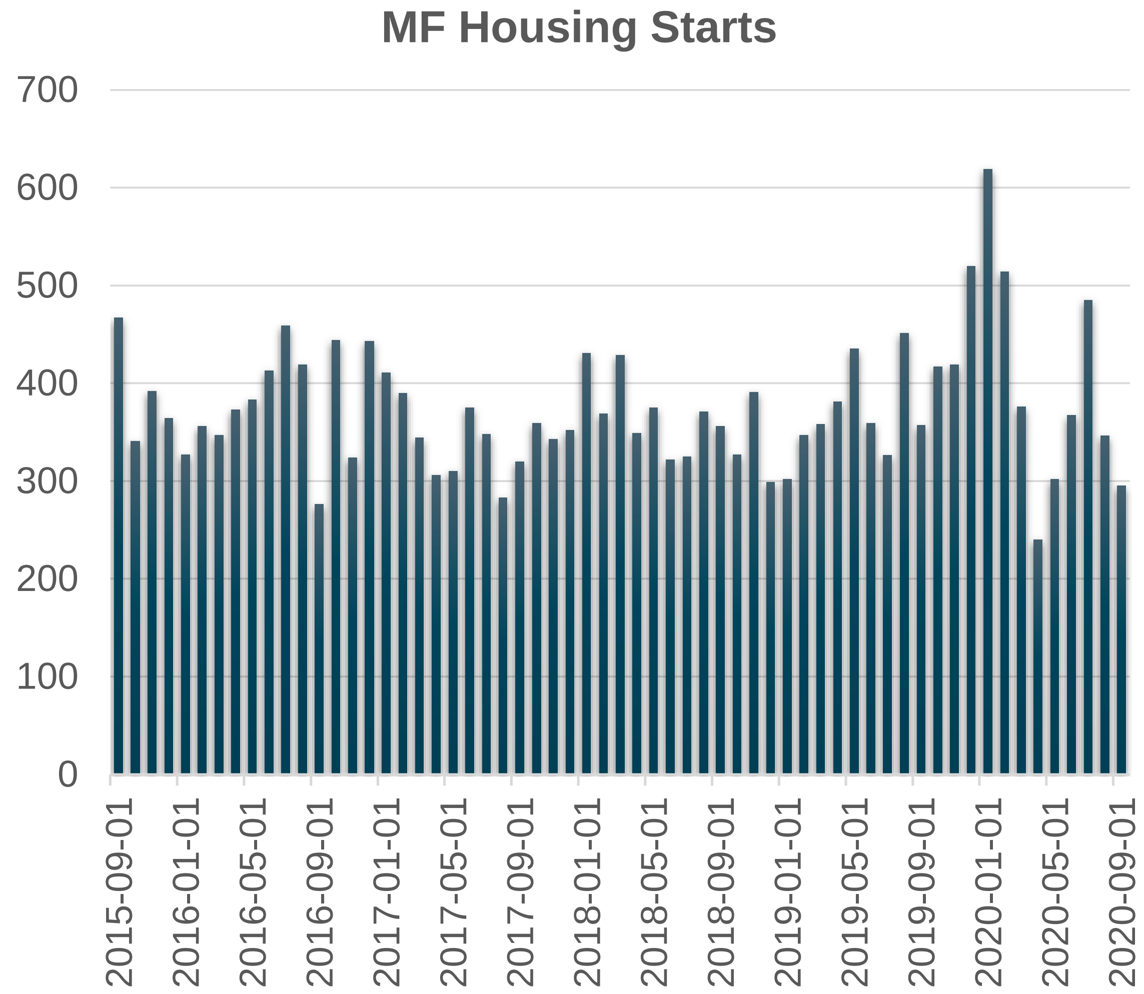


MSA	Single-family		Multifamily	
	2020	1-Yr Chg	2020	1-Yr Chg
Vegas	10,492	1,720	7,222	3,980
Reno	2,625	547	2,169	-919

Apartments?

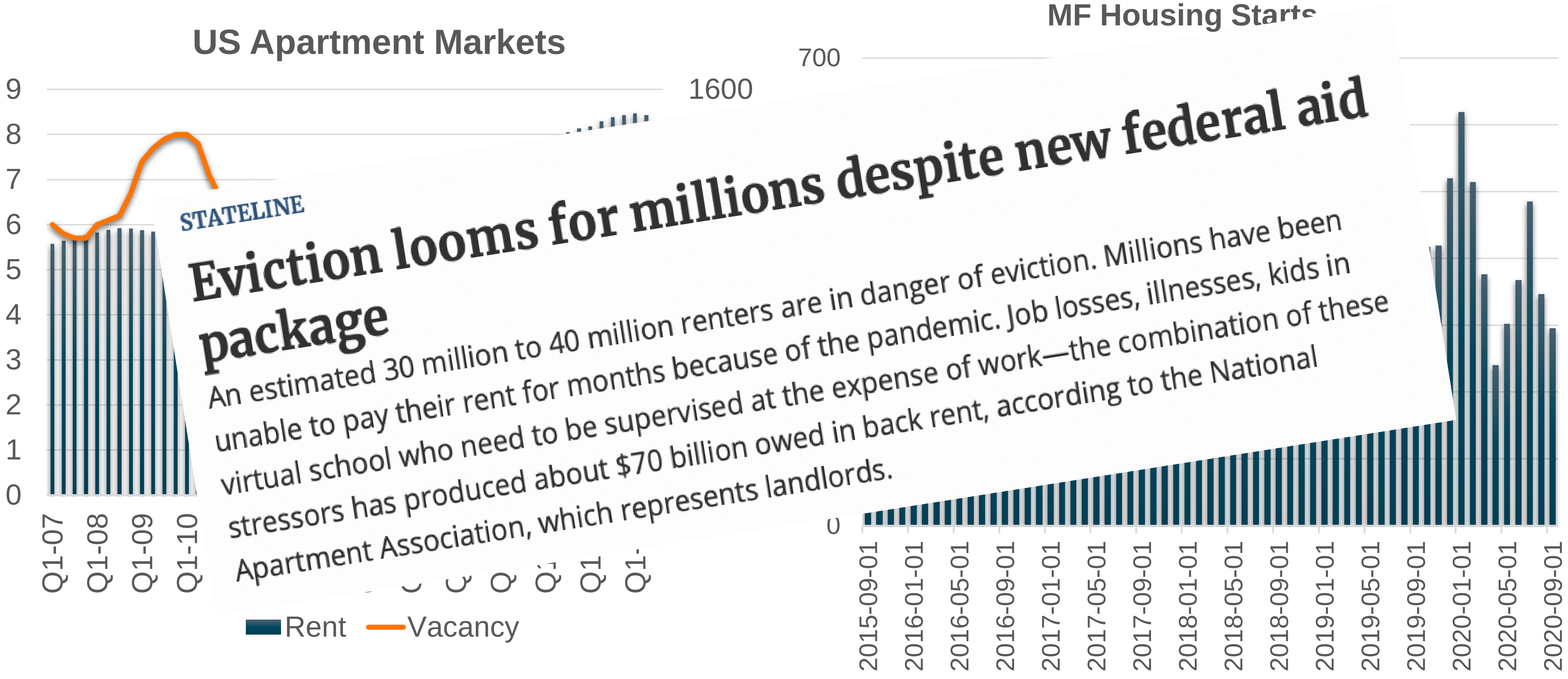


US Apartment Markets
9
8
7
6
5
4
3
2
1
0
1600
1400
1200
1000
800
600
400
200
0
Q1-07
Q1-08
Q1-09
Q1-10
Q1-11
Q1-12
Q1-13
Q1-14
Q1-15
Q1-16
Q1-17
Q1-18
Q1-19
Q1-20
Rent
Vacancy



MF Housing Starts
700
600
500
400
300
200
100
0
2015-09-01
2016-01-01
2016-05-01
2016-09-01
2017-01-01
2017-05-01
2017-09-01
2018-01-01
2018-05-01
2018-09-01
2019-01-01
2019-05-01
2019-09-01
2020-01-01
2020-05-01
2020-09-01

Apartments?

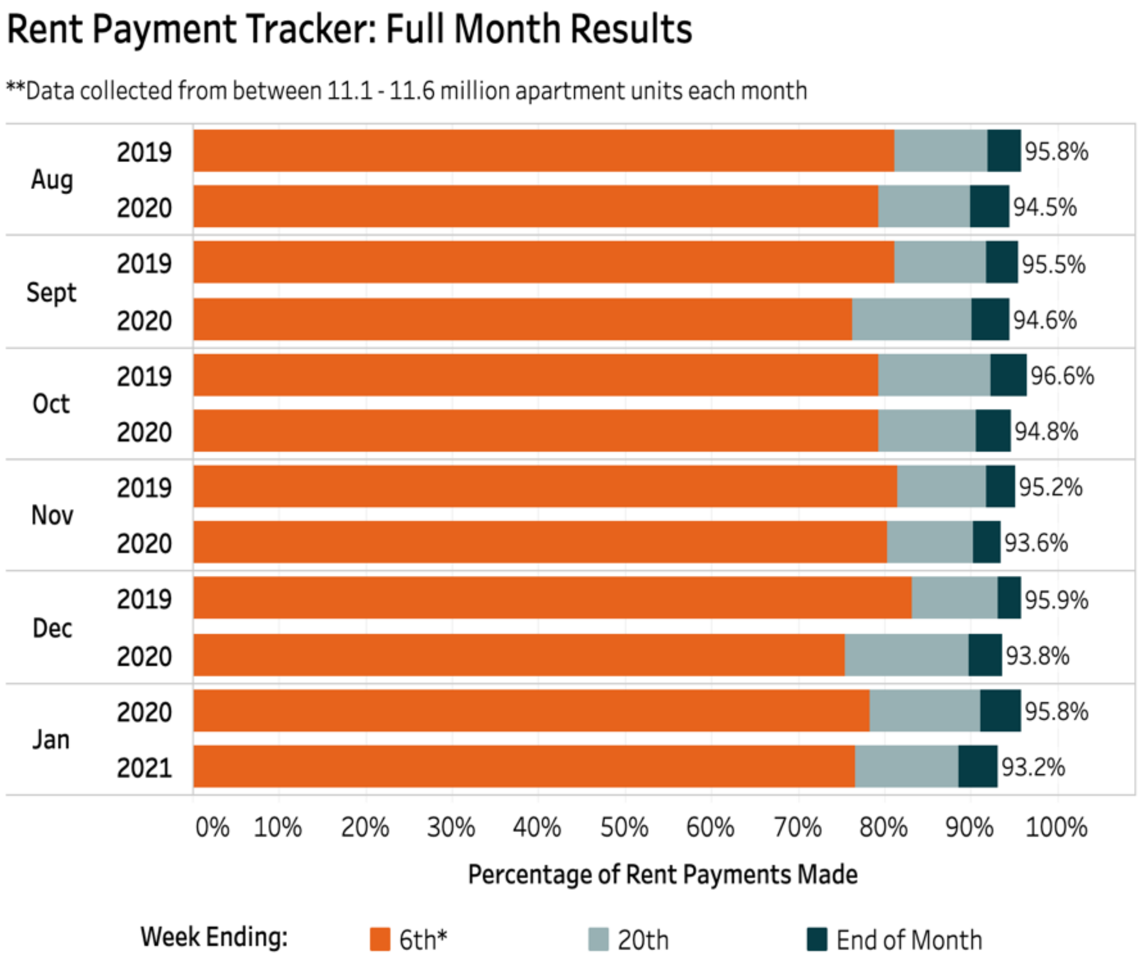


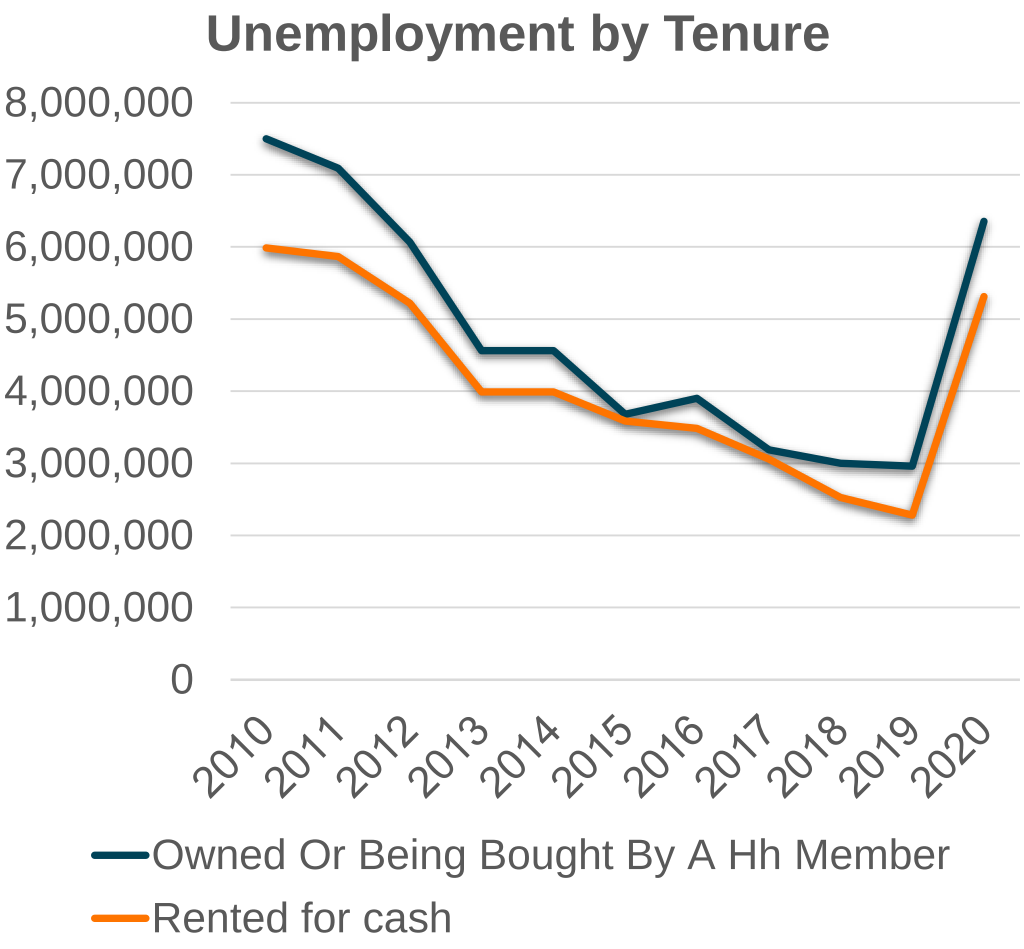
STATELINE

Eviction looms for millions despite new federal aid package

An estimated 30 million to 40 million renters are in danger of eviction. Millions have been unable to pay their rent for months because of the pandemic. Job losses, illnesses, kids in virtual school who need to be supervised at the expense of work—the combination of these stressors has produced about $70 billion owed in back rent, according to the National Apartment Association, which represents landlords.

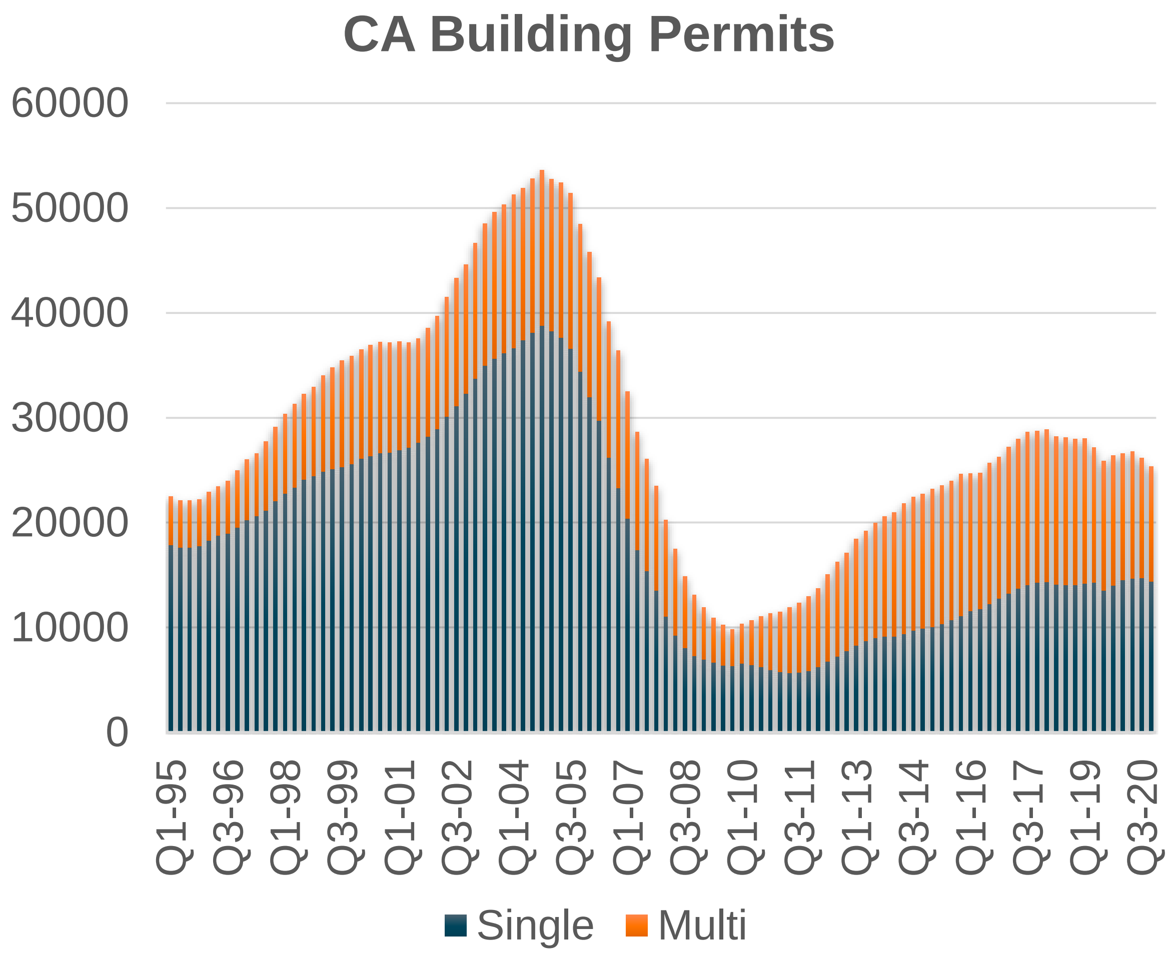
Apartment Market

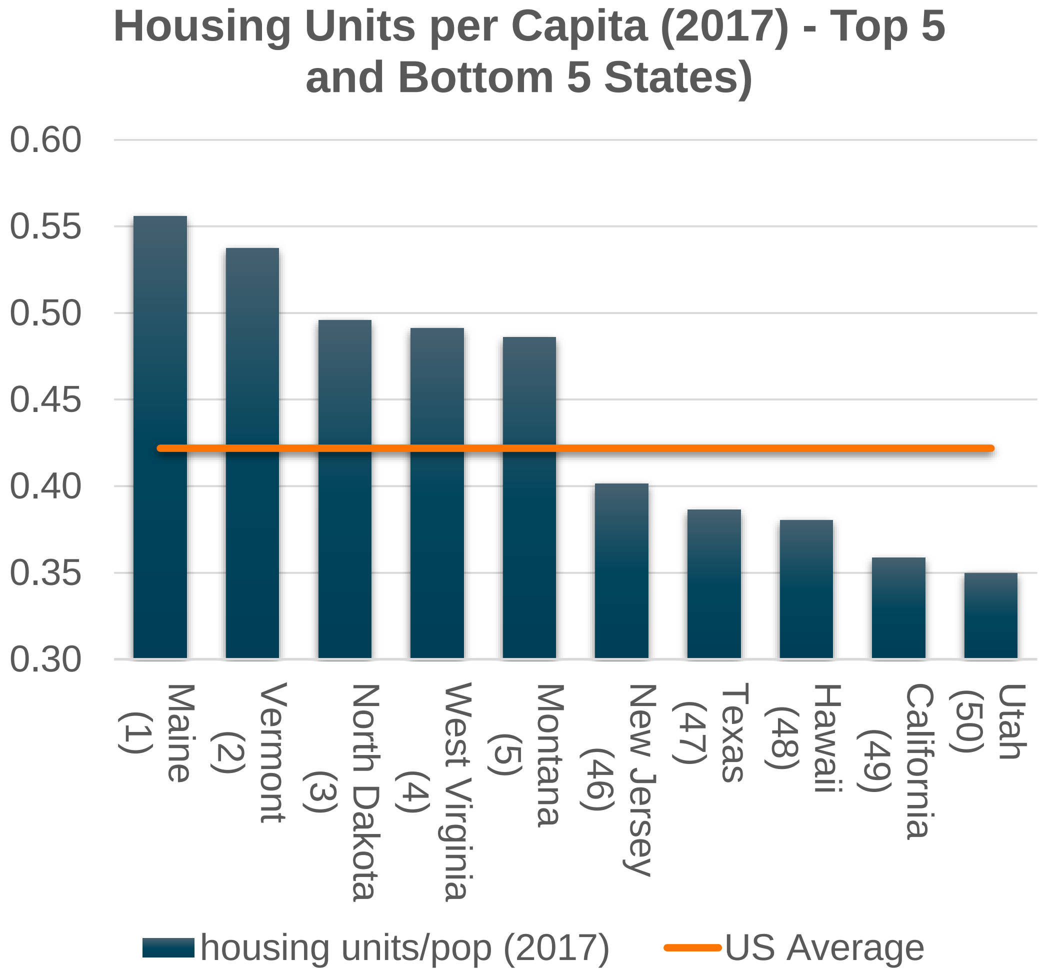




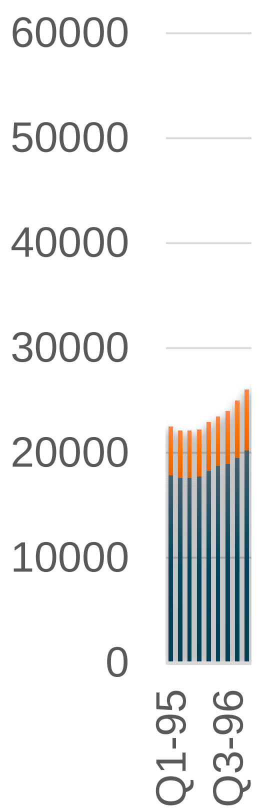
Source: REIS

Whither the Housing Crisis?

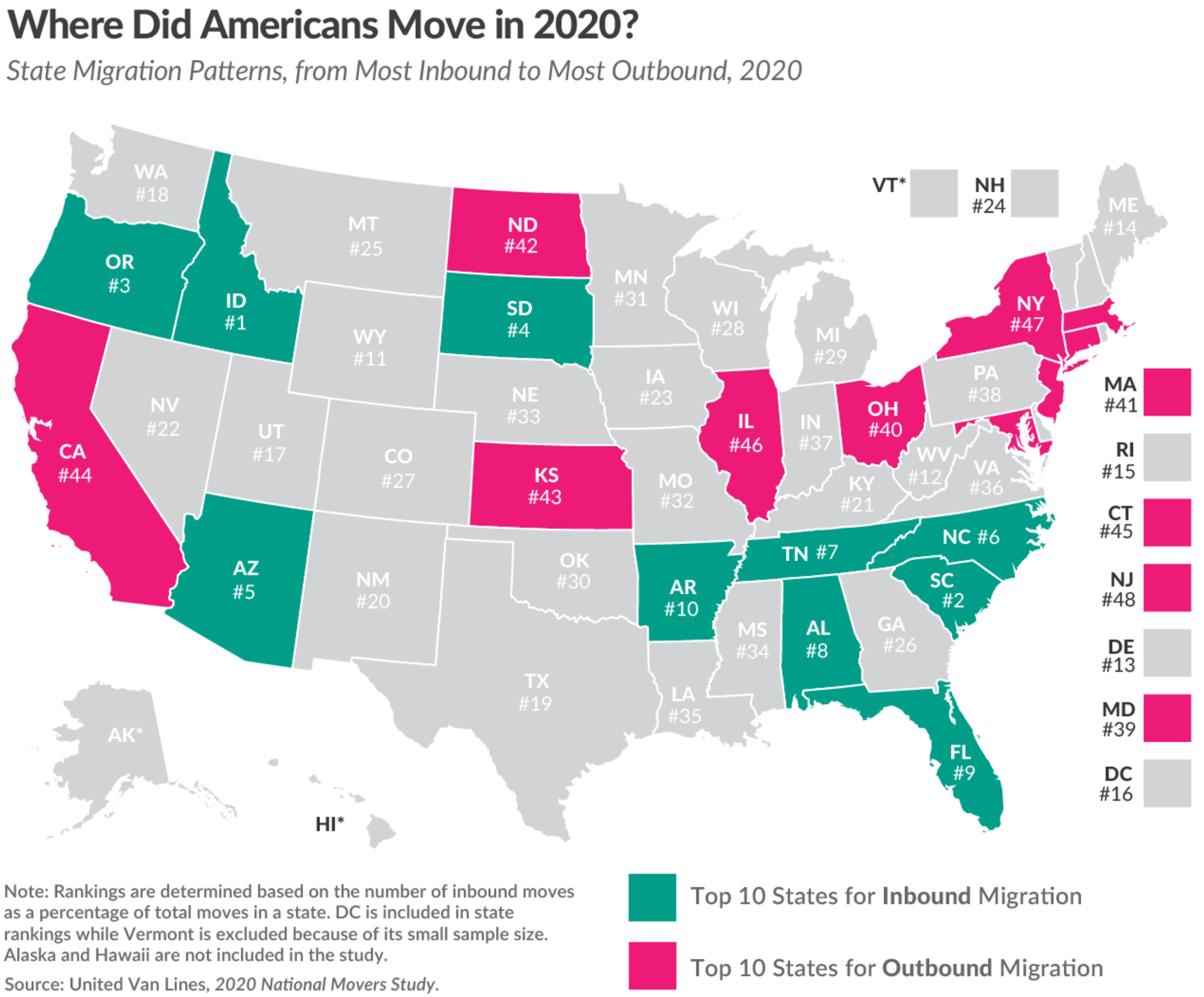




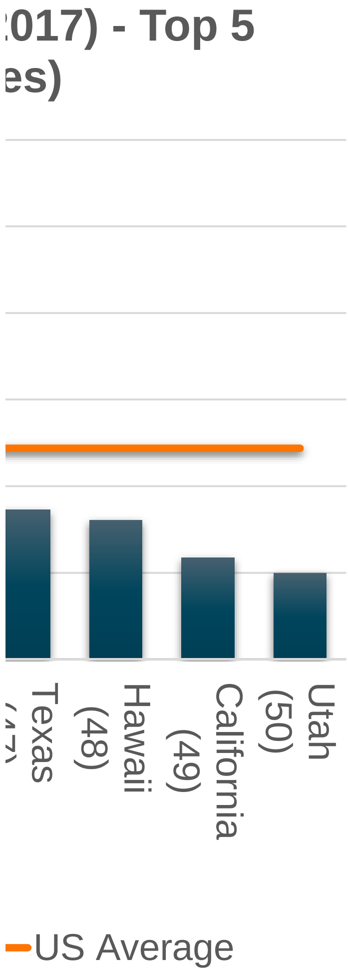
Whith



60000
50000
40000
30000
20000
10000
0
Q1-95
Q3-96



Where Did Americans Move in 2020?
State Migration Patterns, from Most Inbound to Most Outbound, 2020
WA #18
OR #3
ID #1
MT #25
ND #42
SD #4
WY #11
MN #31
WI #28
MI #29
NE #33
IA #23
IL #46
IN #37
OH #40
PA #38
NY #47
VT*
NH #24
ME #14
NV #22
UT #17
CO #27
KS #43
MO #32
KY #21
WV #12
VA #36
CA #44
AZ #5
NM #20
OK #30
AR #10
TN #7
NC #6
SC #2
TX #19
LA #35
MS #34
AL #8
GA #26
FL #9
AK*
HI*
MA #41
RI #15
CT #45
NJ #48
DE #13
MD #39
DC #16
Note: Rankings are determined based on the number of inbound moves as a percentage of total moves in a state. DC is included in state rankings while Vermont is excluded because of its small sample size. Alaska and Hawaii are not included in the study.
Source: United Van Lines, 2020 National Movers Study.
Top 10 States for Inbound Migration
Top 10 States for Outbound Migration



017) - Top 5
es)
Texas
(48)
Hawaii
(49)
California
(50)
Utah
US Average

Population

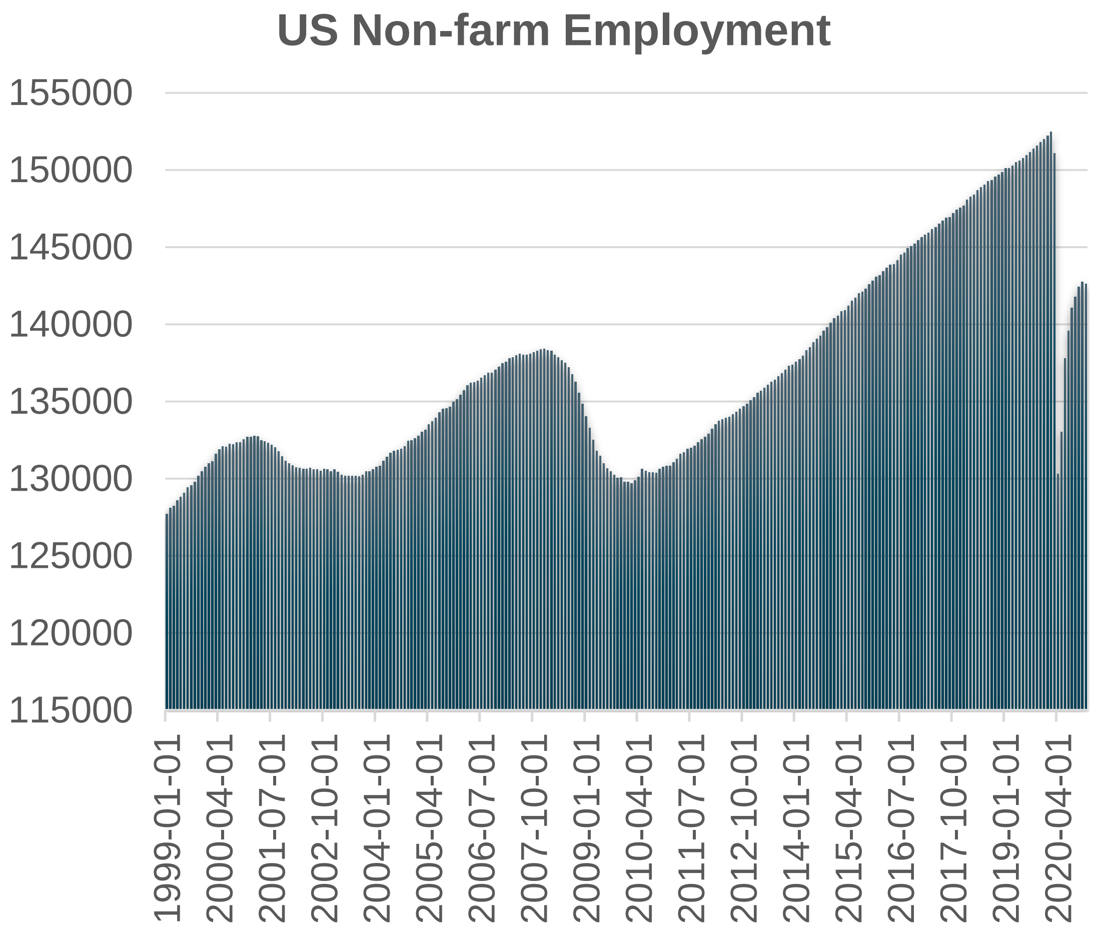
City	2020 Pop. (000s)	1-Year % Change
Mesquite	25.6	5.9
Henderson	330.4	2.7
North Las Vegas	264.8	2.4
Las Vegas	670.7	1.3
Boulder City	16.5	0.7

Apartments

	Vacancy		Rents	
	Q4-20	Y-o-y	Q4-20	Y-o-y
United States	5.2	0.5	$ 1,453	-3.0%
Fresno	2.2	0	$ 1,016	2.0%
Inland Empire	3.7	0.4	$ 1,467	2.5%
Las Vegas	4.3	0	$ 1,181	2.6%
Phoenix	5.1	0.5	$ 1,155	1.8%
Reno	4.5	-0.2	$ 1,442	1.6%
Sacramento	3.2	0.3	$ 1,392	2.2%
Tucson	3.7	-0.4	$ 841	0.4%

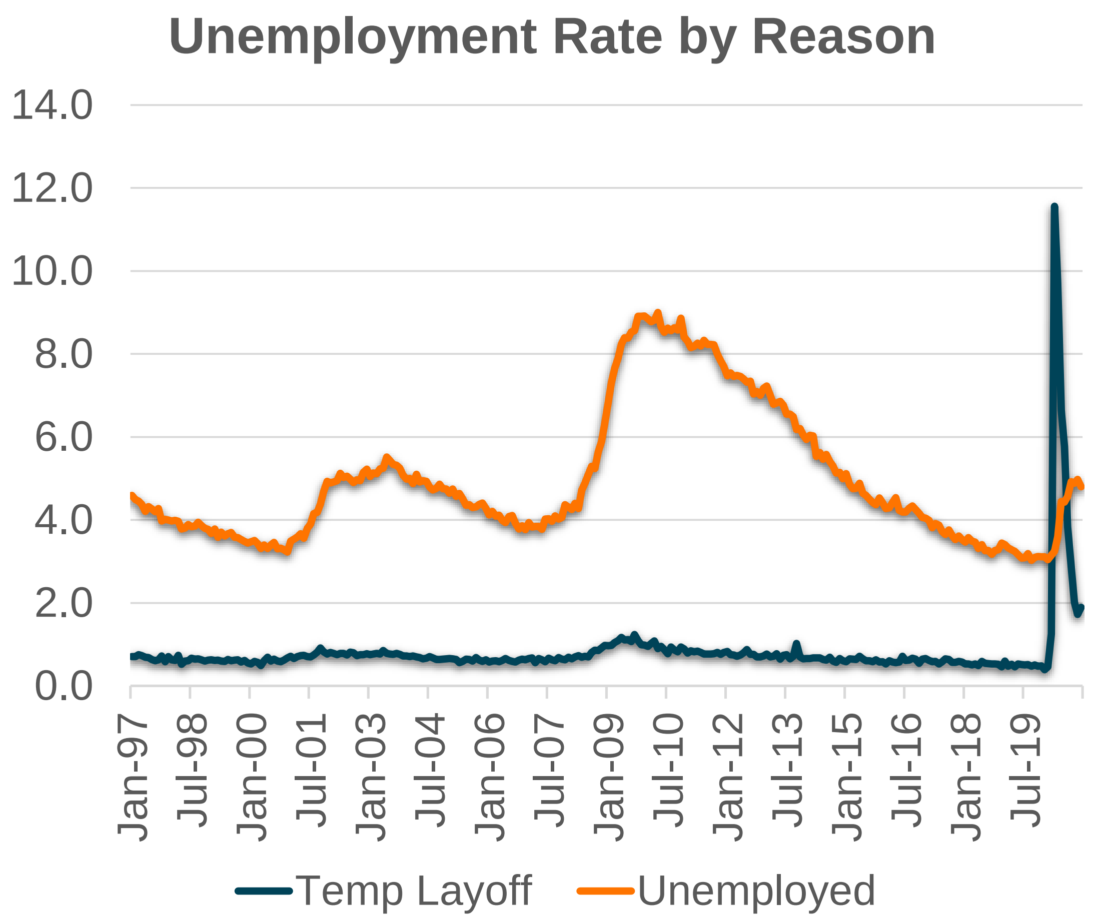
Source: UNLV Center for Business and Economic Research, ClarkCounty.gov

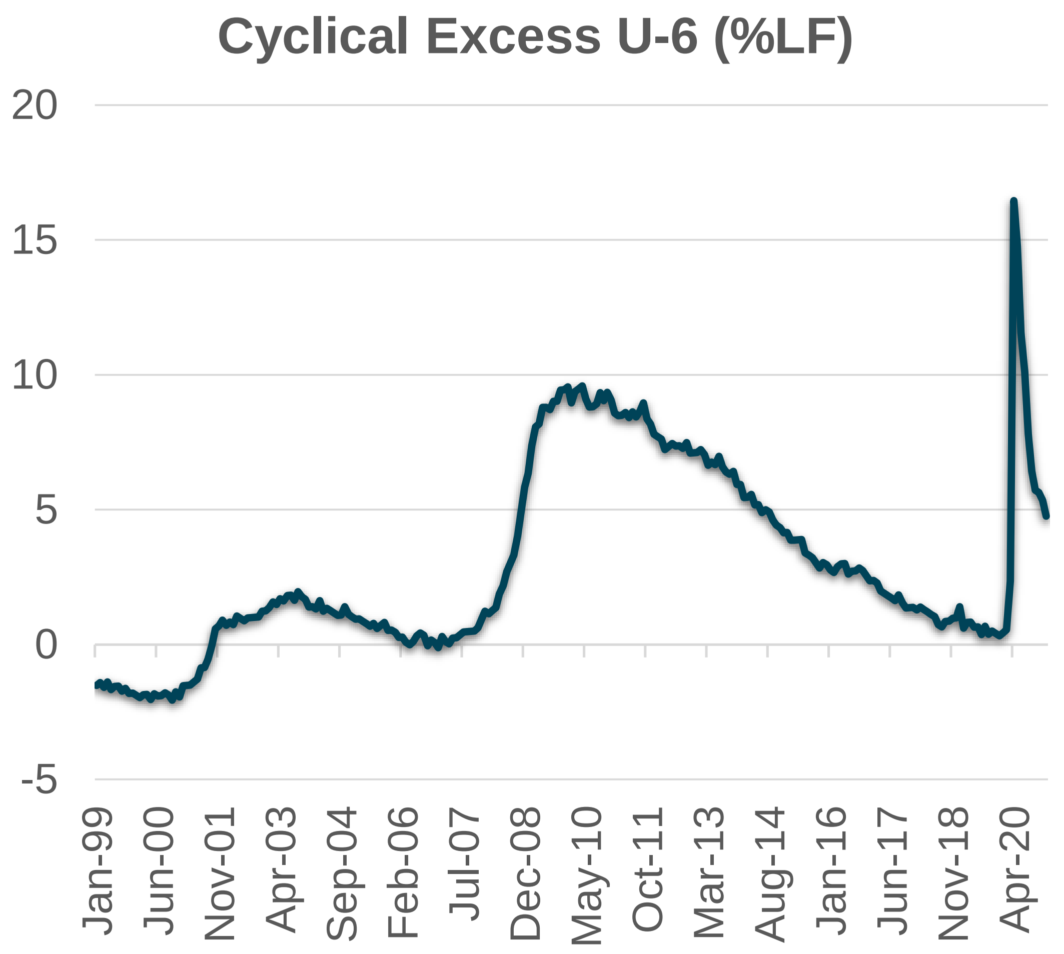
The biggest lagging indicator



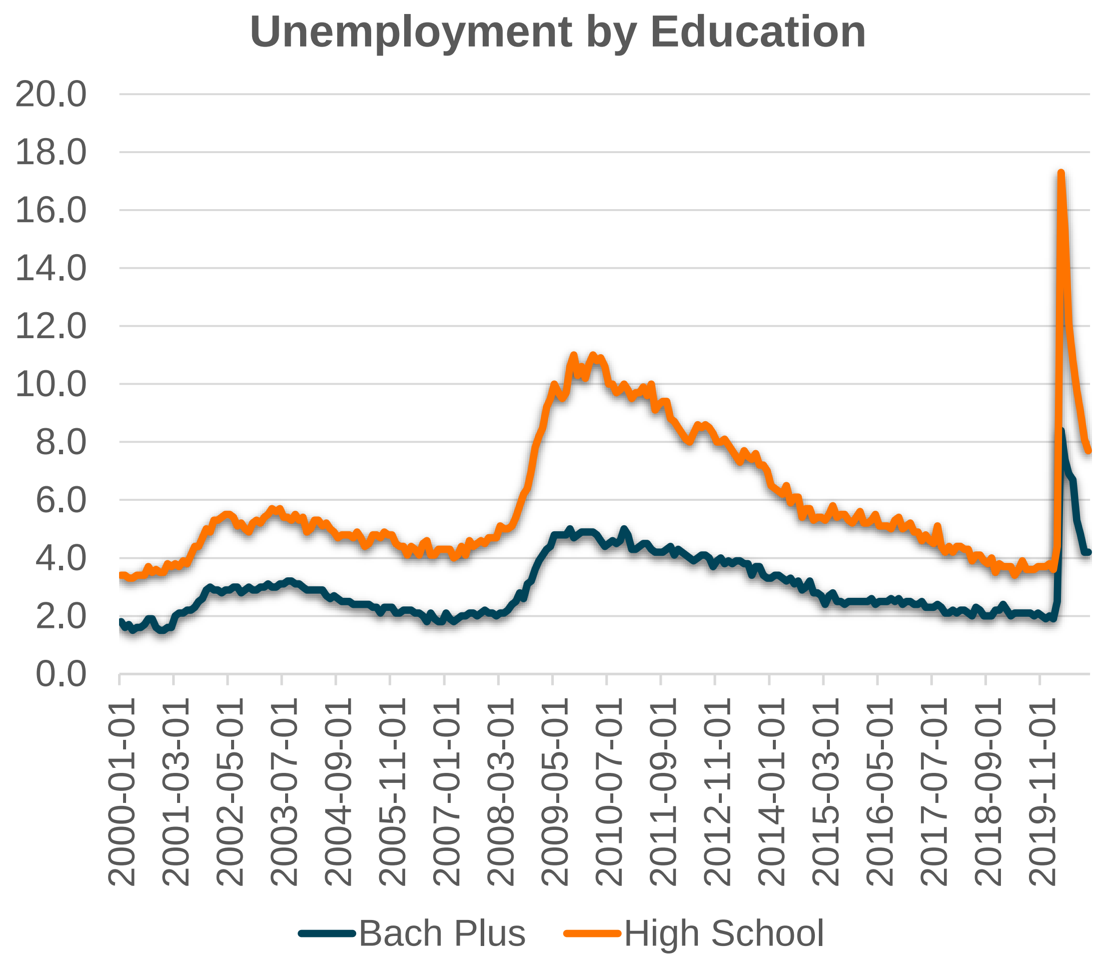
	YoY Ch	YoY Gr
Total nonfarm	-9152	-6.0%
Leisure hospitality	-3738	-22.7%
Government	-1261	-5.5%
Professional business	-800	-3.7%
Health care	-737	-3.6%
Manufacturing	-545	-4.2%
Other services	-434	-7.4%
Retail trade	-429	-2.7%
Educational services	-426	-10.9%
Information	-255	-8.8%
Wholesale trade	-248	-4.2%
Construction	-125	-1.7%
Financial activities	-61	-0.7%
Transportation	1	0.0%

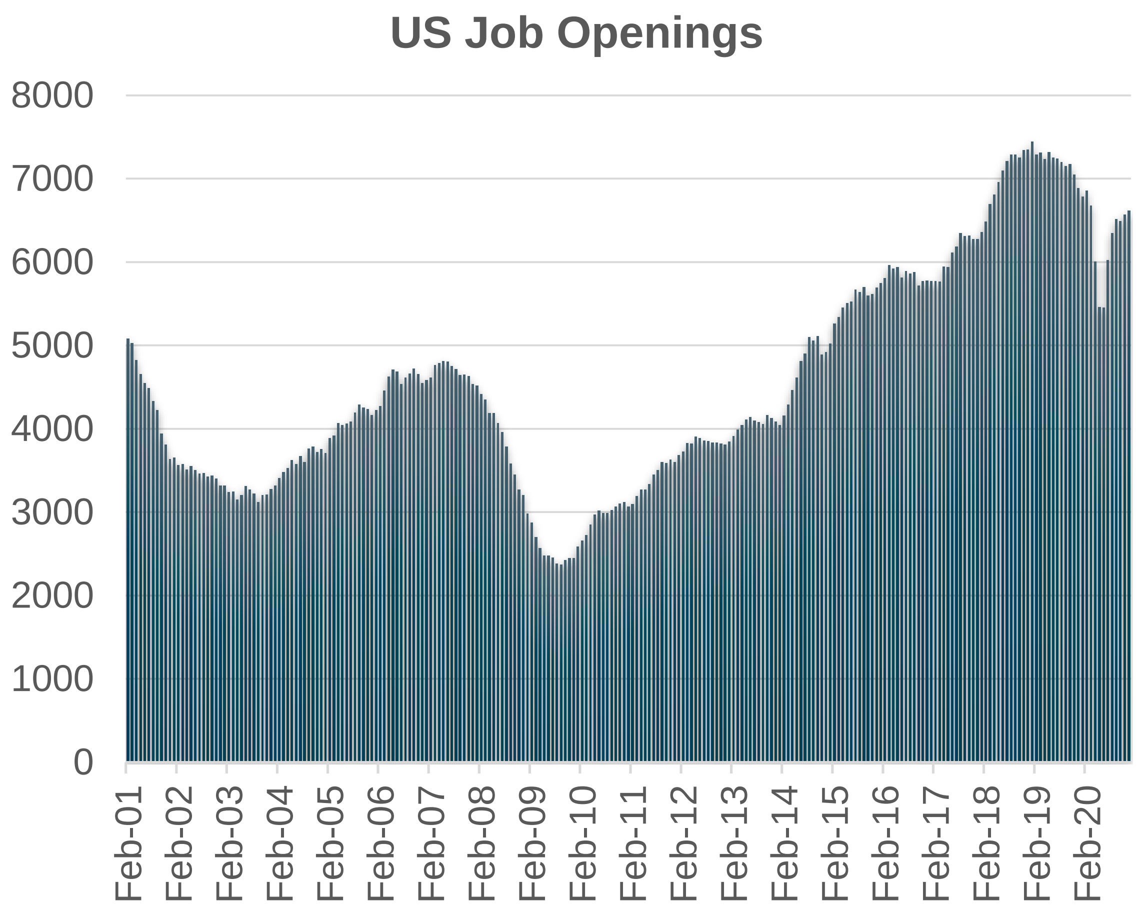
Misreading Unemployment



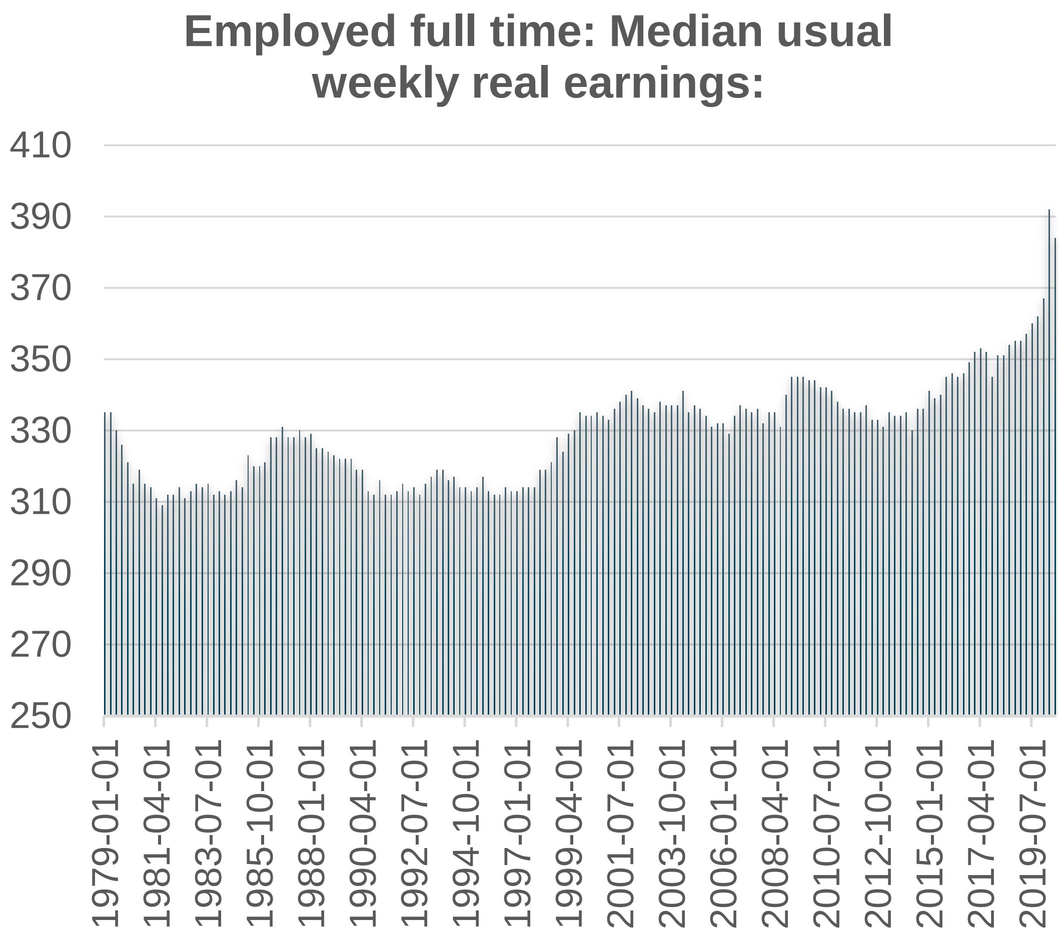


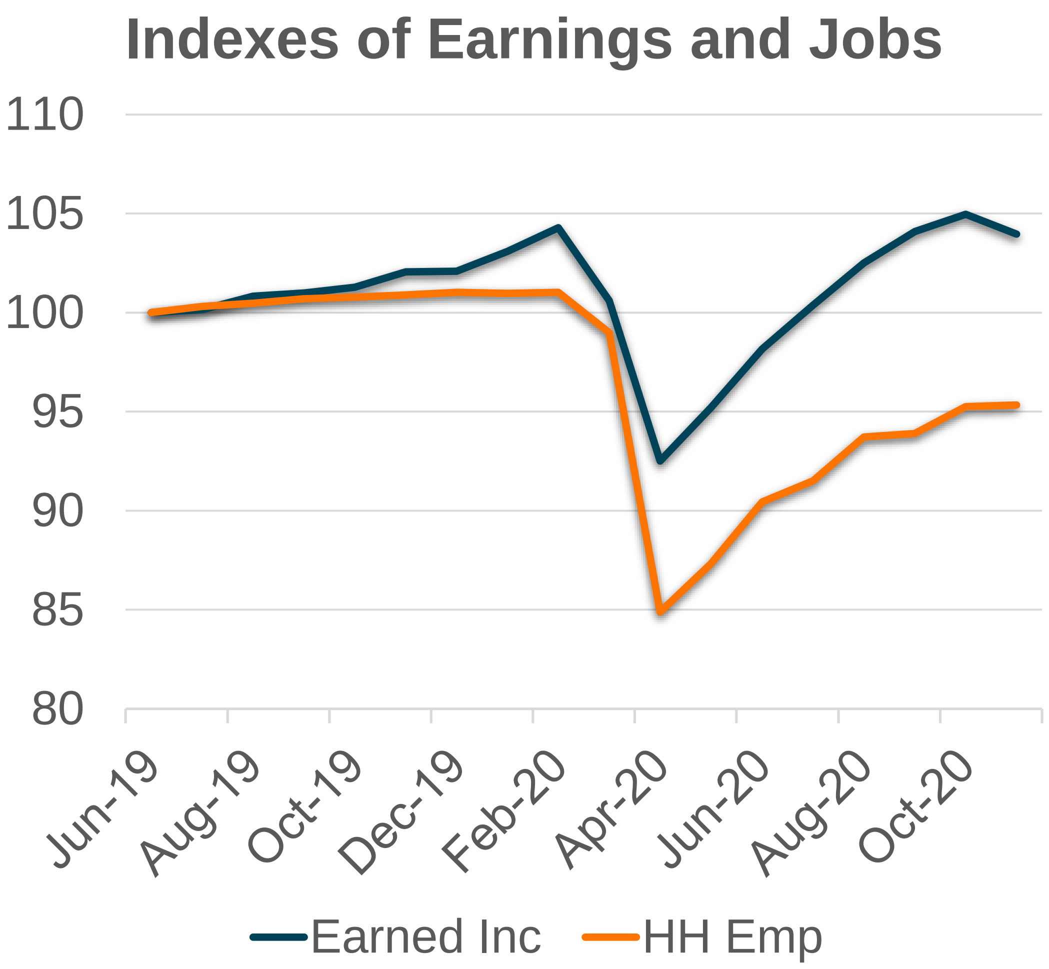
Glass half full or empty?





Winner / Loser: Earnings



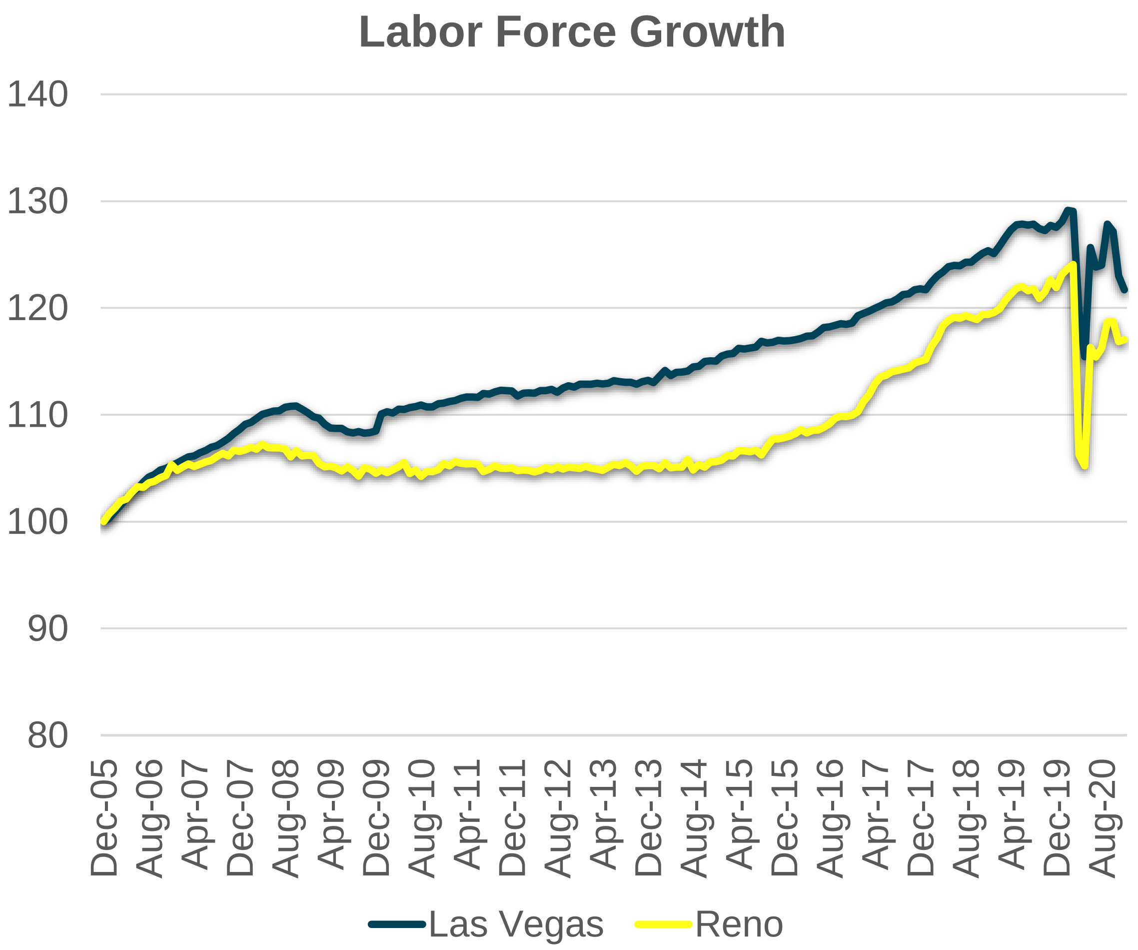


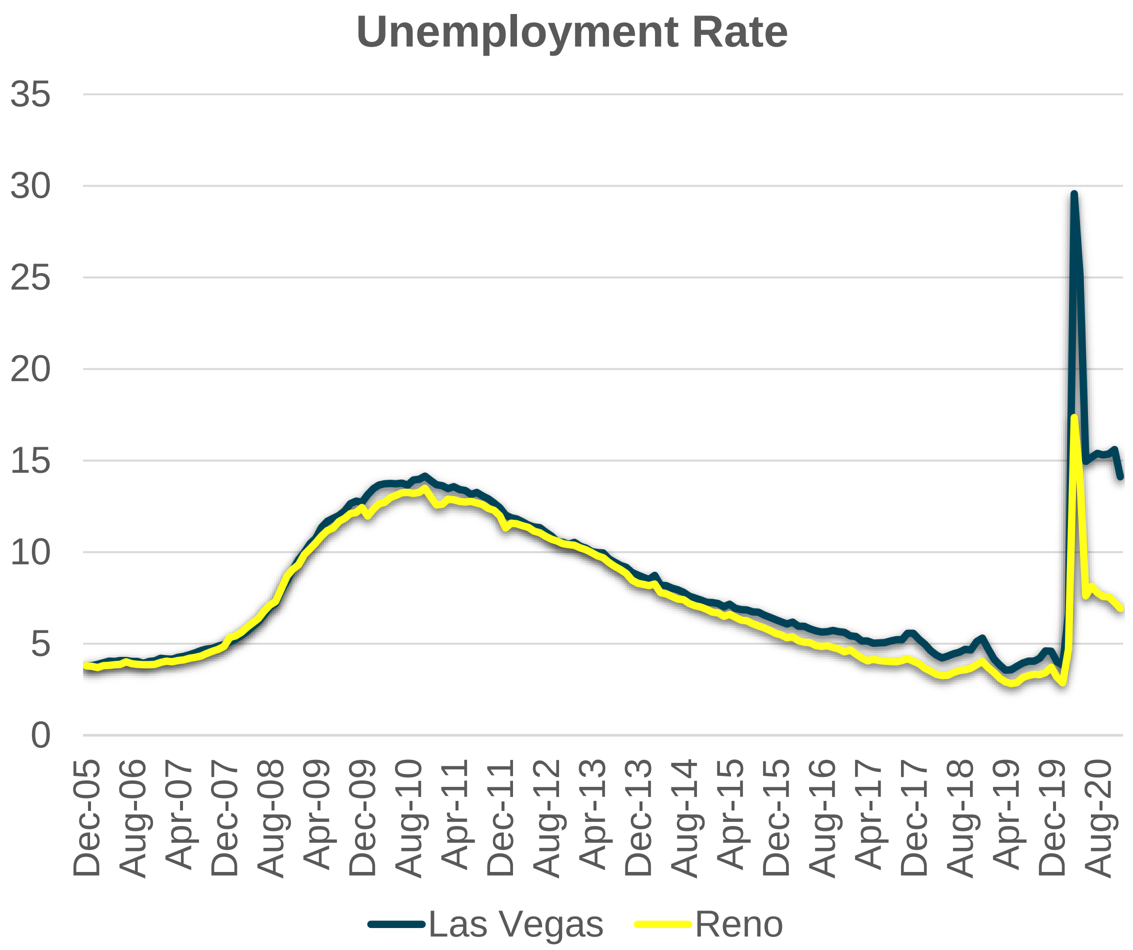
Metro Employment Across the U.S.

Industry	Phoenix		Los Angeles		Las Vegas		Orange County		San Diego	
	Dec-20	1-Yr % Chg	Dec-20	1-Yr % Chg	Dec-20	1-Yr % Chg	Dec-20	1-Yr % Chg	**Dec-20**	**1-Yr % Chg**
Total Nonfarm	2150.6	-2.9	4184.2	-9.7	927.8	-10.1	1536.8	-8.7	**1408.9**	**-7.5**
Logistics	426.5	2.0	826.4	-4.2	180.3	-1.3	246.1	-5.7	**212.1**	**-5.6**
Wholesale Trade	87.0	0.5	212.9	-3.2	22.3	-10.0	72.7	-7.2	**38.9**	**-10.8**
Financial Activities	204.8	0.0	224.8	-0.7	55.9	4.1	114.5	-5.6	**74.7**	**-3.8**
Retail Trade	236.4	0.0	399.4	-5.0	105.7	-1.6	141.6	-7.0	**138.1**	**-5.5**
Manufacturing	131.4	-1.8	313.0	-7.2	25.2	-3.1	144.8	-8.8	**108.9**	**-6.9**
Education/Health	343.3	-1.8	817.2	-4.8	103.0	-2.5	222.9	-4.9	**208.2**	**-6.0**
Construction	135.2	-2.2	148.5	-4.1	68.2	-7.7	108.2	0.4	**87.9**	**3.7**
Professional/Business	357.5	-3.6	607.5	-7.0	131.2	-12.7	316.4	-3.7	**270.8**	**2.2**
Information	37.2	-7.9	186.8	-18.0	9.4	-17.8	22.0	-14.8	**20.0**	**-14.3**
Leisure and Hospitality	199.2	-16.2	367.5	-33.0	225.0	-22.7	167.4	-27.1	**147.6**	**-27.0**

Source: BLS

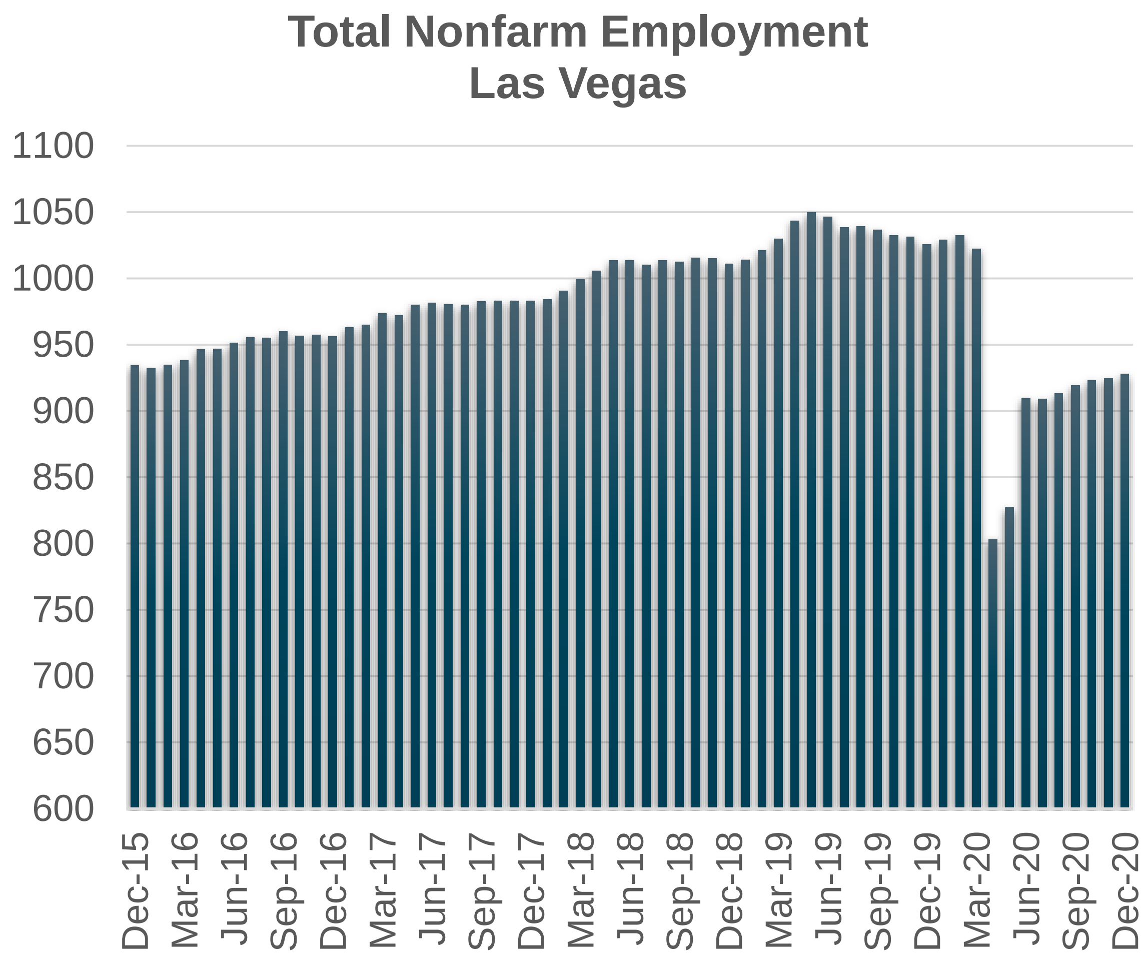
Labor Market





Source: BLS

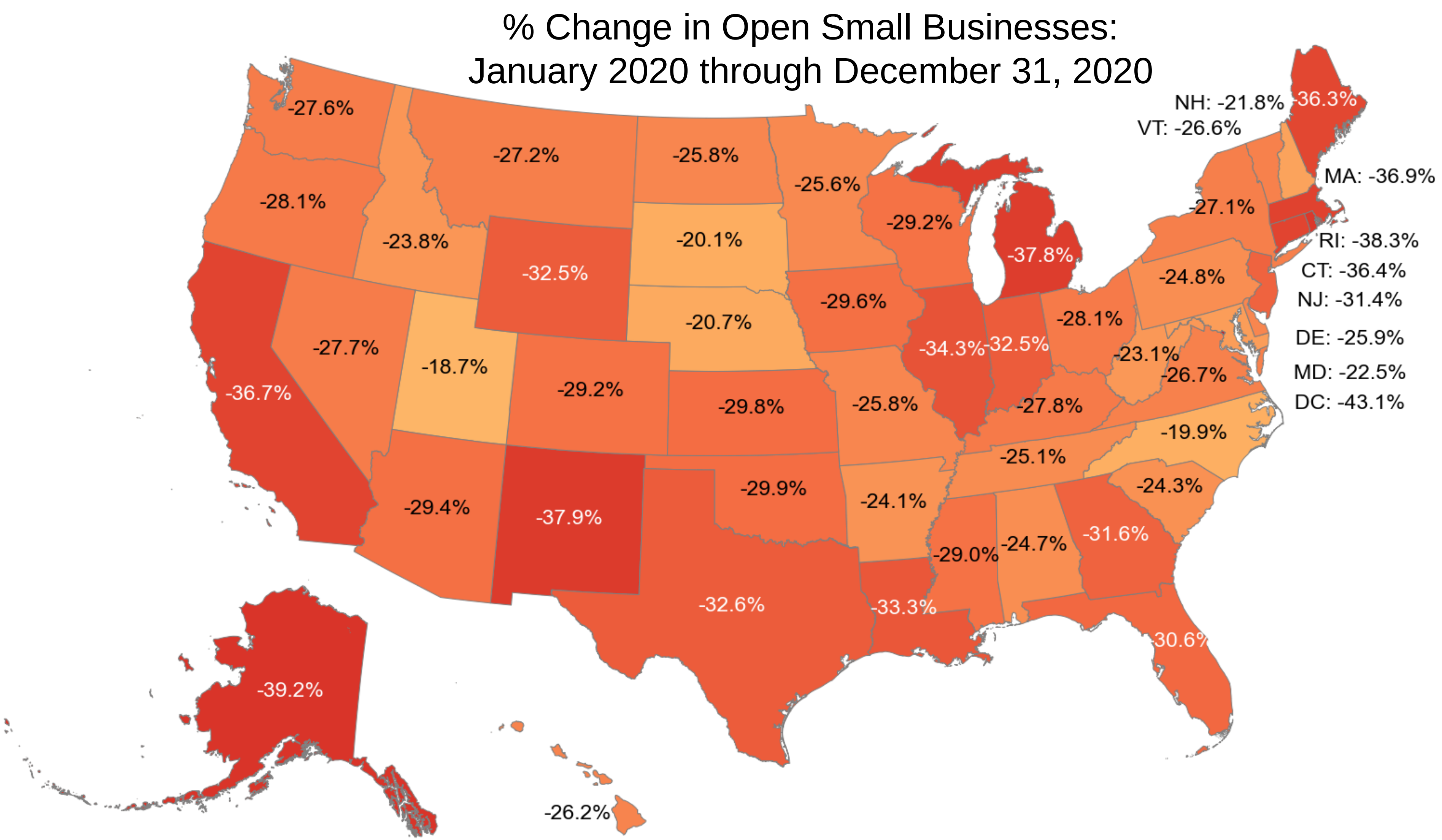
Las Vegas Employment



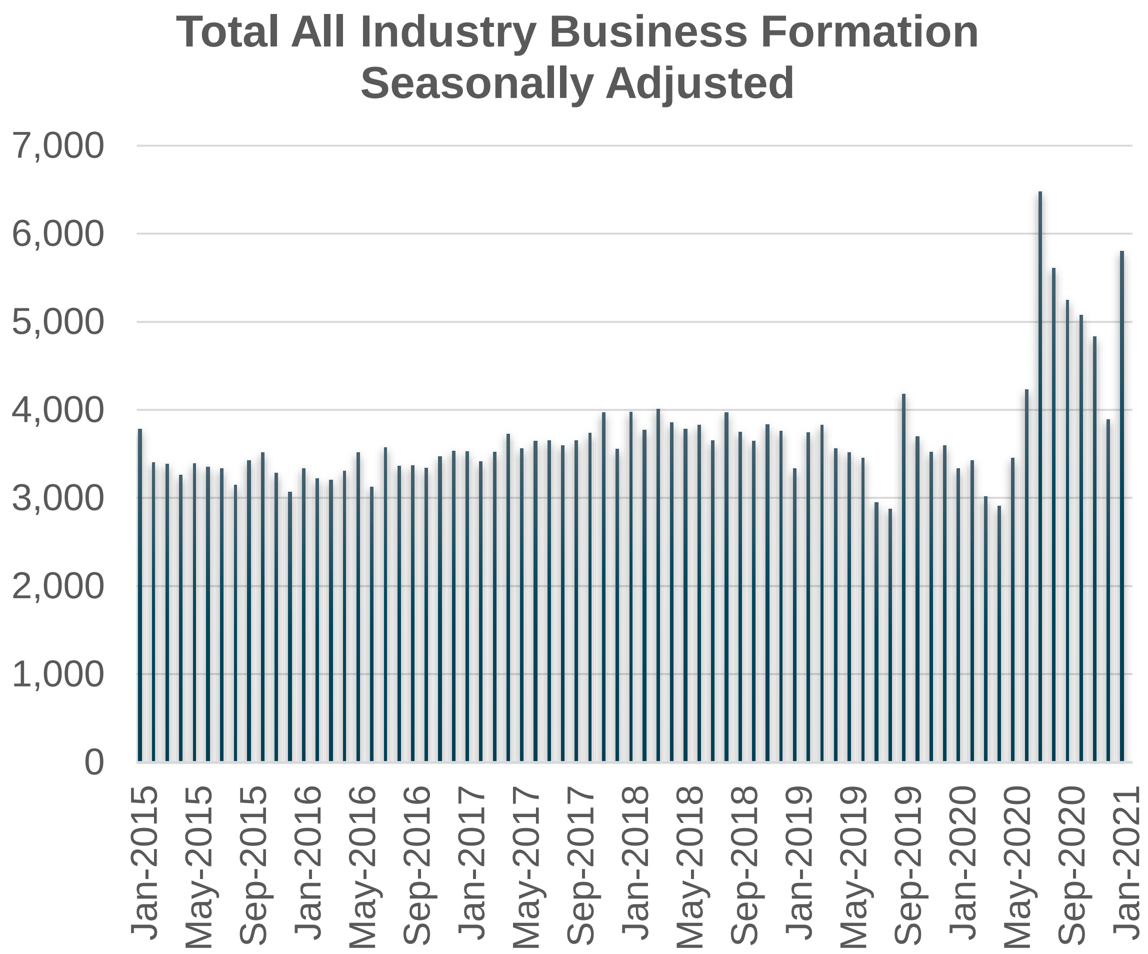
Industry	Dec. 2020 Emp (000s)	Feb to Dec % Growth		
		Abs Chg LV	% Chg LV	% Chg NV
Total Nonfarm	927.8	-104.4	-10.1	-6.9
Finance	55.9	2.2	4.1	1.4
Logistics	49.8	1.4	2.9	1.1
Utilities	2.6	0.0	0.6	-2.4
Retail Trade	105.7	-1.7	-1.6	-0.6
Education/Health	103.0	-2.6	-2.5	-2.1
Prof/Sci/Tech	43.9	-1.2	-2.6	-0.2
Manufacturing	25.2	-0.8	-3.1	-1.3
Government	102.6	-4.9	-4.5	-8.9
Construction	68.2	-5.7	-7.7	-6.3
Wholesale Trade	22.3	-2.5	-10.0	-6.0
Admin Support	71.5	-12.3	-14.7	-10.9
Information	9.4	-2.0	-17.8	-12.7
Hospitality	225.0	-66.1	-22.7	-13.8
Management	16.1	-5.4	-25.0	-17.0

Source: BLS

Open Small Businesses



Nevada Business Formation Statistics



Application Type	2019	2020	% Growth
Total	41,994	51,427	22.5
Business App. From Corporations	5,140	5,415	5.4
High Propensity Applications	14,421	17,222	19.4
Business App. With Planned Wages	5,529	6,542	18.3

Source: Census

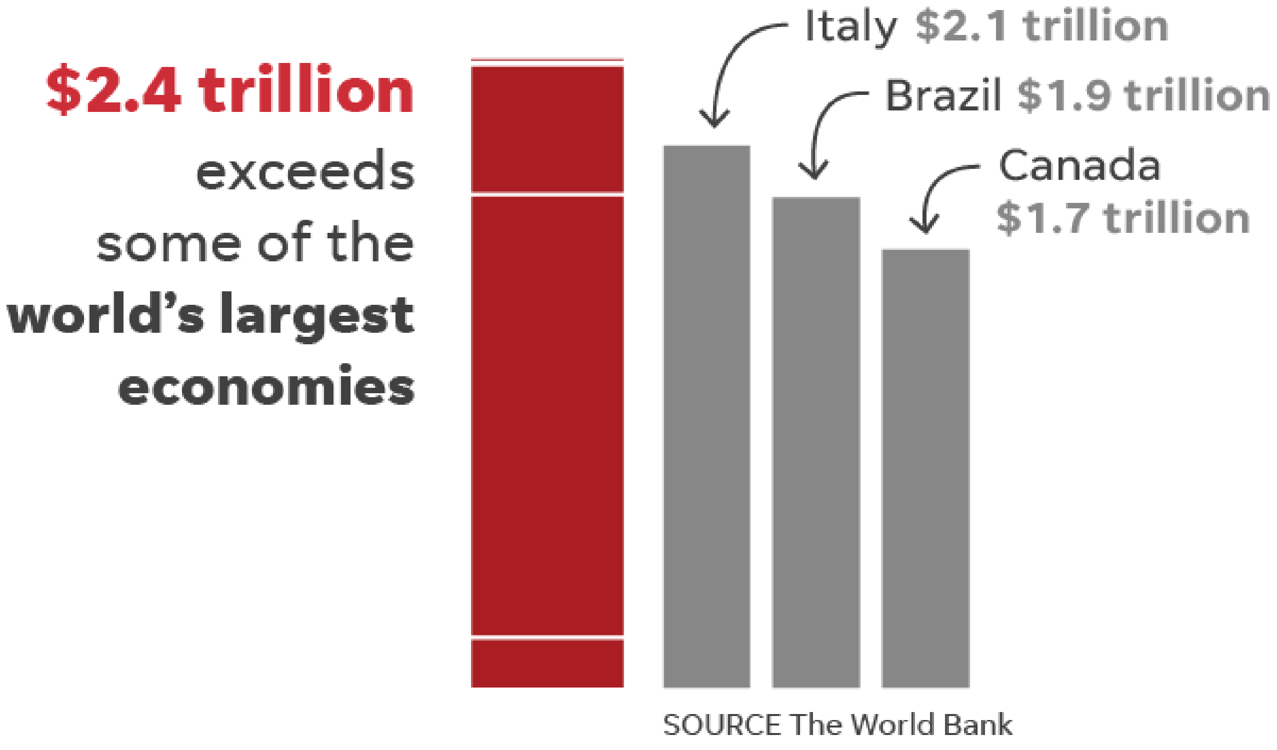
2. Federal Policy (Over)reaction

Fiscal Stimulus Plans

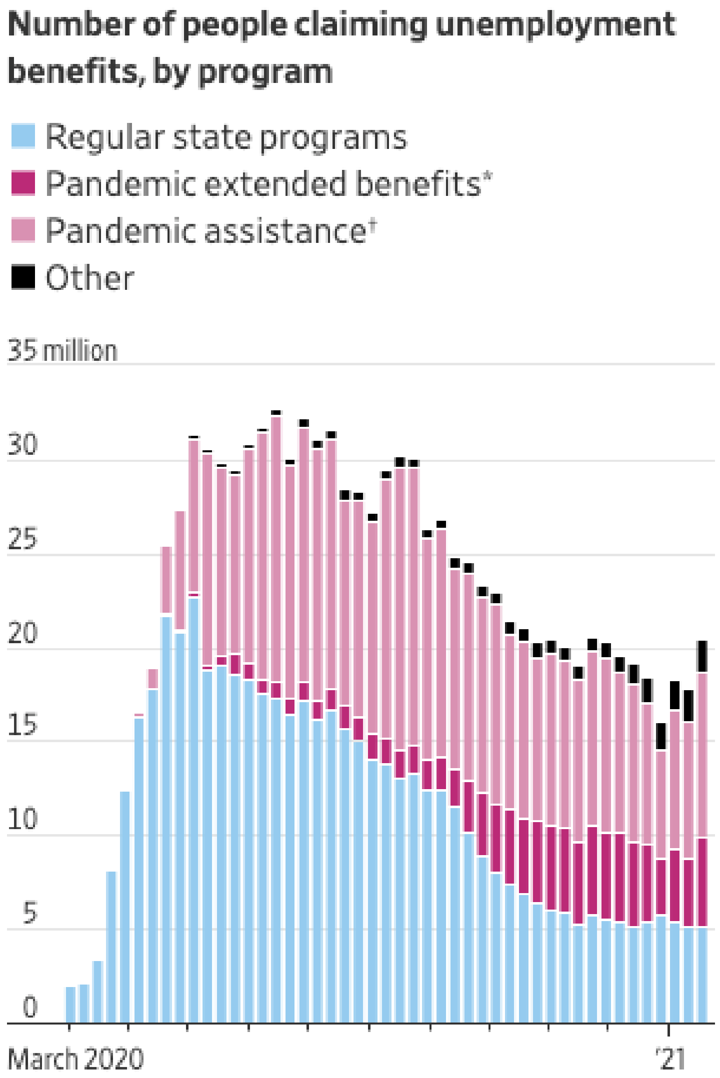
- Unemployment Insurance
- Local Government Support
- PPP Loans
- Direct Transfers to People

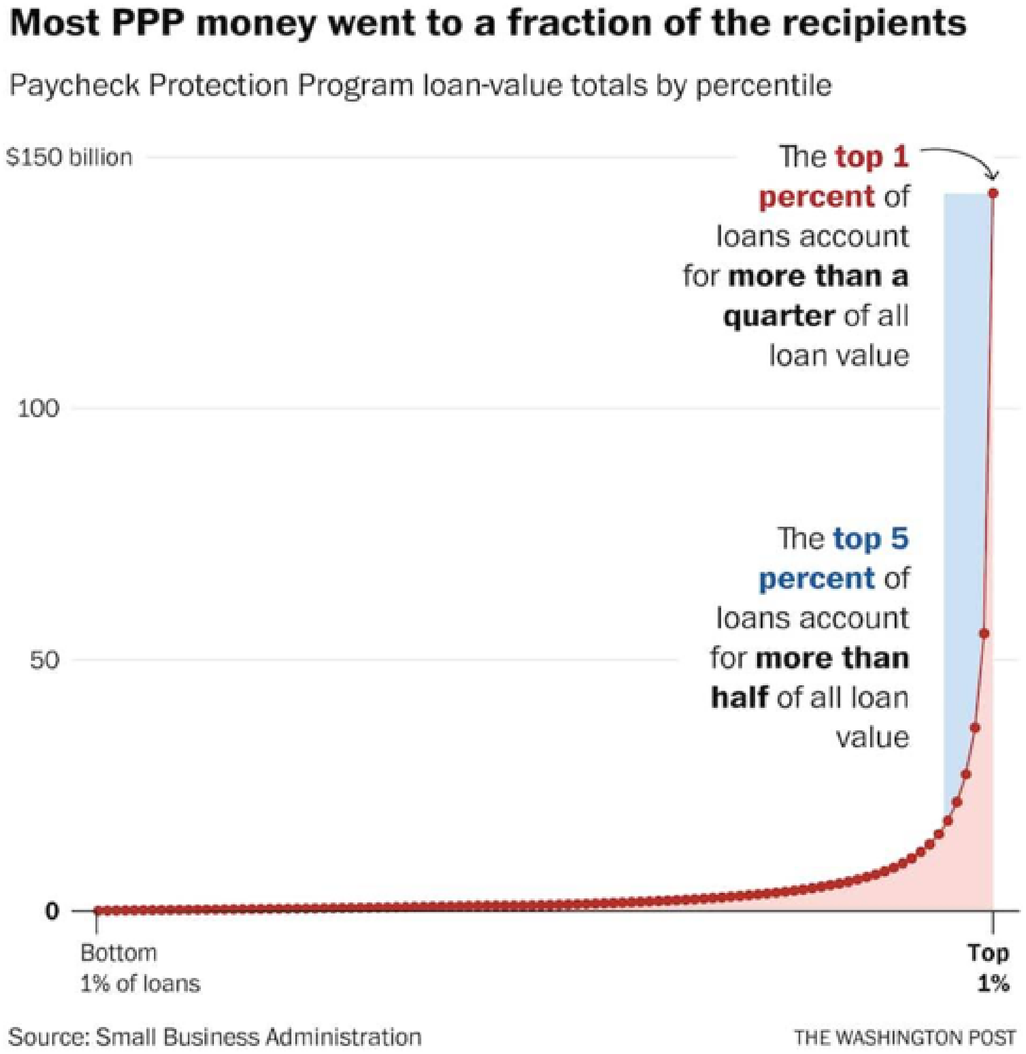
Monetary Stimulus

- Rate Cuts
- Quantitative Easing

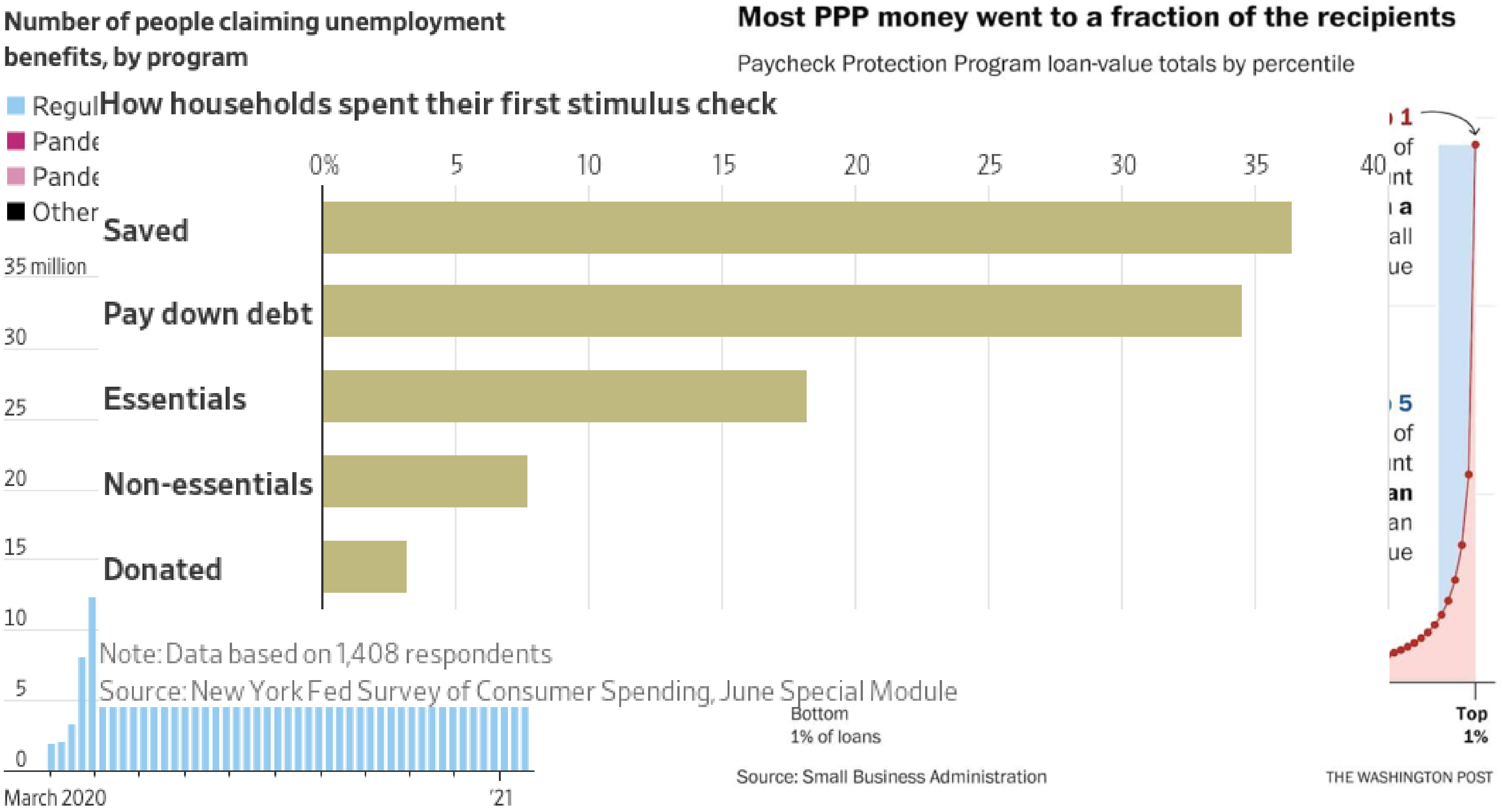


Are you doing what you need to do?

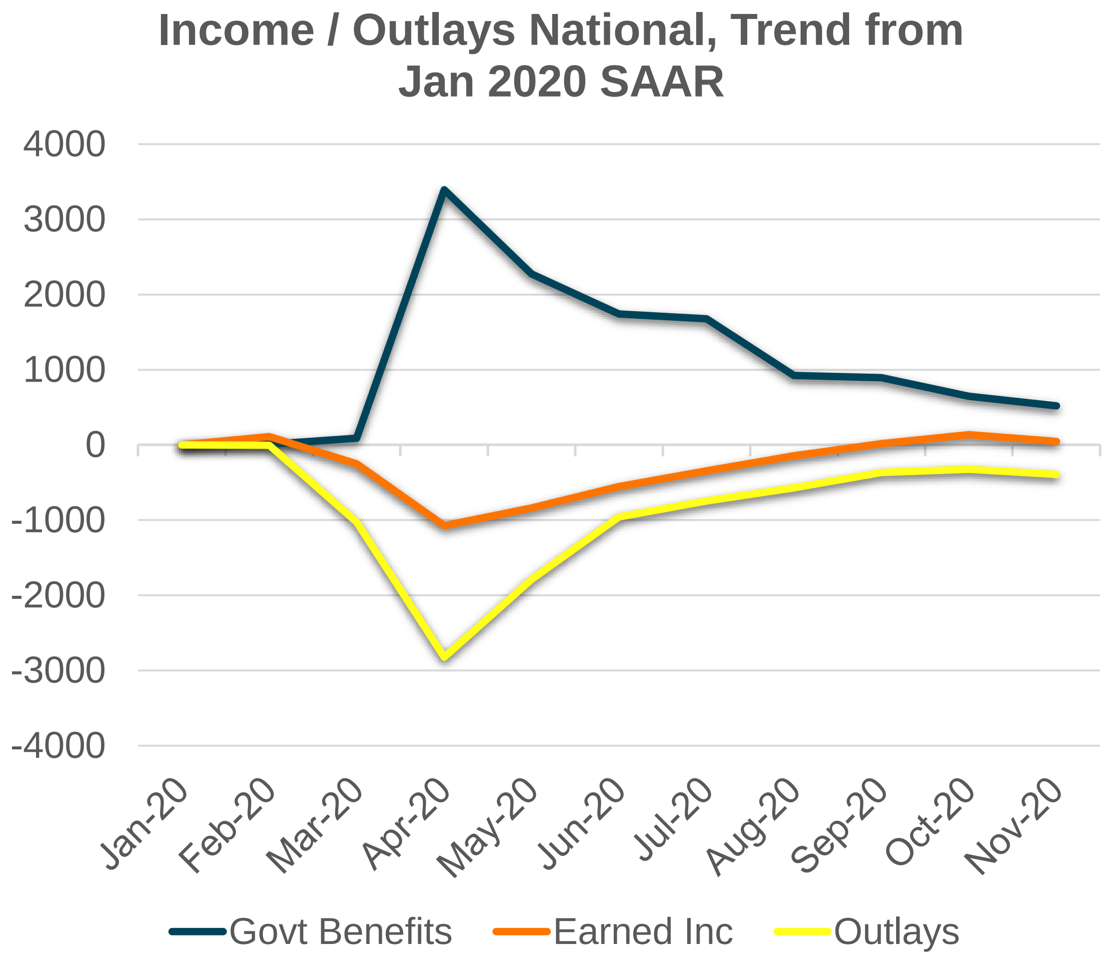




Are you doing what you need to do?



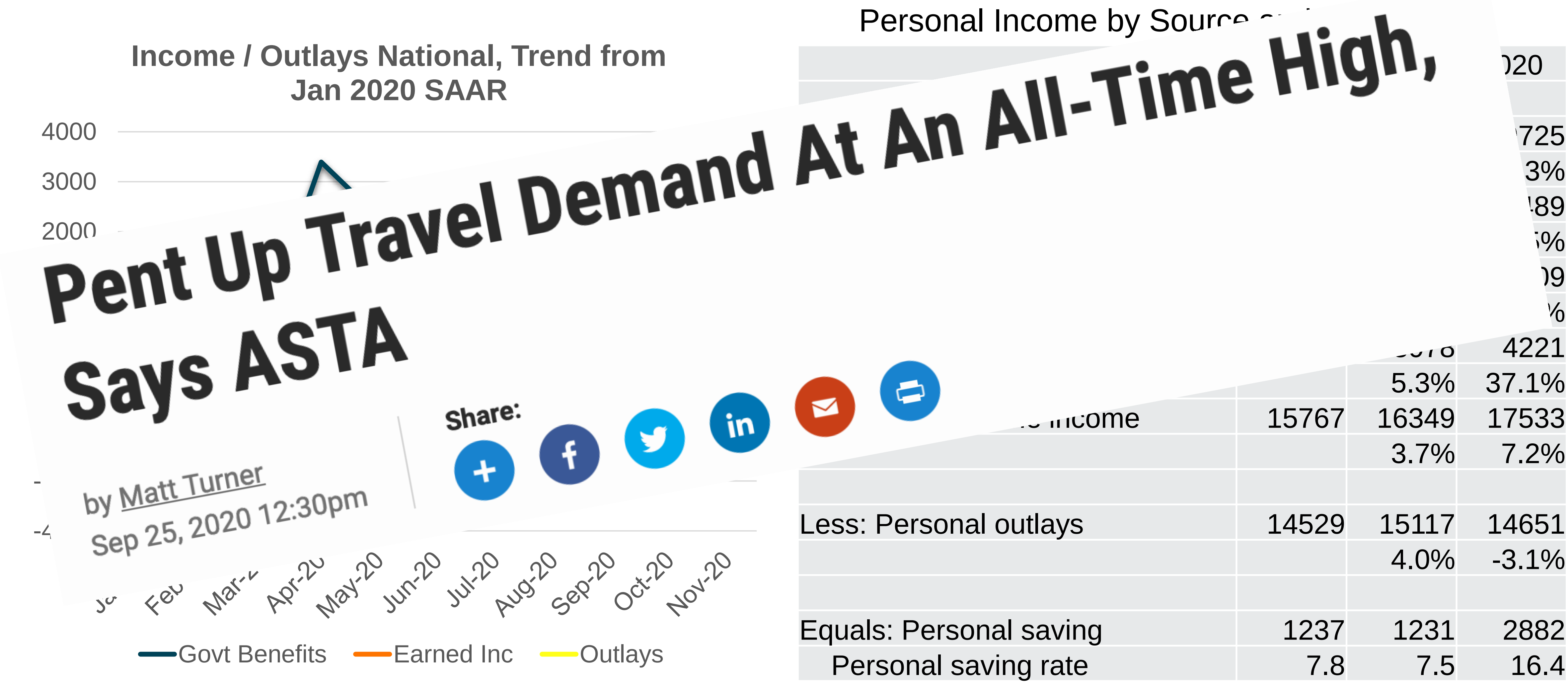
Policy (Over)reaction



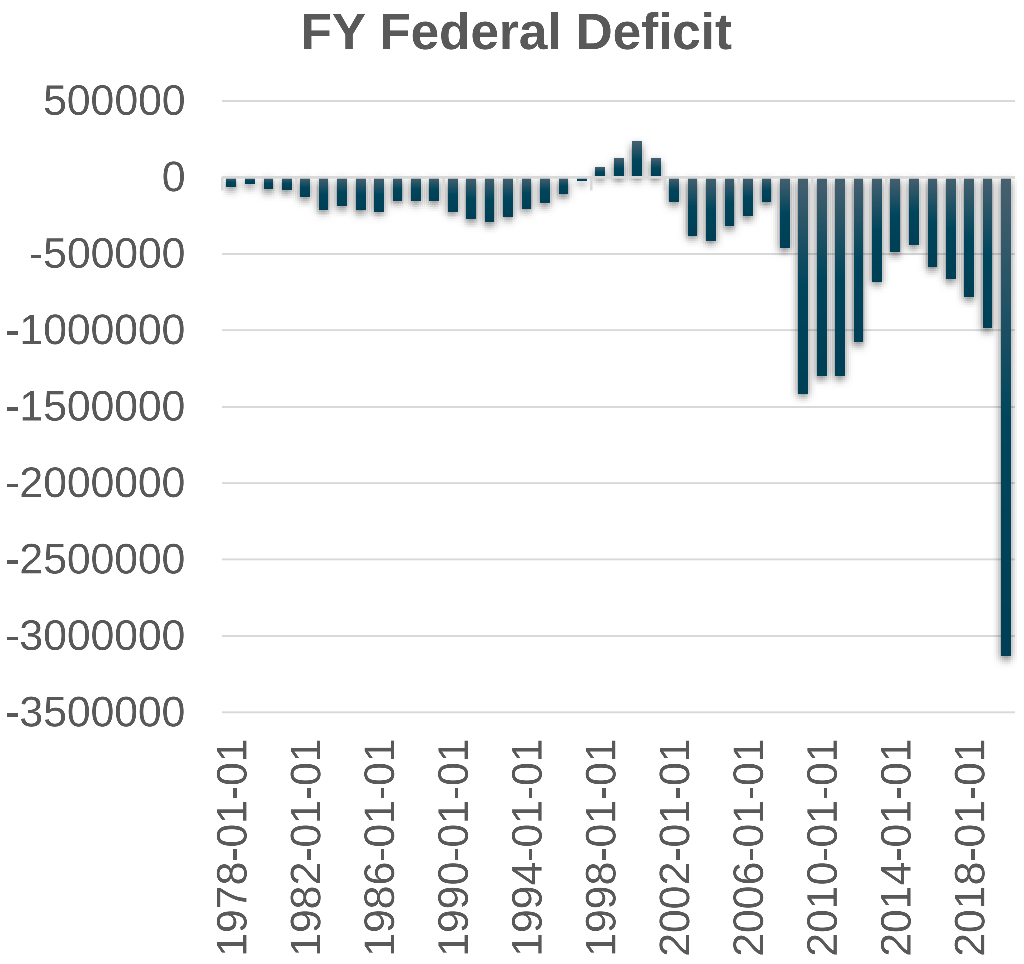
Personal Income by Source and Use ($Bil)

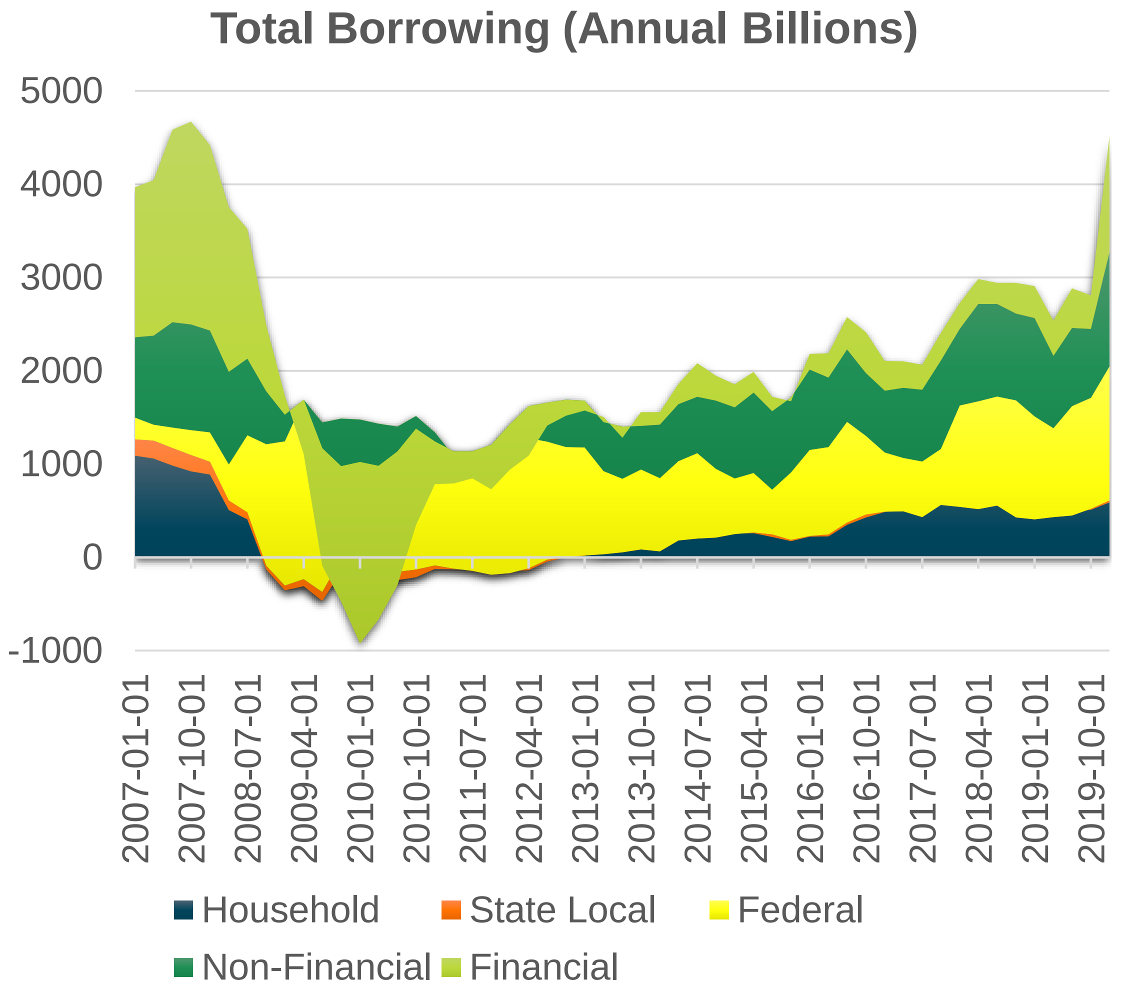
	2018	2019	2020
Personal income	17852	18552	19725
		3.9%	6.3%
Compensation of employees	10950	11432	11489
		4.4%	0.5%
Capital Earnings	5292	5413	5409
		2.3%	-0.1%
Government benefits	2923	3078	4221
		5.3%	37.1%
Equals: Disposable income	15767	16349	17533
		3.7%	7.2%
Less: Personal outlays	14529	15117	14651
		4.0%	-3.1%
Equals: Personal saving	1237	1231	2882
Personal saving rate	7.8	7.5	16.4

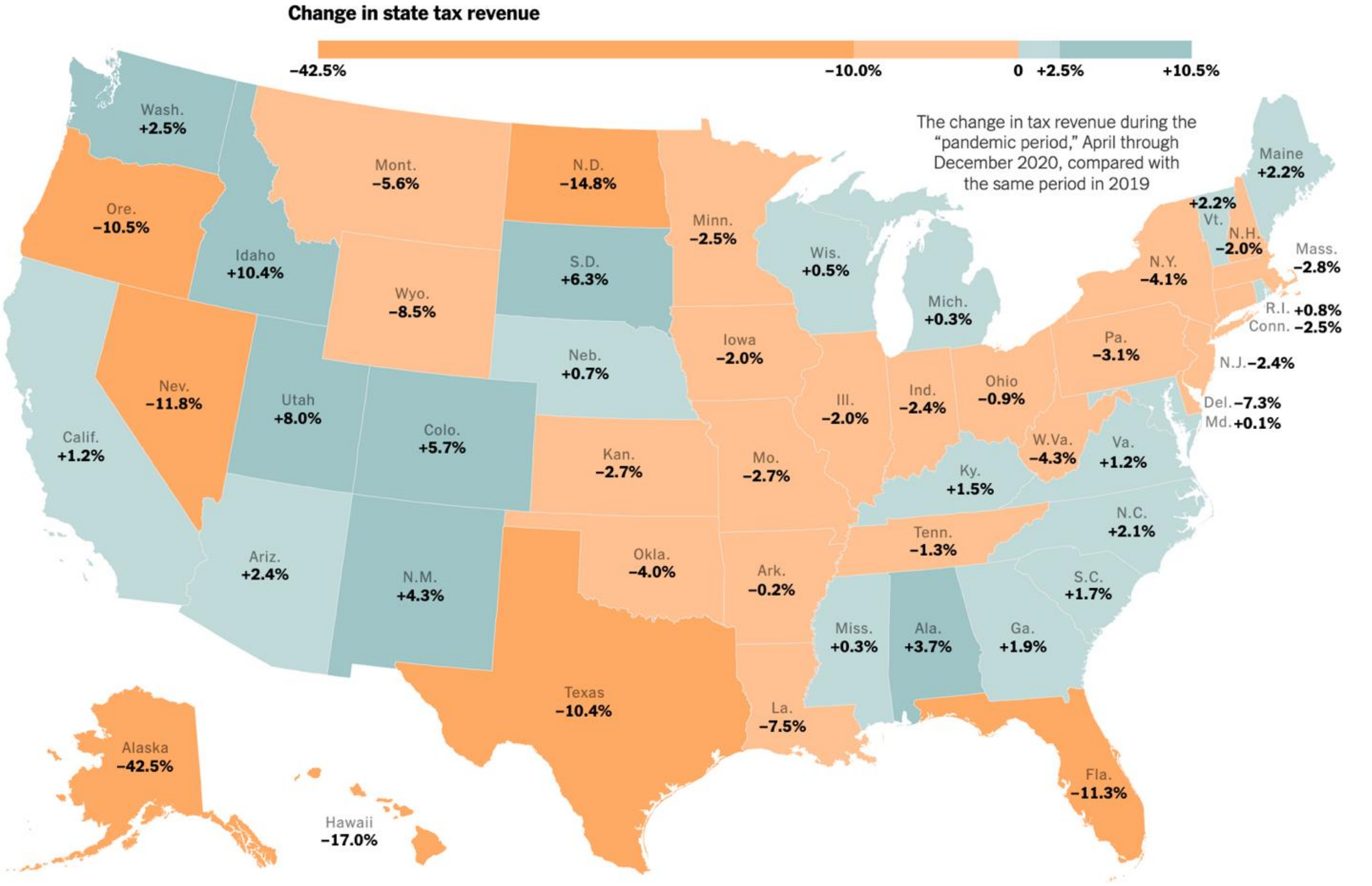
Policy (Over)reaction



Government Debt

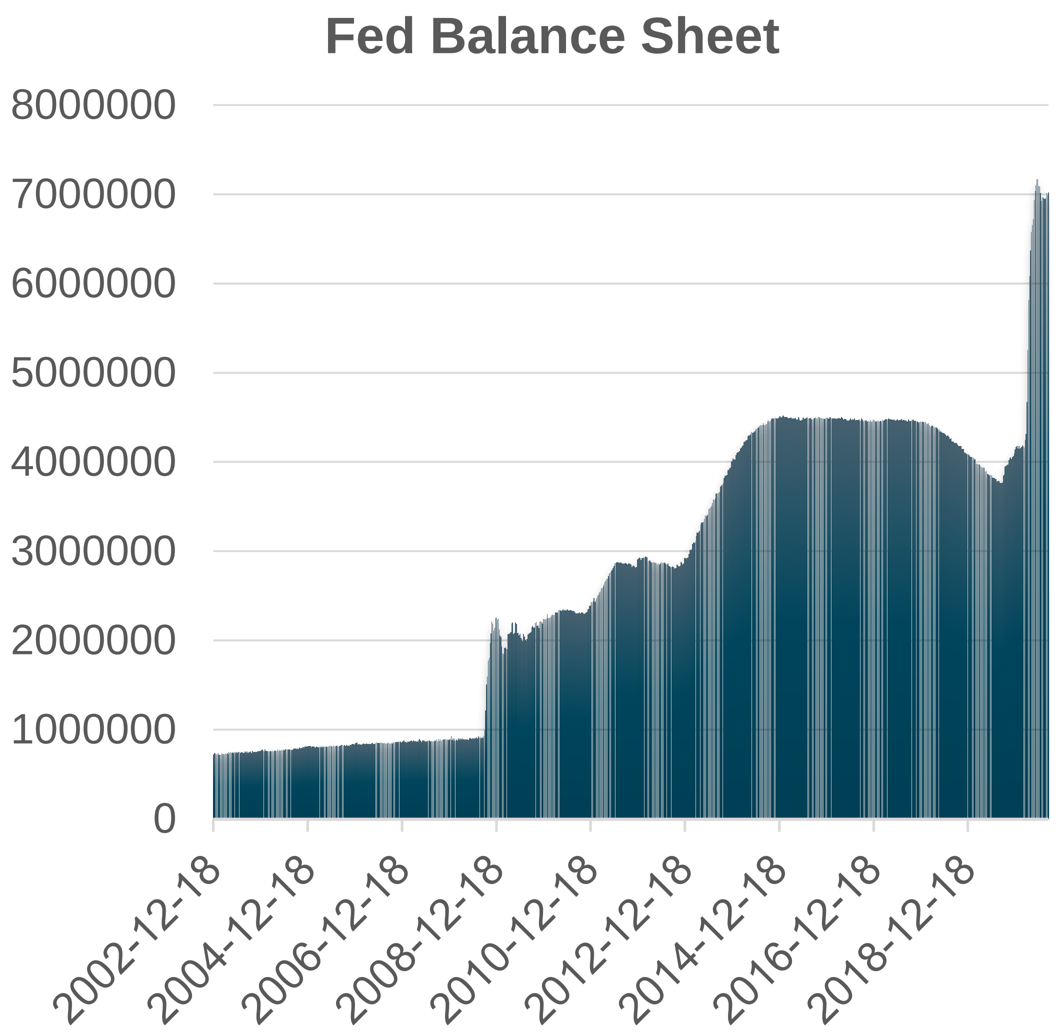


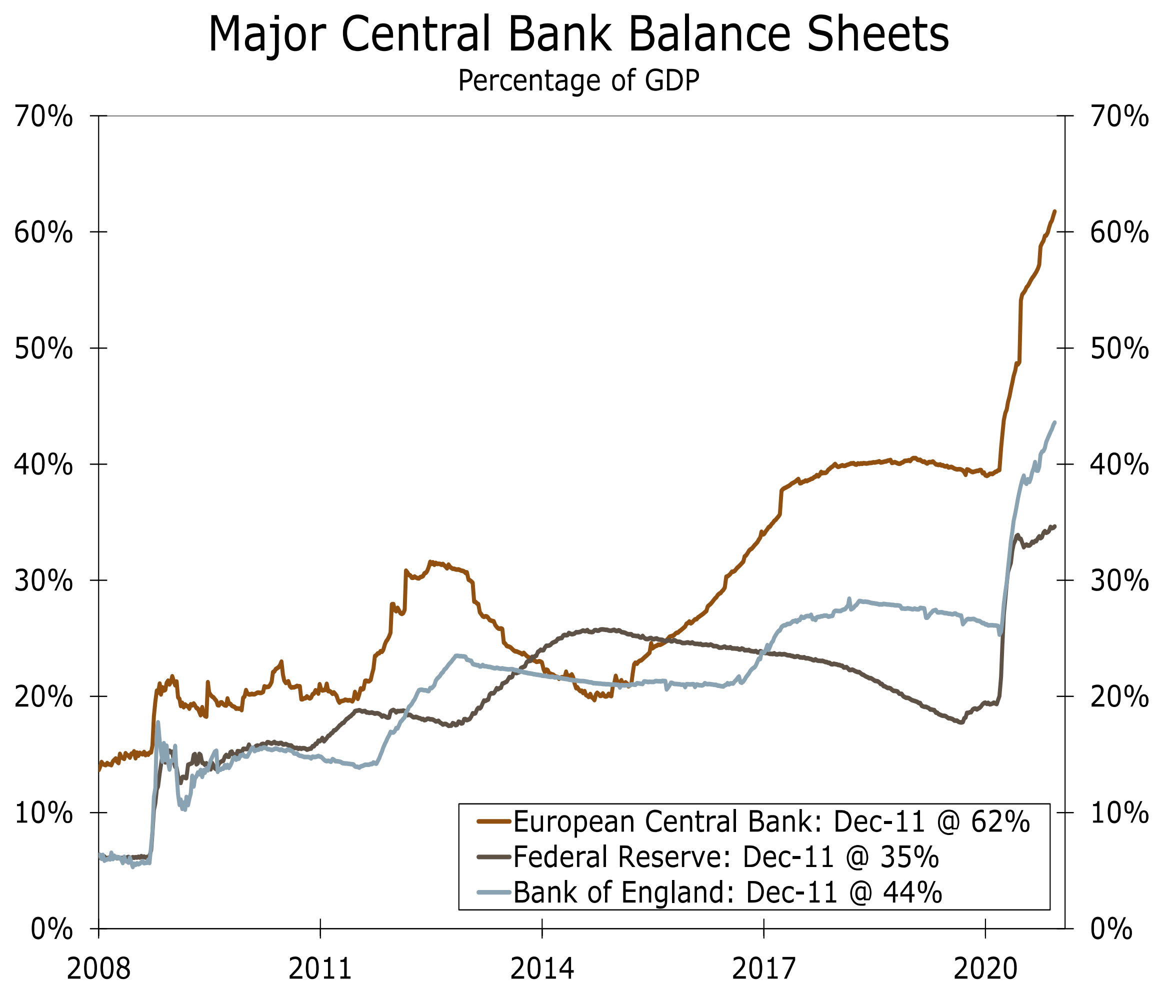




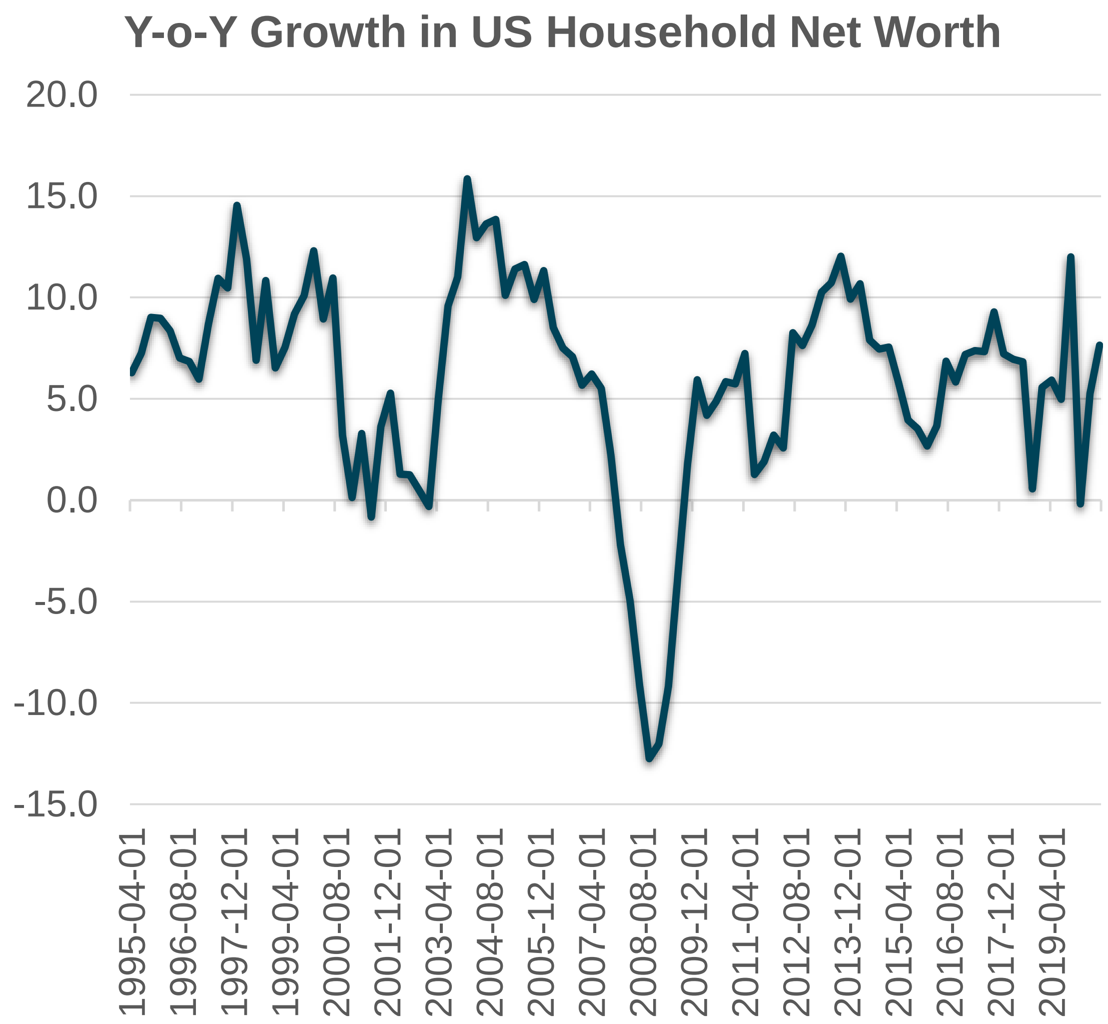
Source: Urban-Brookings Tax Policy Center

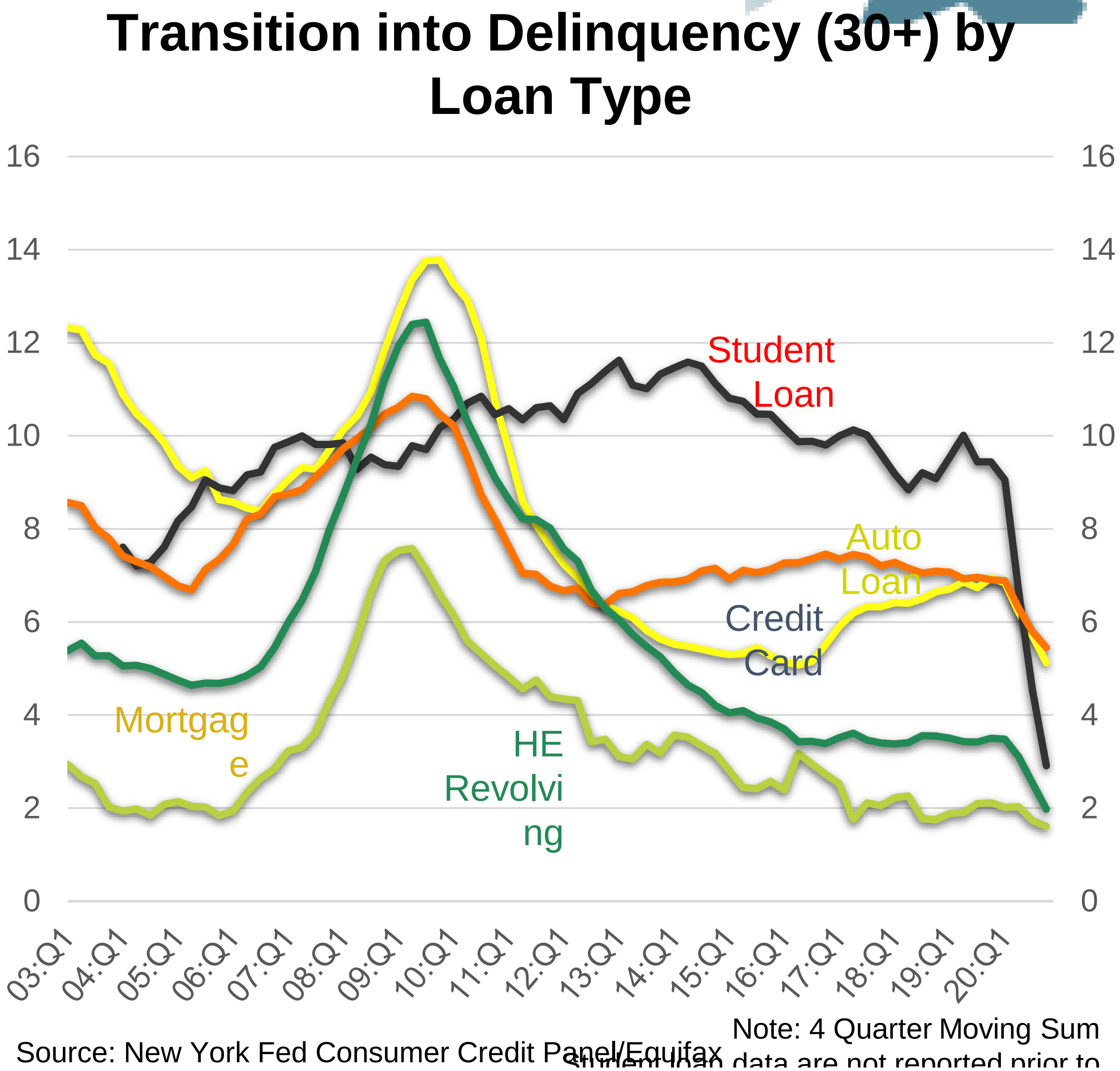
Federal Reserve Policy



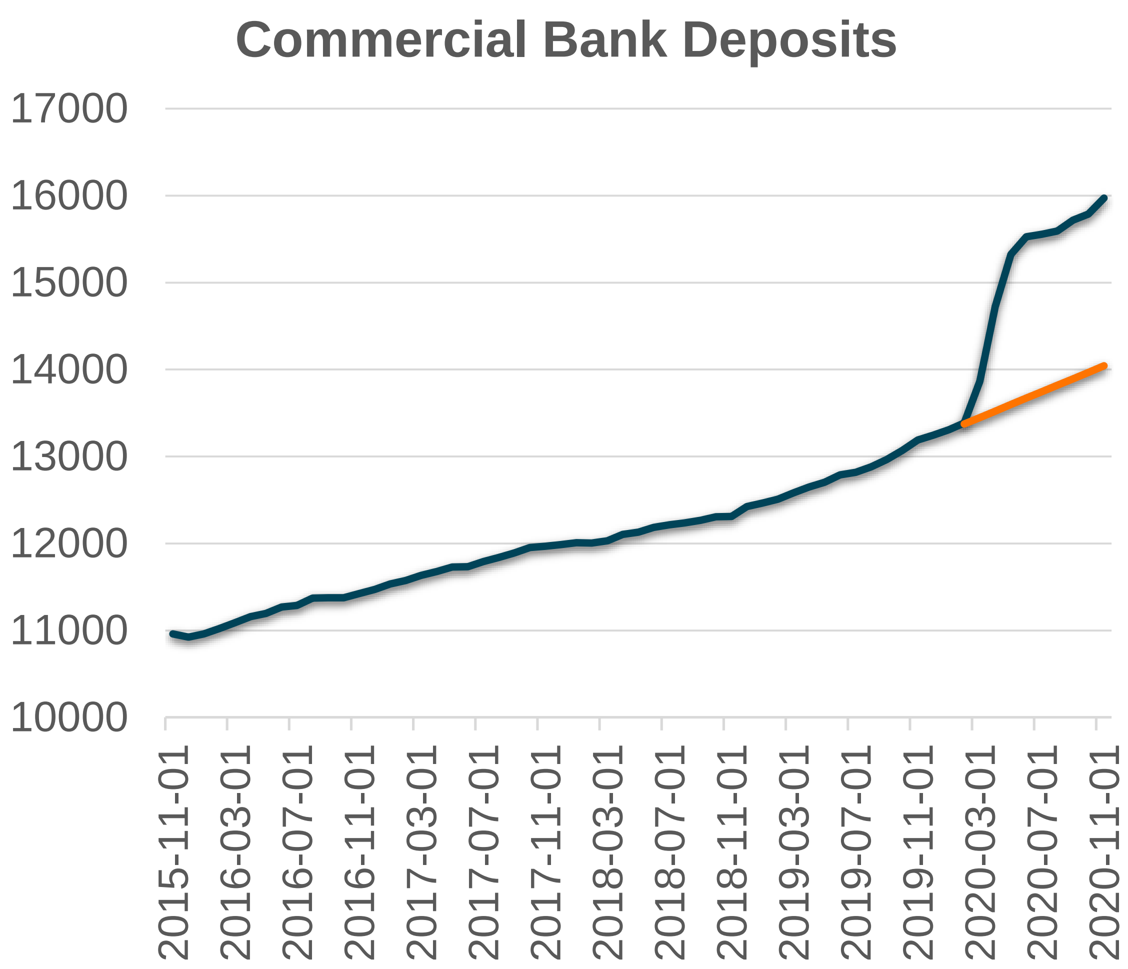


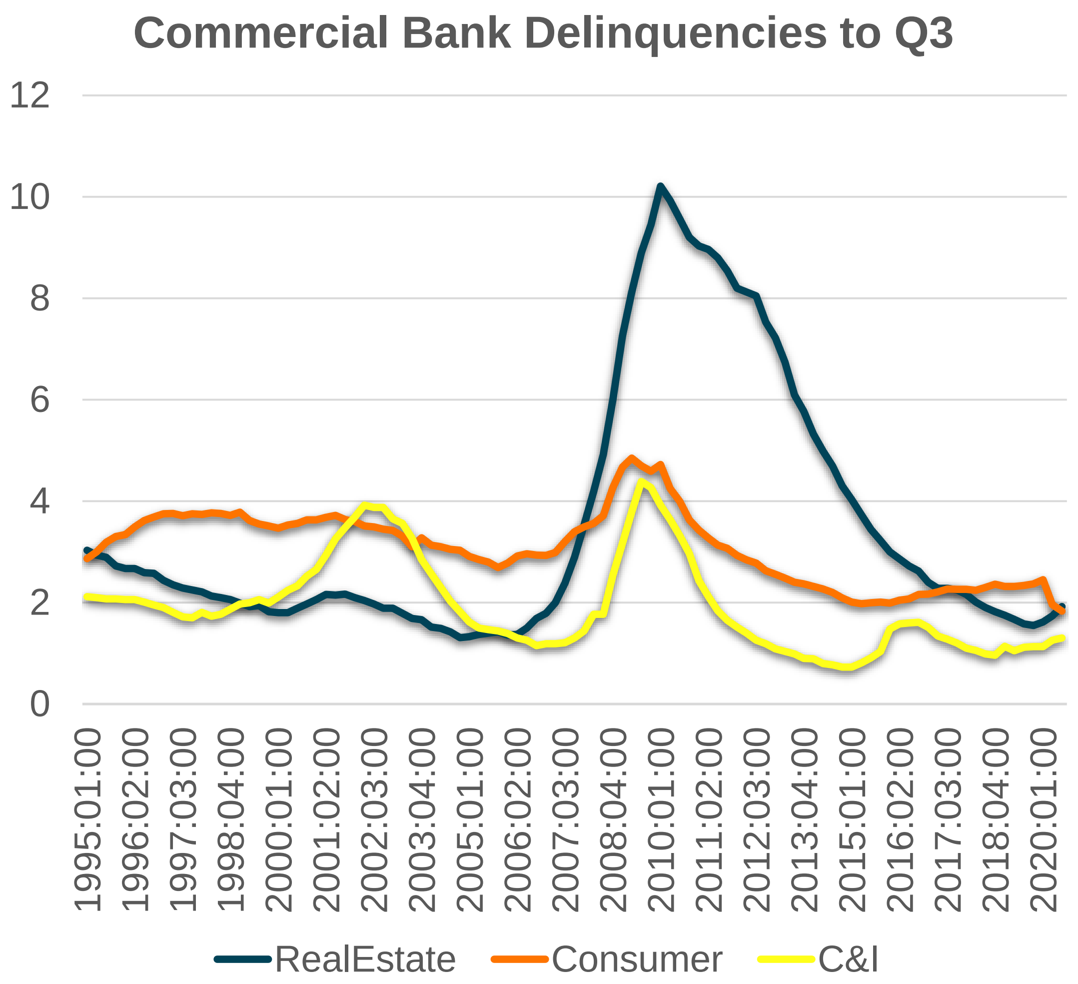
Unneeded Liquidity



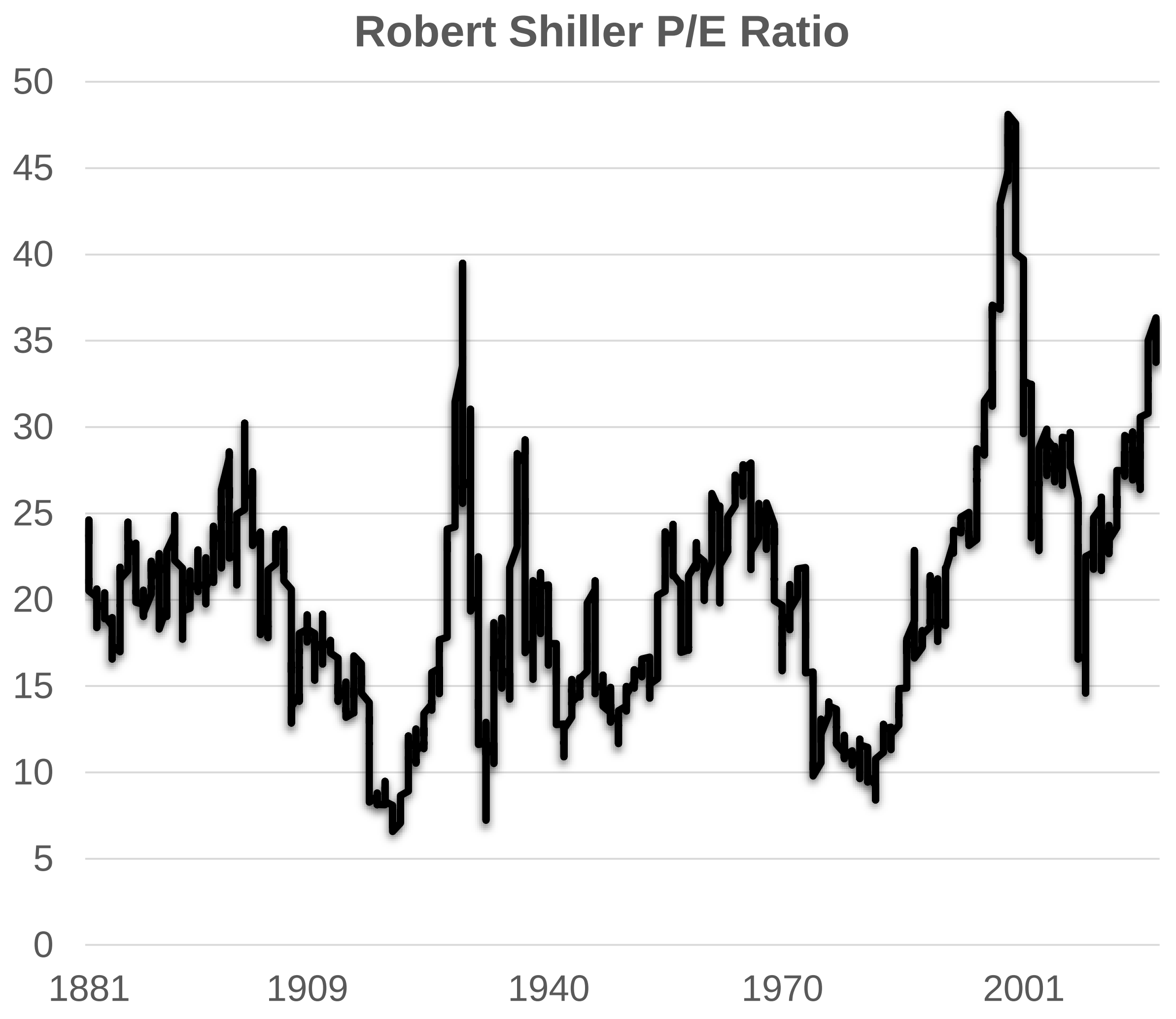


Credit Markets Looks Clean



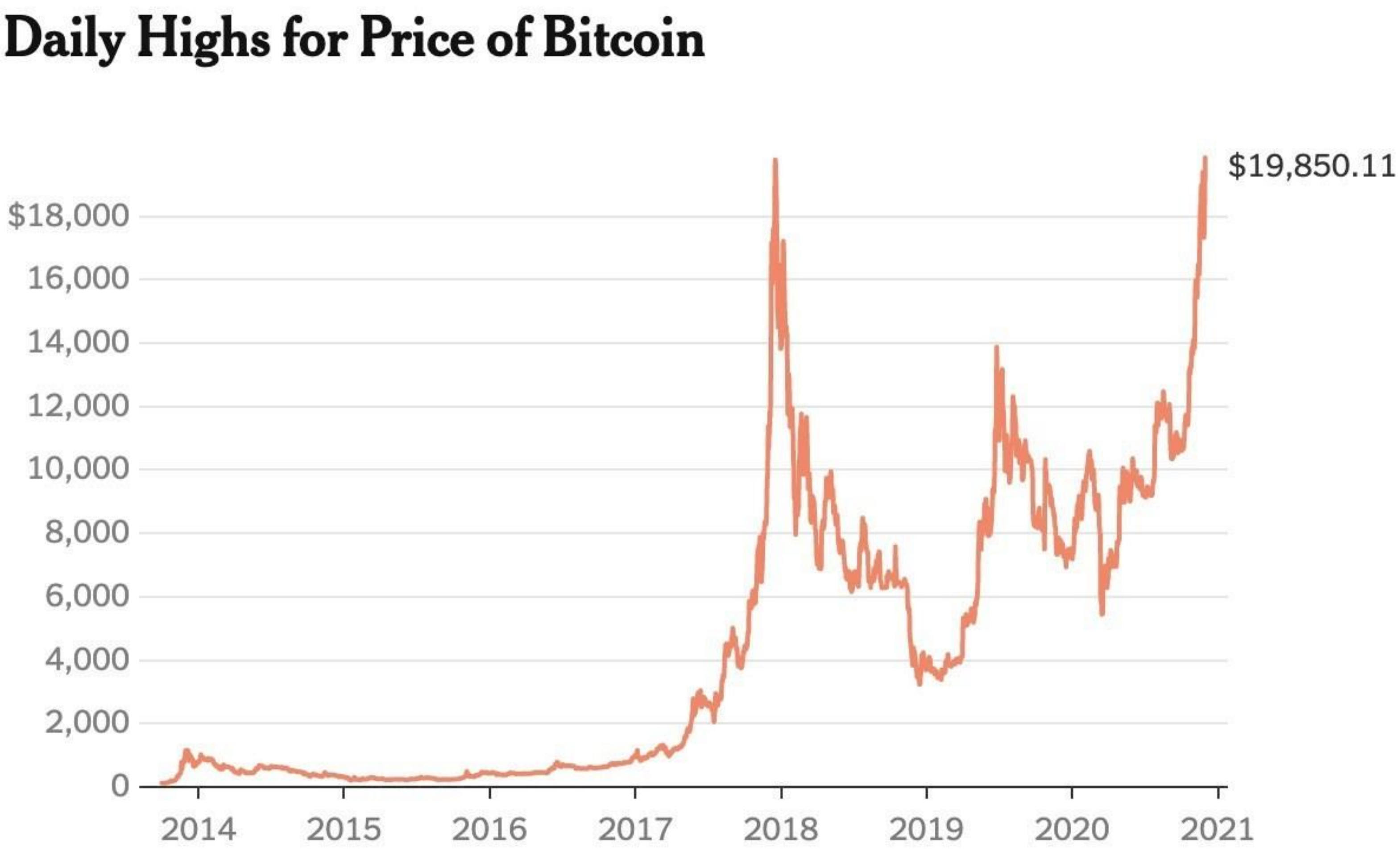


Dry Powder

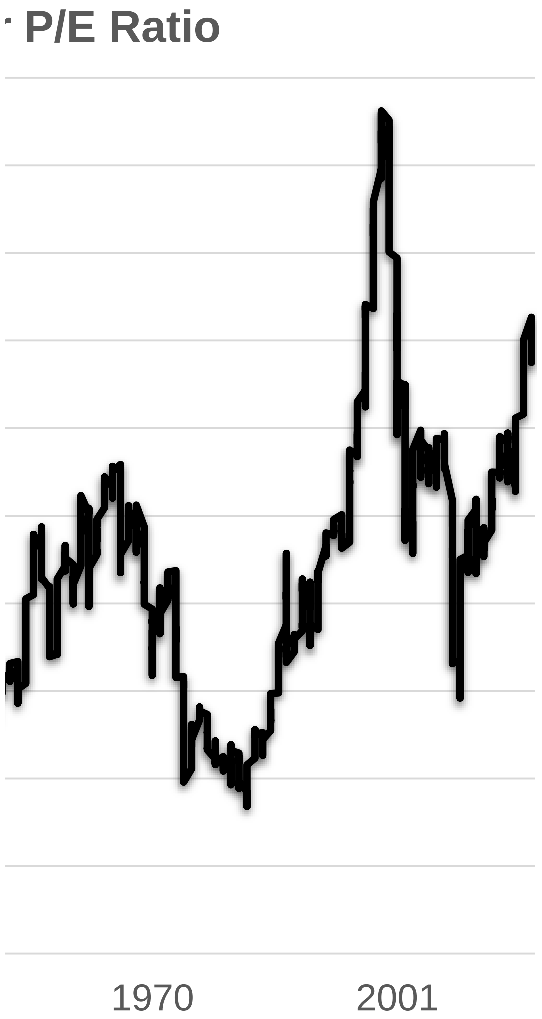


Robert Shiller P/E Ratio
50
45
40
35
30
25
20
15
10
5
0
1881
1909
1940
1970
2001

Dry Powder

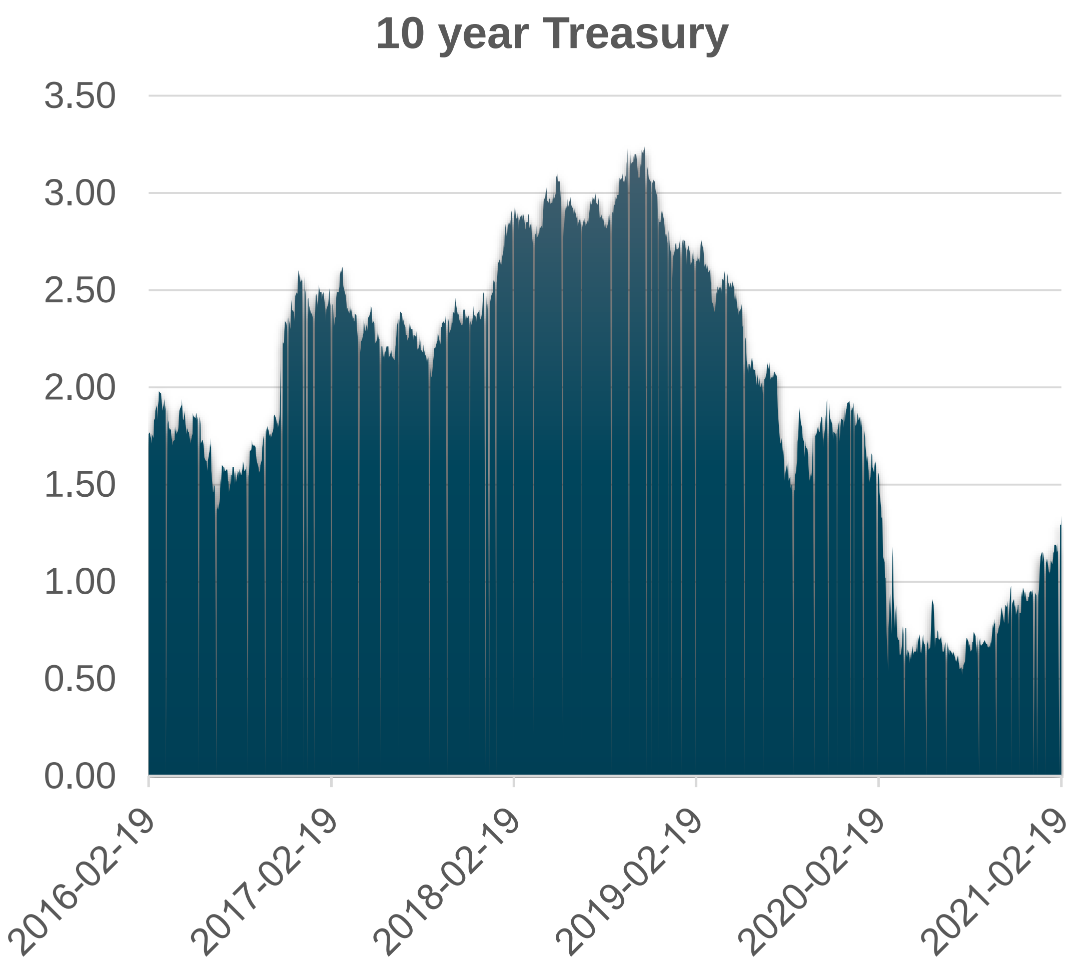


Daily Highs for Price of Bitcoin
$19,850.11
$18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
2014
2015
2016
2017
2018
2019
2020
2021

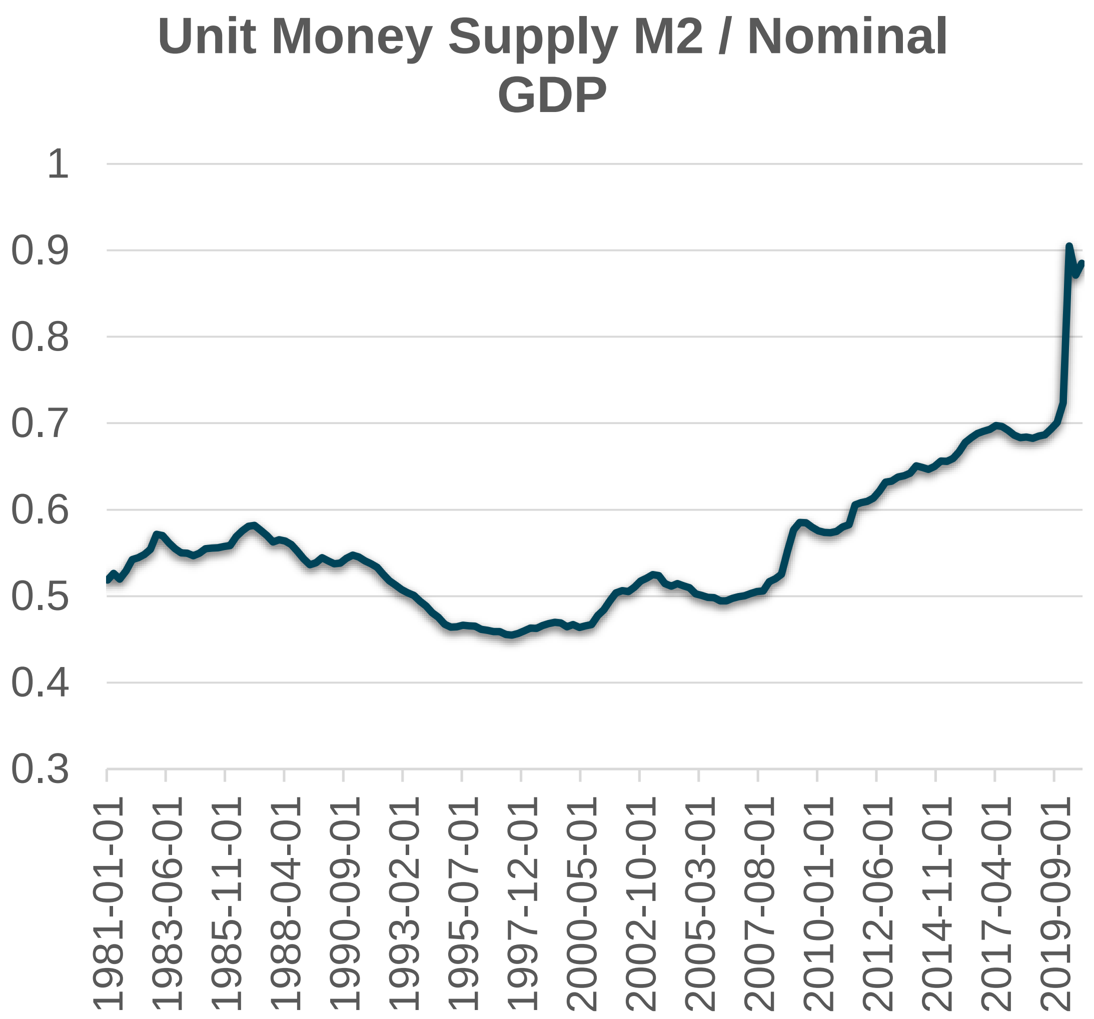


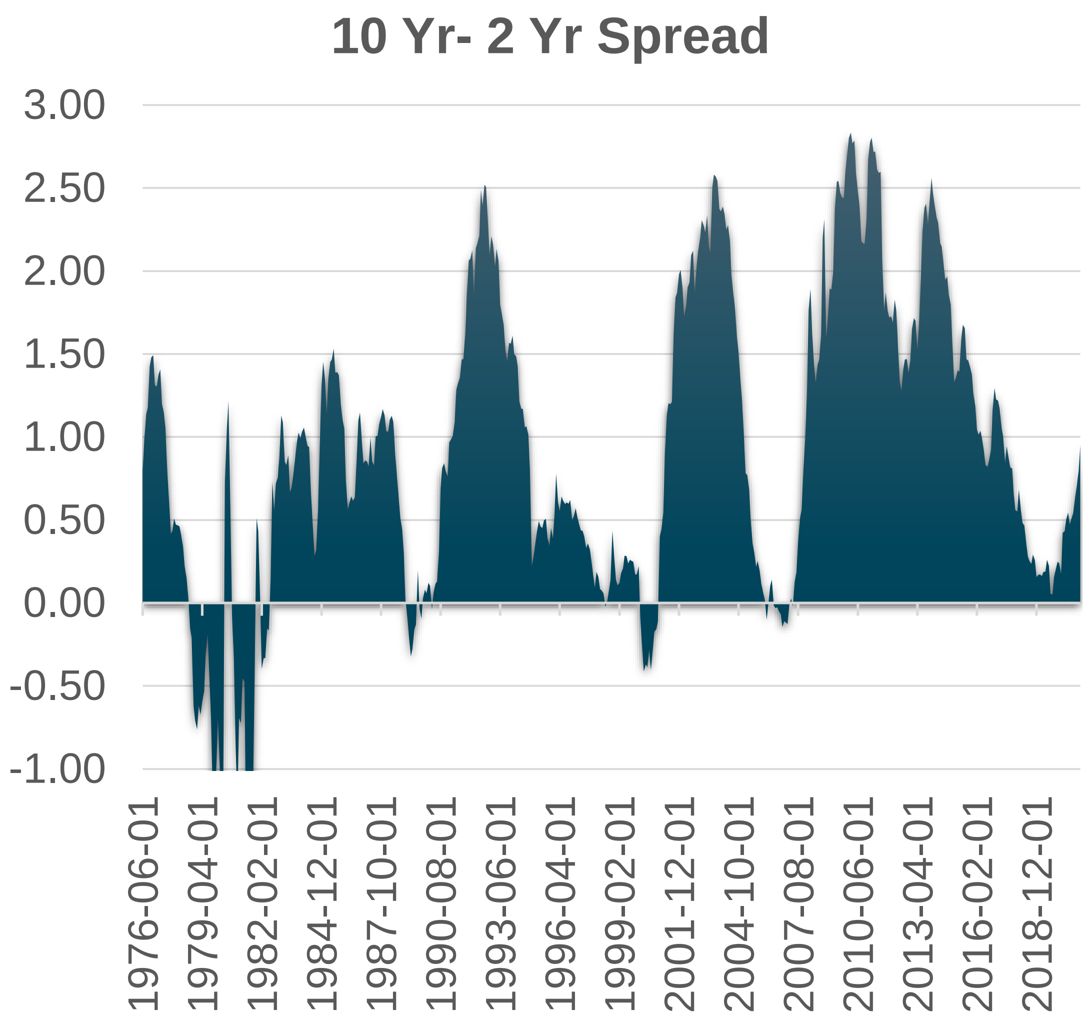
P/E Ratio
1881
1909
1940
1970
2001

Rates and Inflation



Inflation Potential?

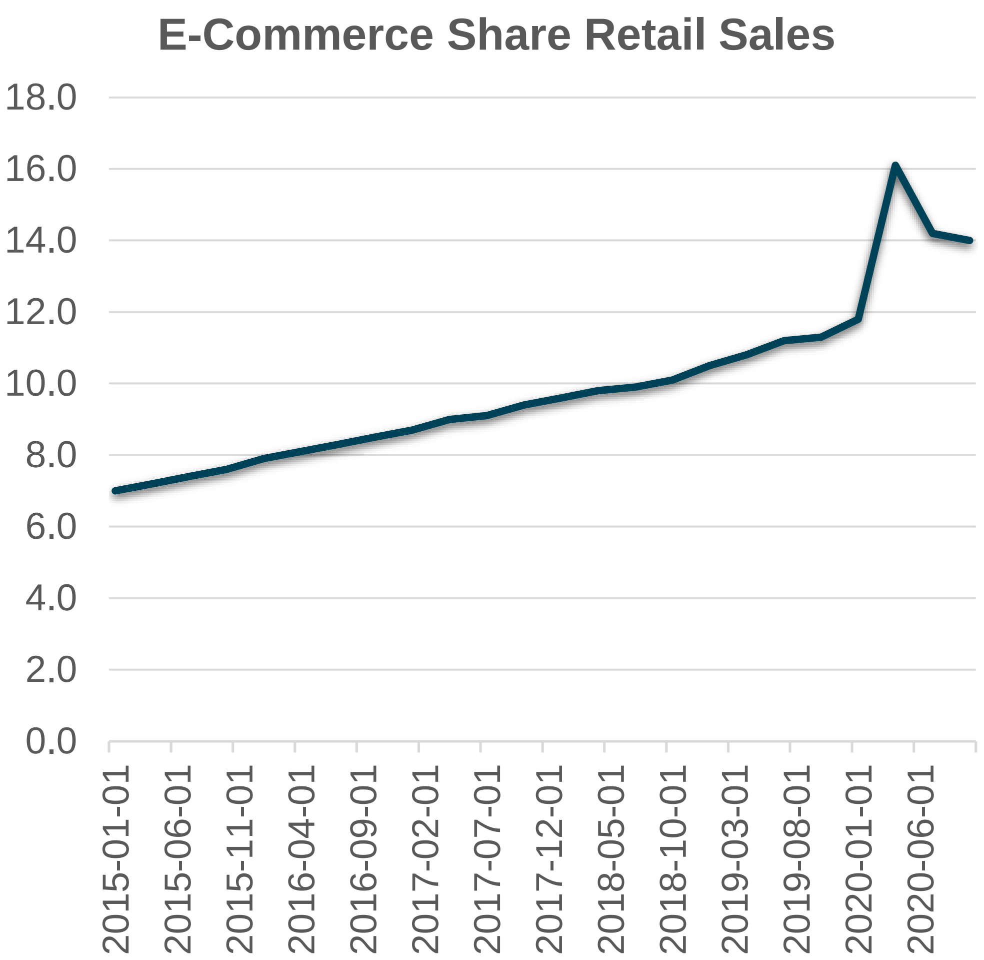




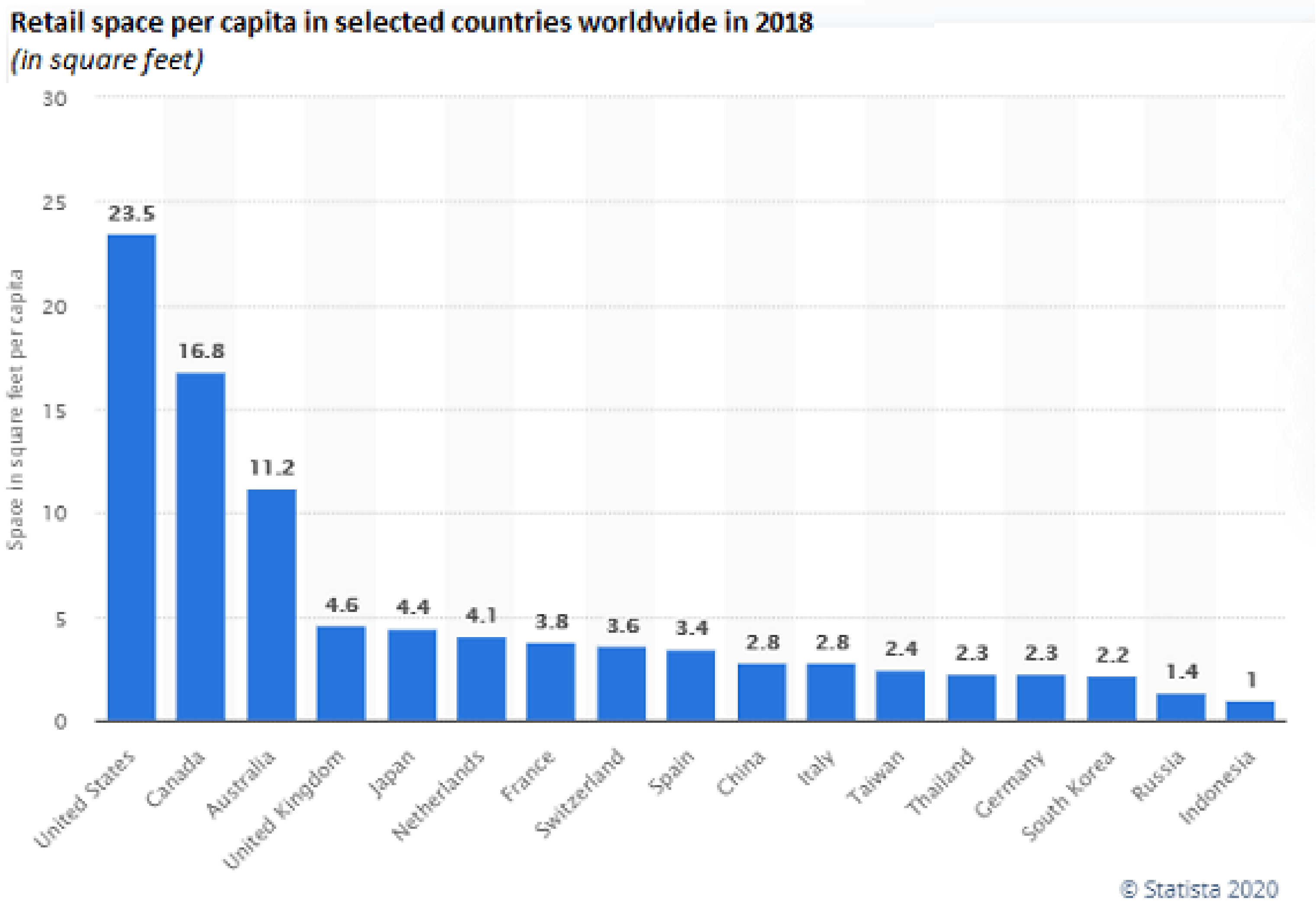
3. Long Run Consumer / Business Behavior

How does Covid change us?

- This is not a “new normal”
  - Polio, smallpox, plague, etc
  - Spanish flu, MERS, SARS
  - Terrorism episodes
  - No permanent change in consumer behavior seen
- Acceleration of Trends that were already there
  - Retail shifting to online
  - The WFH explosion
  - The future of location



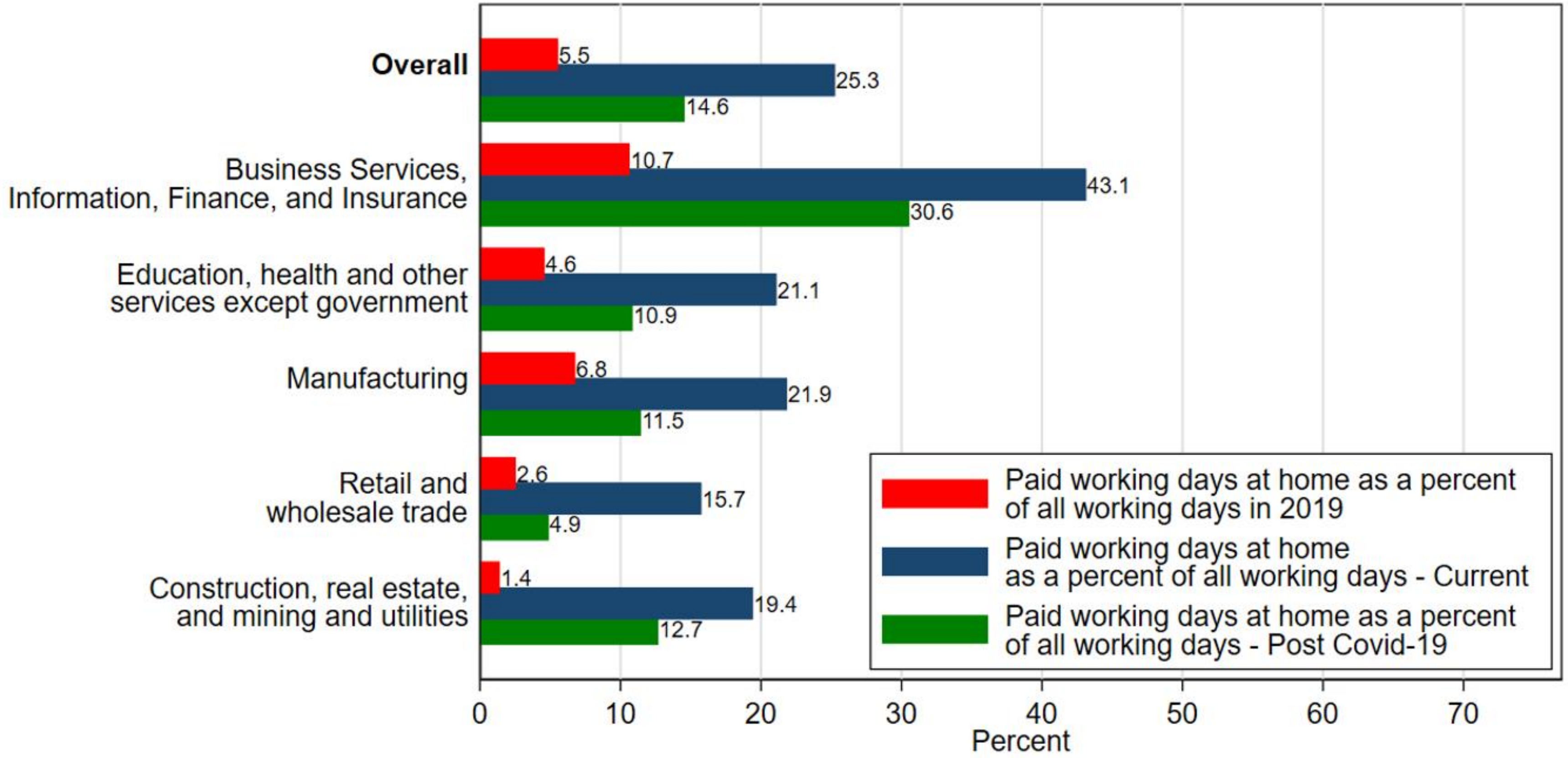
The retail dilemma



1) When possible, re-zone retail to mixed use.
2) Amend retail zoning to include ecommerce suppliers.
3) Look to create work / live spaces
4) State should review how local cities can fund themselves

WFH?

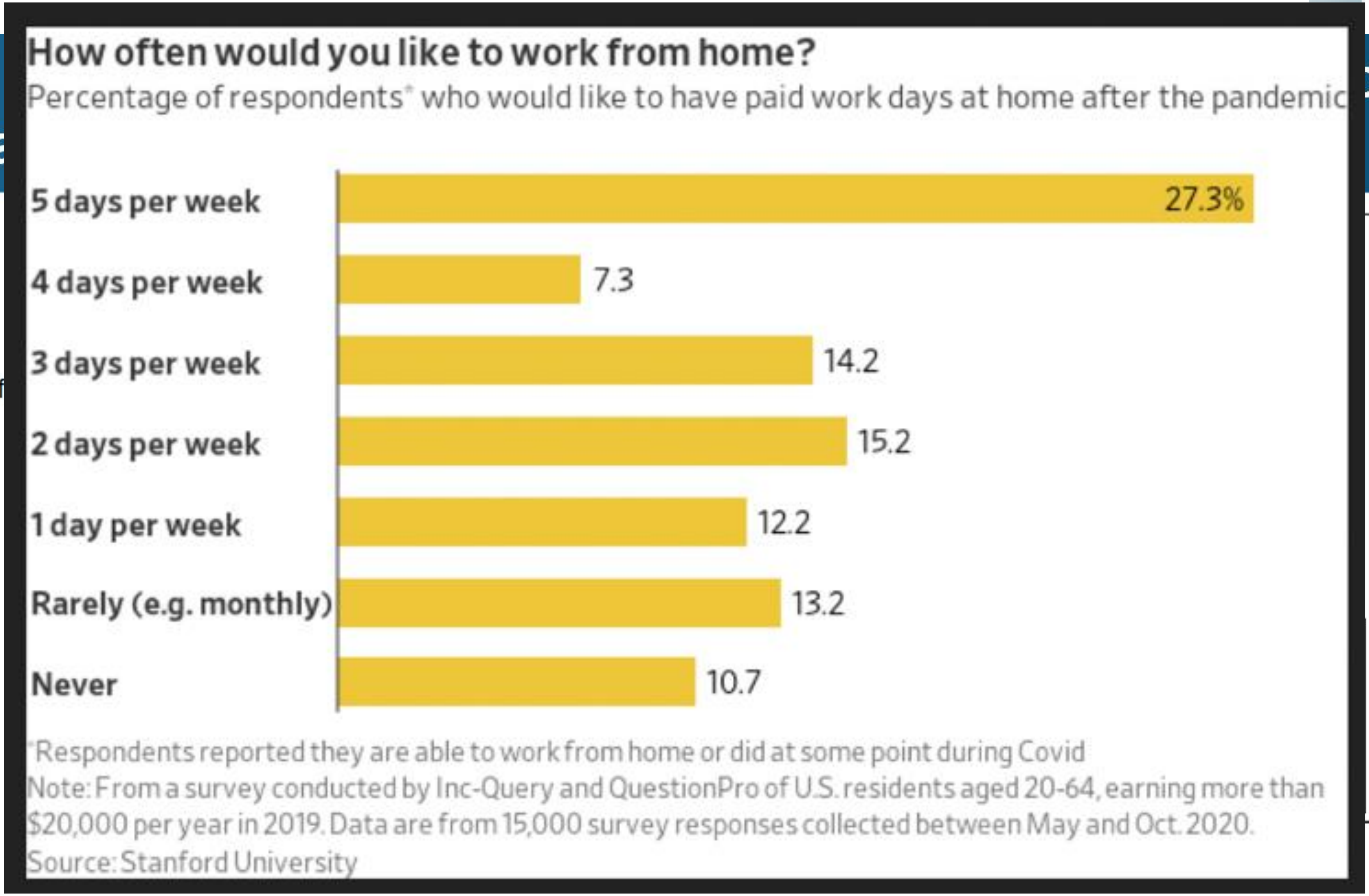
Chart 2: Paid WFH Days as a Share of All Working Days before, during, and after the Pandemic



WFH?

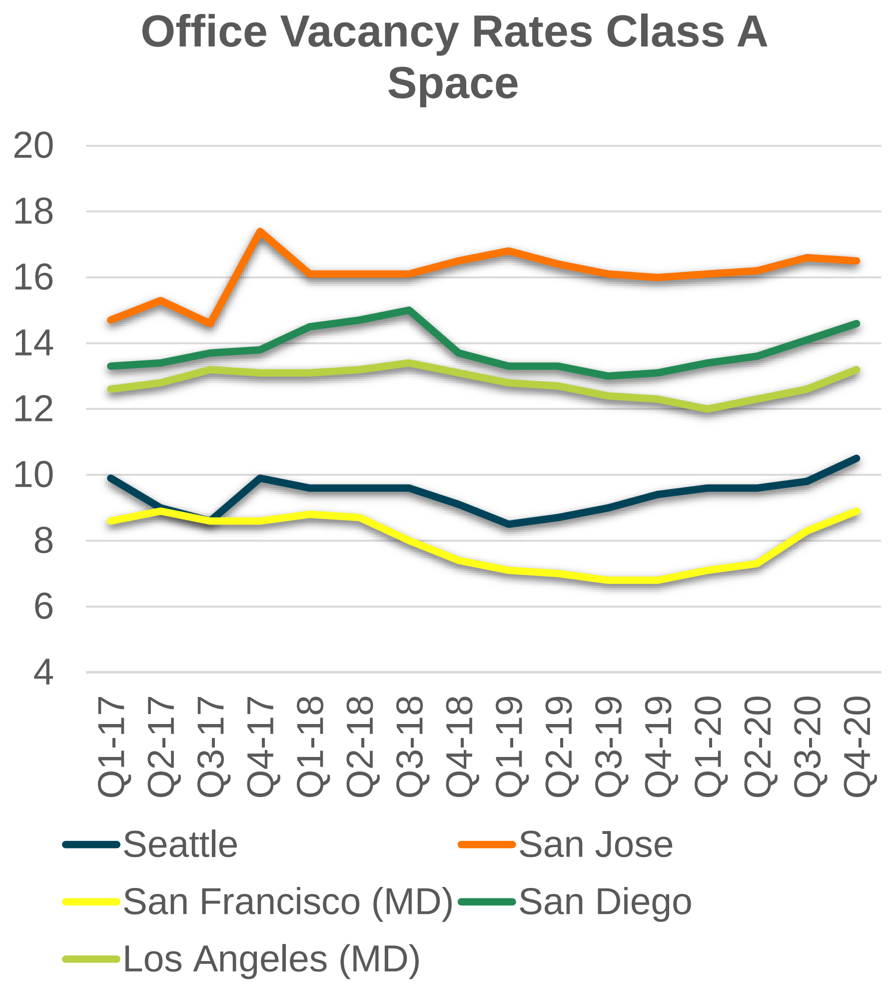
Chart 2: ... ore,
during, a...

Inf



How Will Businesses Respond?

- Businesses will still be downtown
  - Forces of agglomeration
  - Creative forces, liquid labor markets, close proximity to vendors and clients
  - Greater specialization
  - More telecommuting
  - Look for consolidation effects
- Biz Travel
  - Business travel downs, but also ups
  - “Over half (58%) of business travelers express the fact that they are “burned out” on virtual business meetings and events.”
  - “[B]usiness travelers expect that conferences, conventions and trade shows will be offered in a virtual or hybrid format in 2021, a majority (77%) would prefer attending in person in the future.”



The Long Run Still Matters

- It ain't good, but it ain't *that* bad..
  - The "V" is the only logical outcome
  - Speed of recovery dictated by pace at which vaccines rolled out
- Baseline Forecast
  - 5.5% Q1, 11%Q2, 5.5% Q3, 6% Q4
  - The new roaring 20's?
  - Unemployment below 5% by year end
  - Moderate upticks in debt distress
  - Retail / restaurants / tourism to lag
  - Residential Real Estate Markets? Cold, Hot, Bubble?
- The true enemy: Miserabilism
  - Problem before the pandemic
  - More bad policy driven by a basic lack of context
  - Health needs conflated with culture wars
  - No consideration for tomorrow / the next generation
- Forecast Wildcards
  - New variants of virus vs Vaccine roll outs
  - A new financial bubble?
  - Interest rates, public debt, inflation

BEACON ECONOMICS

Thank You

Chris@BeaconEcon.com | beaconecon.com