



The Post-Covid World *Over the Hump* *...or Over-Stimulated?*

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OF ARIZONA[®]

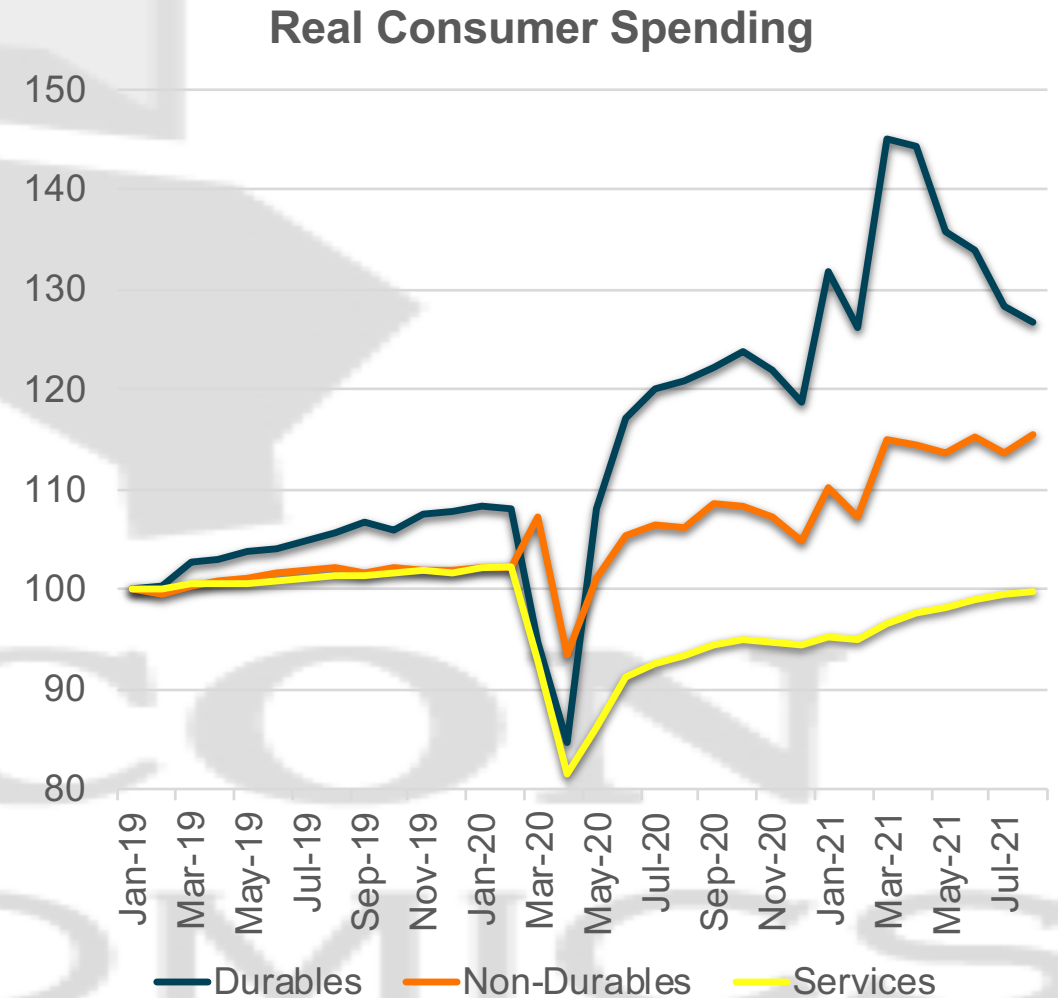
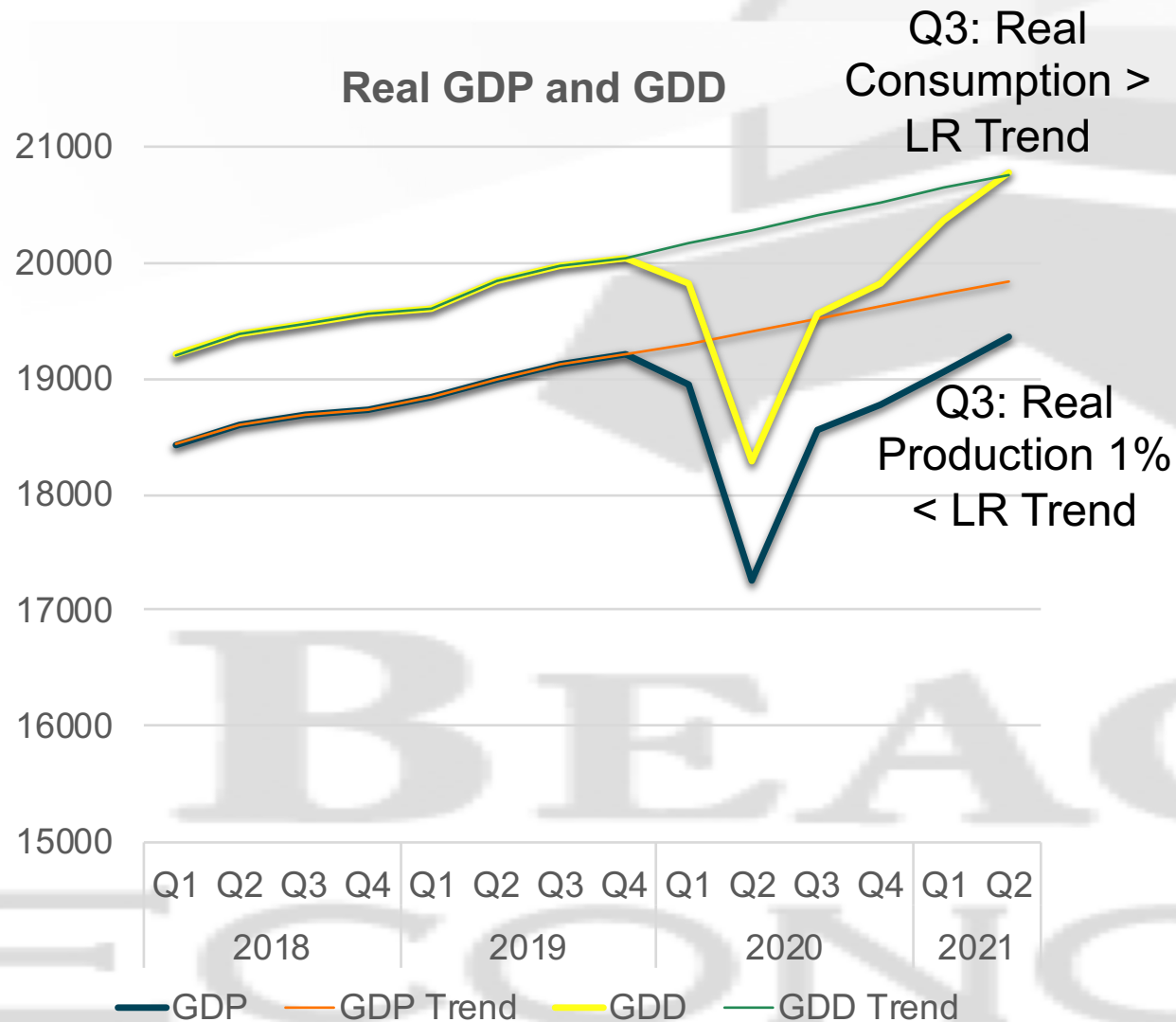
A division of Western Alliance Bank. Member FDIC.

Narratives vs Reality



- The Covid pandemic has been a tragic natural disaster. Yet history shows that natural disasters have limited long-run economic impact. A much quicker-than-normal recovery was certain.
- Fiscal and monetary policy reactions to the crisis have been excessive. This means a *more* rapid recovery but also the introduction of dangerous instabilities into the next expansion.
- The recovery is not even—this economy looks different in terms of the structure of output as well as the availability of inputs. The resultant supply chain issues are the major issue holding the economy back.
- Many of the day-to-day crises we hear about in the news are simply not real. National and local need to turn their attention to managing this next expansion
- There are no economic “new-normals” from the pandemic, but it has accelerated underlying trends that were already in place
- Housing is hot, but sustainable for now. But the housing market highly vulnerable to the economic sugar-crash that will occur when the current stimulus efforts wear off.

Where Are We Now?



The Great Recession vs Today



Then

Now

The Pre-Recession Economy

Over-heated by sub-prime lending bubble

Slow but steady growth due to labor shortages / trade disruptions

Recession Driver

Demand shock caused by collapse in wealth, flow-stock issues

Short run supply shock driven by fear and health mandates

Government Response

Inadequate

Excessive

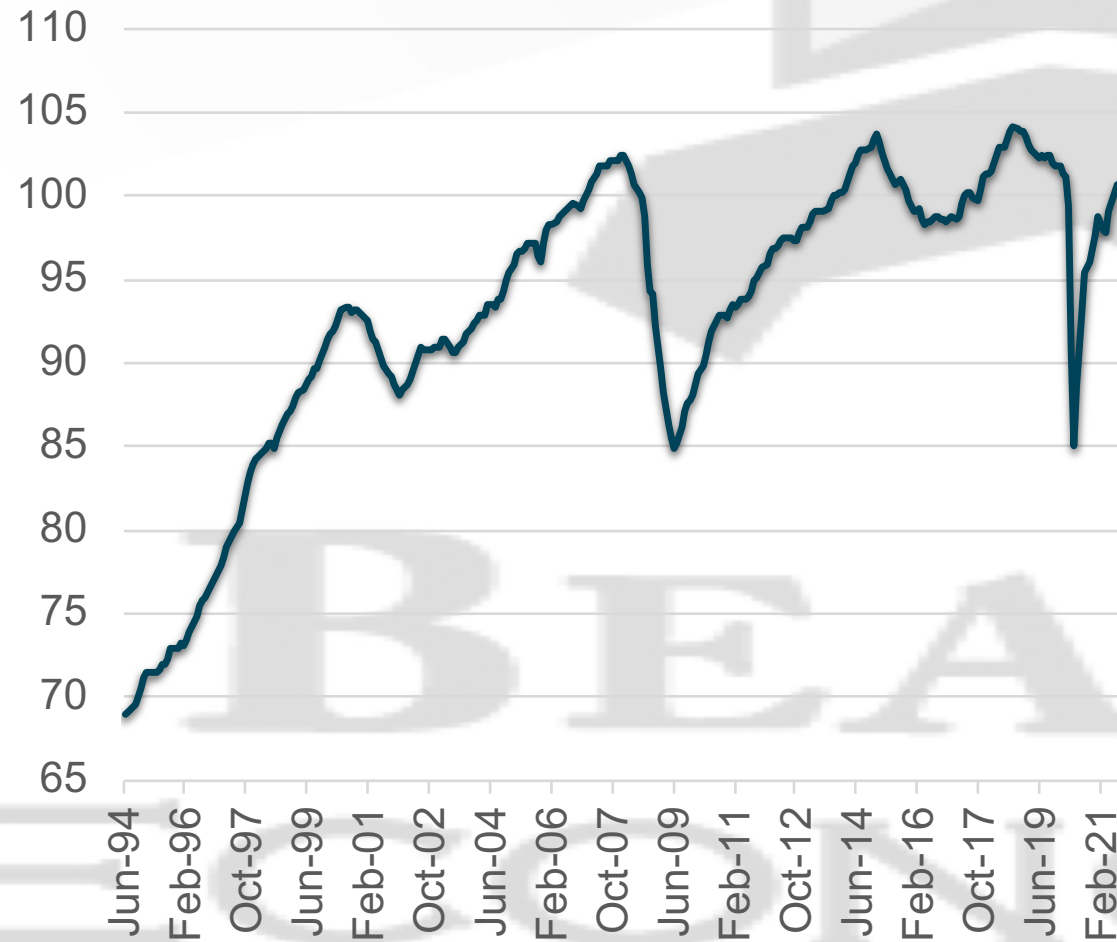
The Cycle

8 Years, 25% of one year of output lost

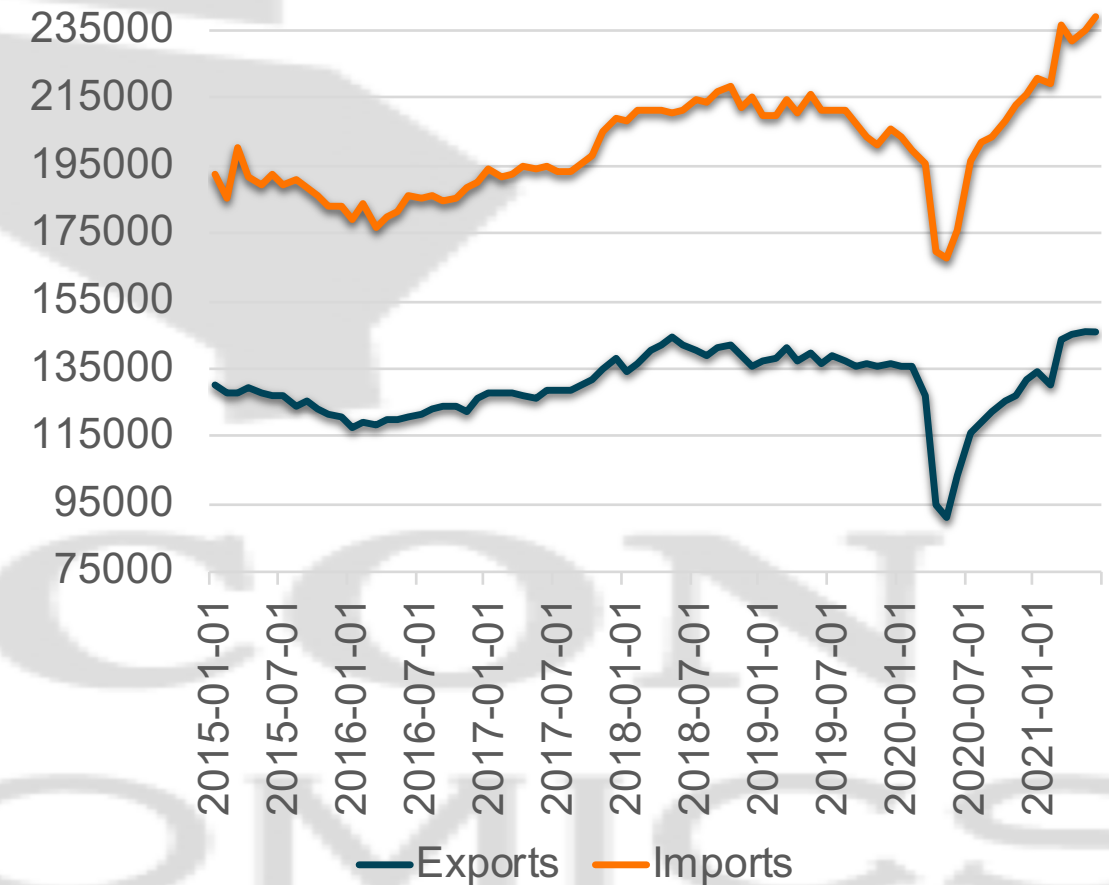
2 Years, 6% of one year output lost

Production Trends

Industrial Production

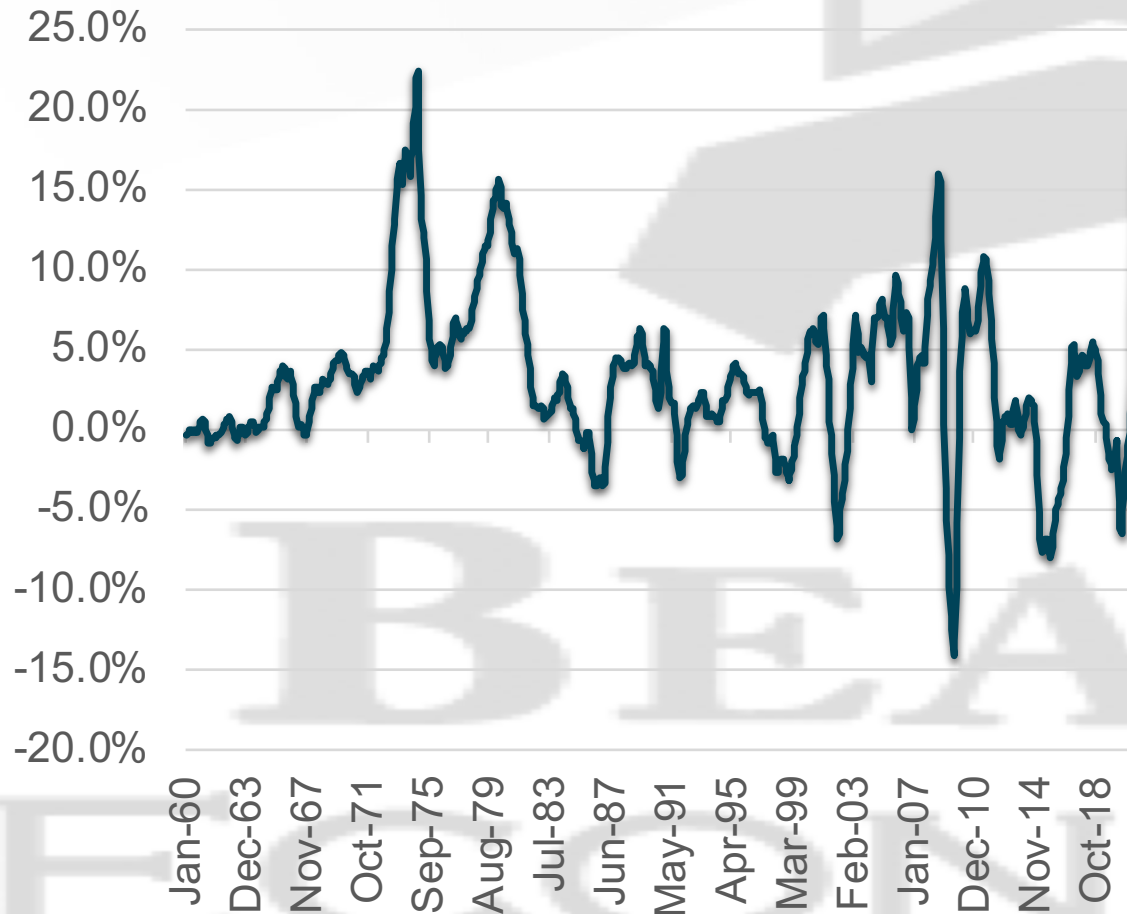


Monthly Goods Trade



Caught Off Guard...

PPI YoY Change

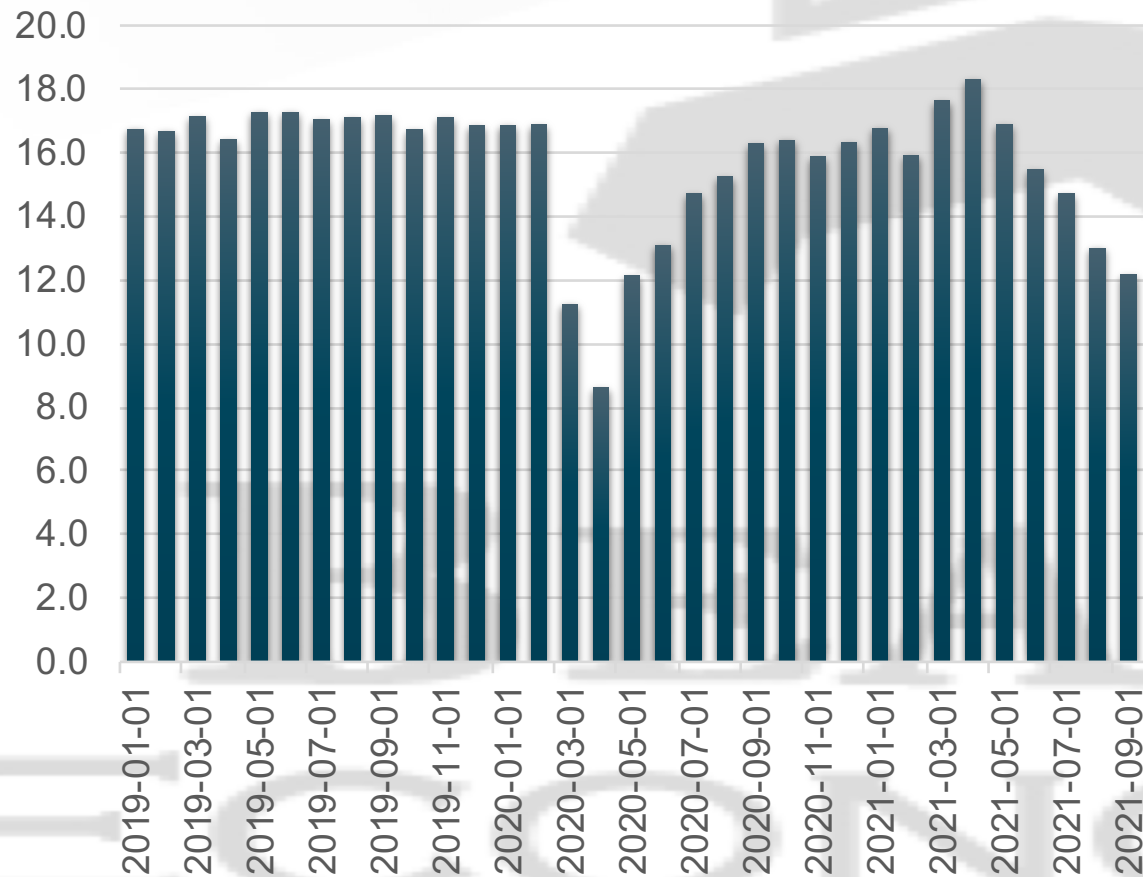


Inventory to Sales Ratios

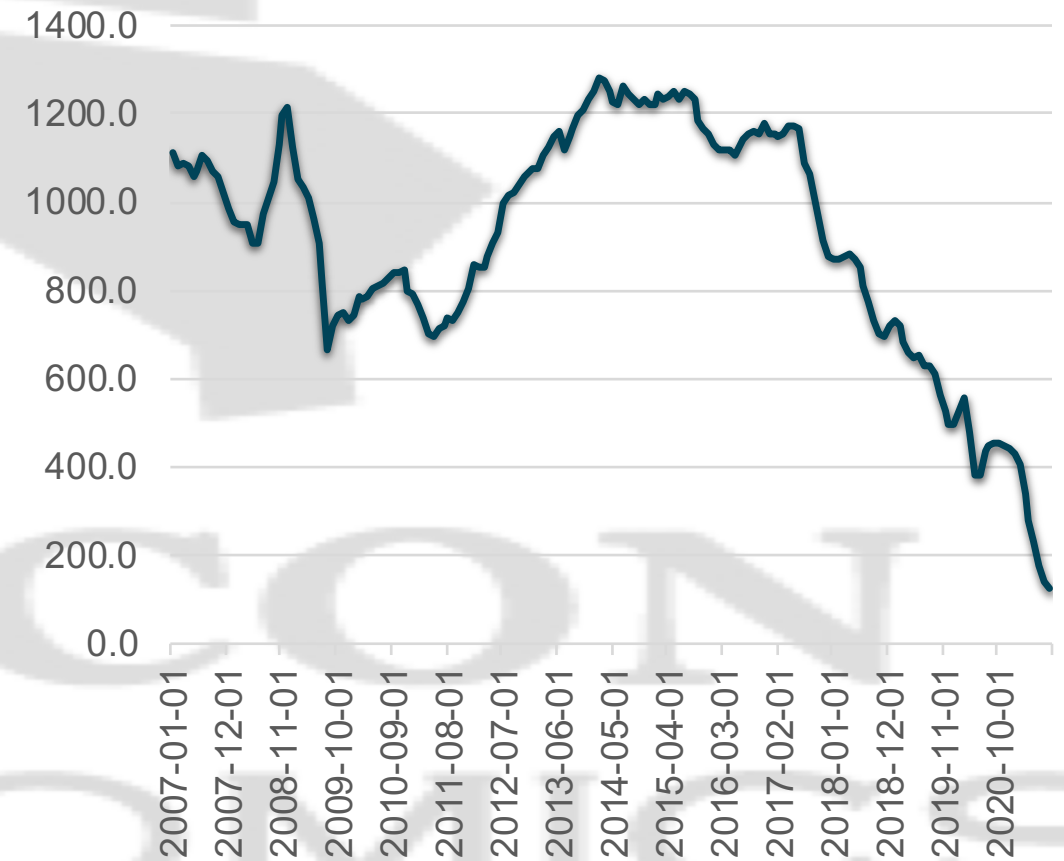


Auto Industry

Auto and Light Truck Sales, M SAAR



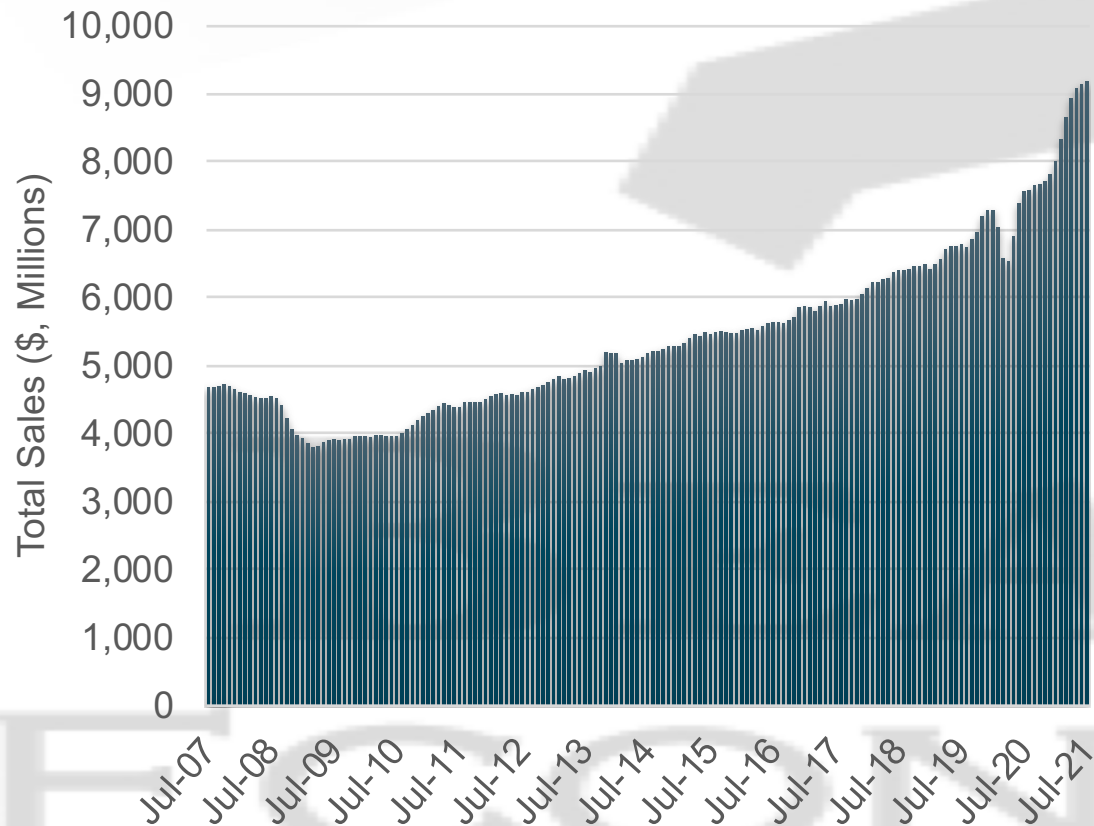
US Auto Inventories



Taxable Sales



**Retail Sales
Phoenix MSA**



Category	July 2021 (\$, Millions)	1-Year % Change
Aggregate Sales	8528.8	21.9%
Retail Sales	5468.8	19.5%
Restaurants & Bars	1042.0	48.2%
Gasoline	489.9	47.6%
Amusements	115.0	415.1%
Hotel/Motel	161.2	115.2%

Hotel Metrics

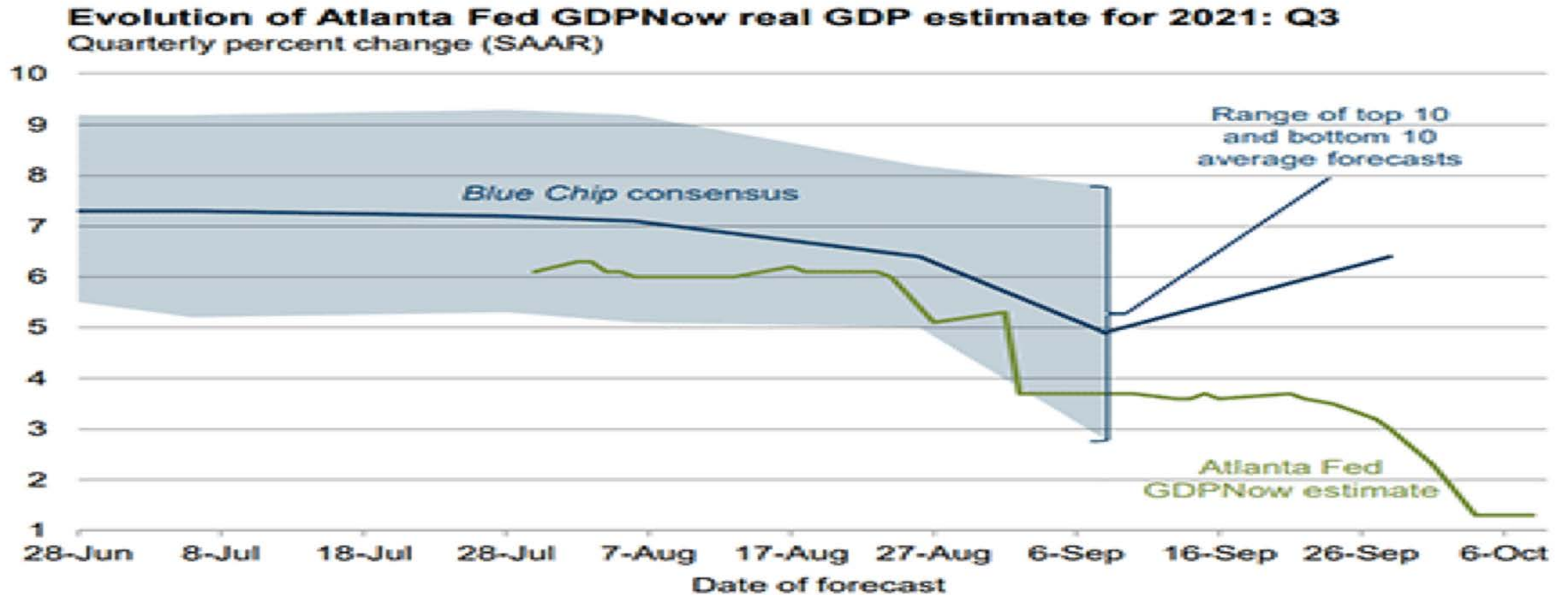


County	Occupancy Rate		ADR		RevPAR	
	Q2-2021	1-Yr P.P. Chg	Q2-2021	1-Yr % Chg	Q2-2021	1-Yr % Chg
Yavapai	75.7	42.4	214.4	113.7	162.3	454.3
Yuma	69.4	29.9	98.8	26.2	68.5	125.1
Maricopa	63.7	29.9	125.2	61.0	79.7	216.2
Pima	60.0	28.8	113.3	52.9	68.0	204.1
Pinal	73.5	21.9	83.3	36.3	61.2	96.9

The Delta Surge



GDP Now Outlook



Federal Policy (Over)reaction

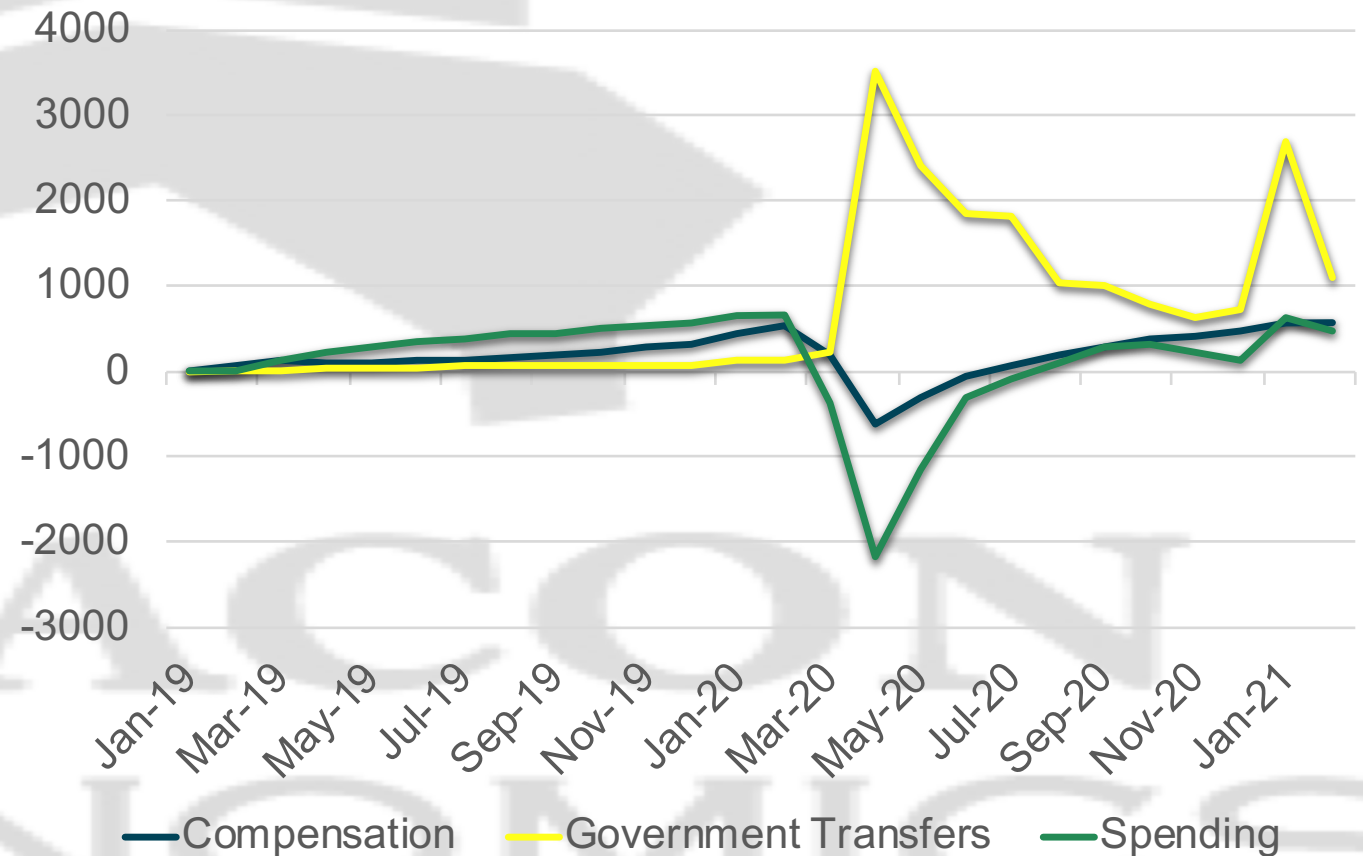
Fiscal Stimulus Plans: \$5.1 trillion

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

Personal Income

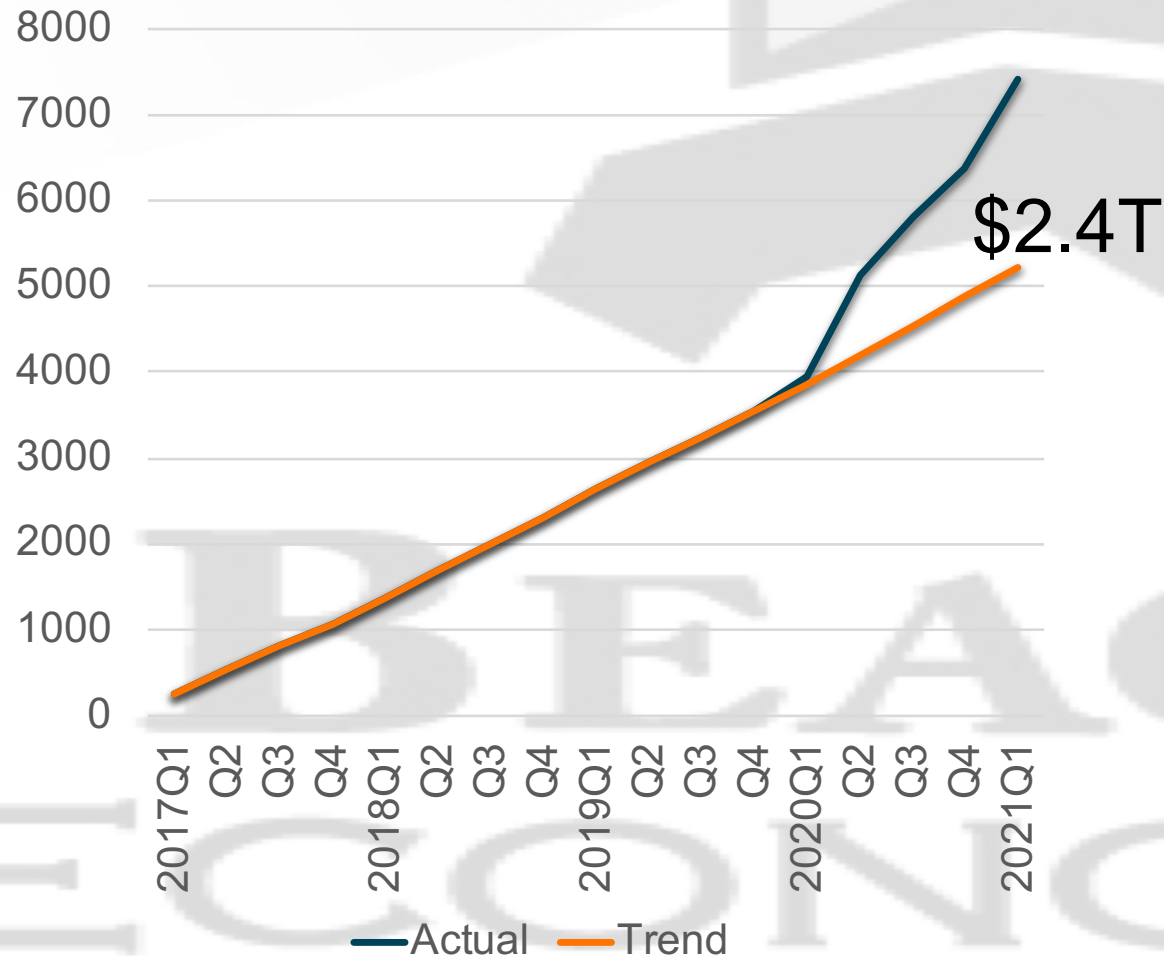
- \$525 billion in lost earnings
- \$1.67 trillion in direct payments
- > 3 to 1 replacement

Personal Income Trends (2019 = 0)

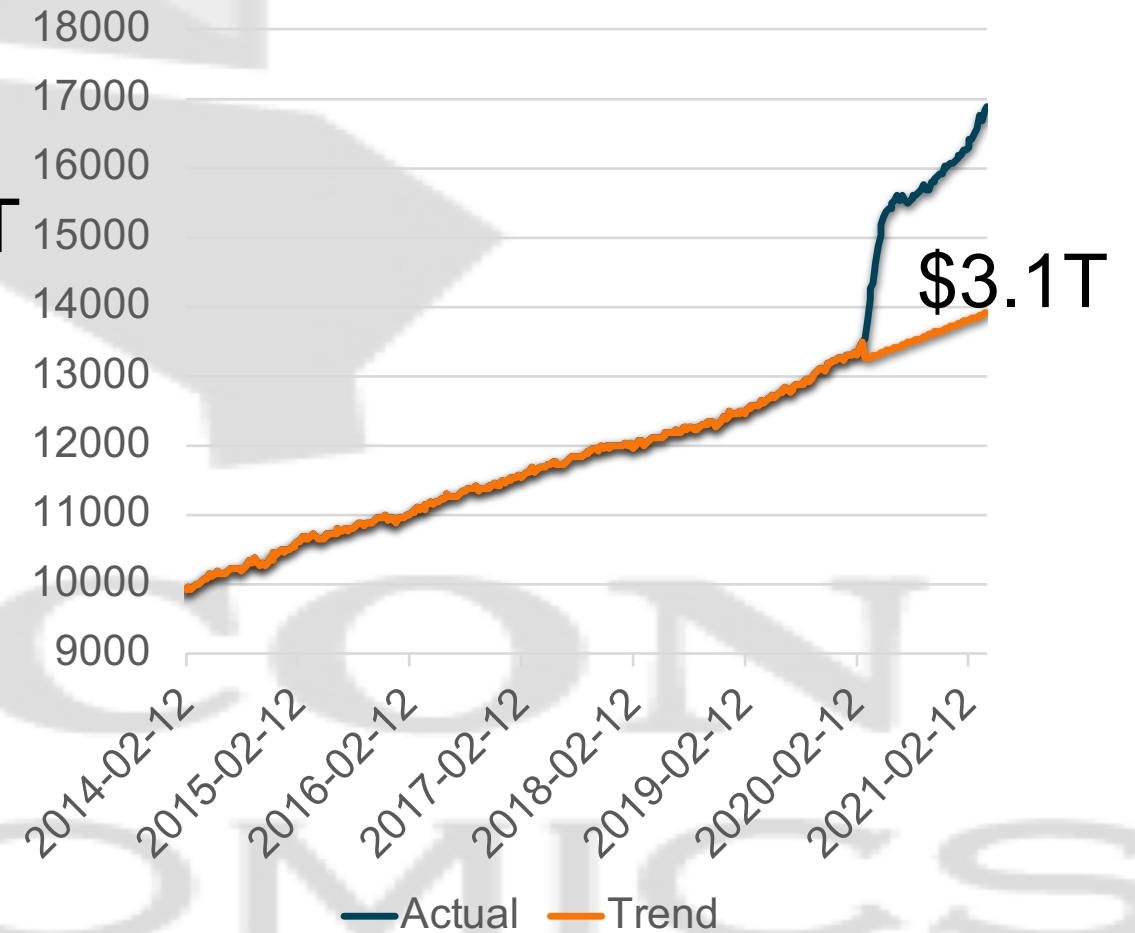


Excess Savings / Cash

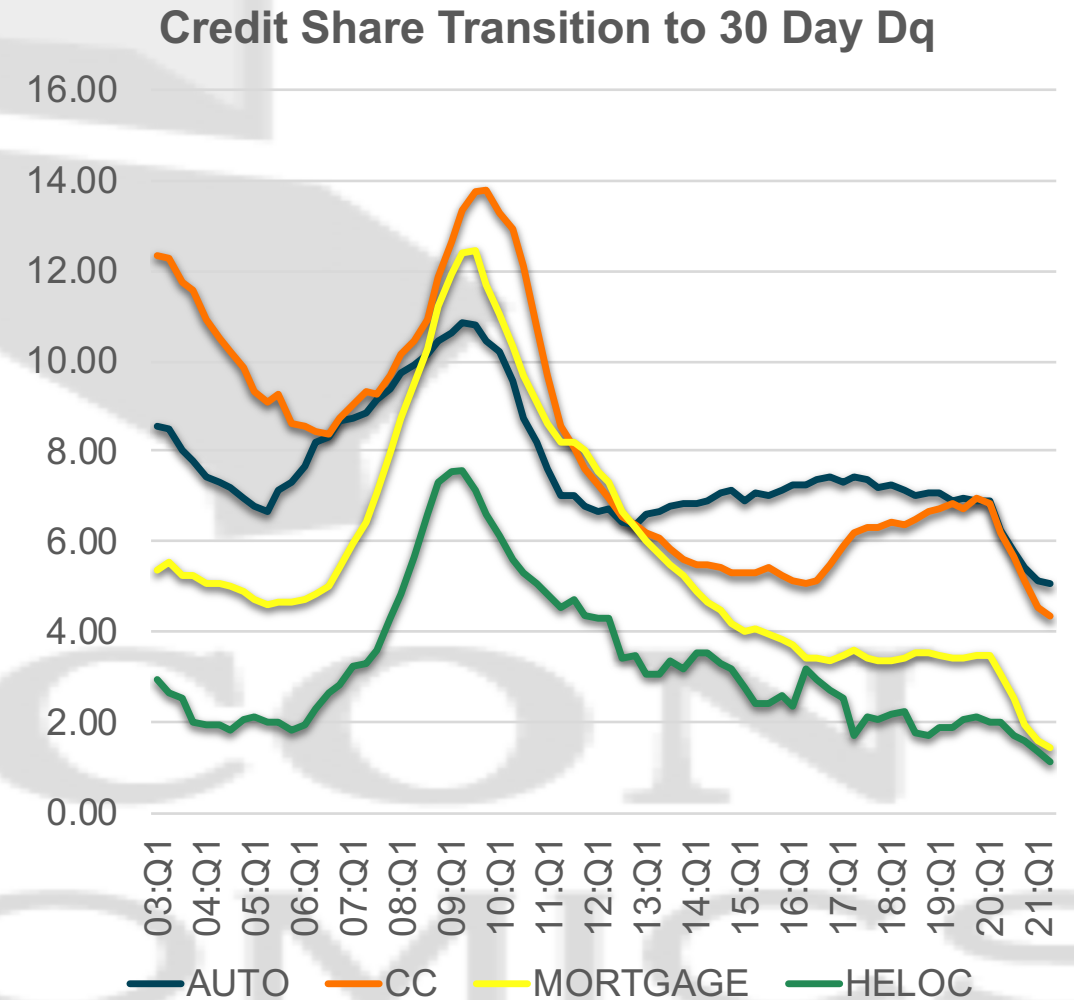
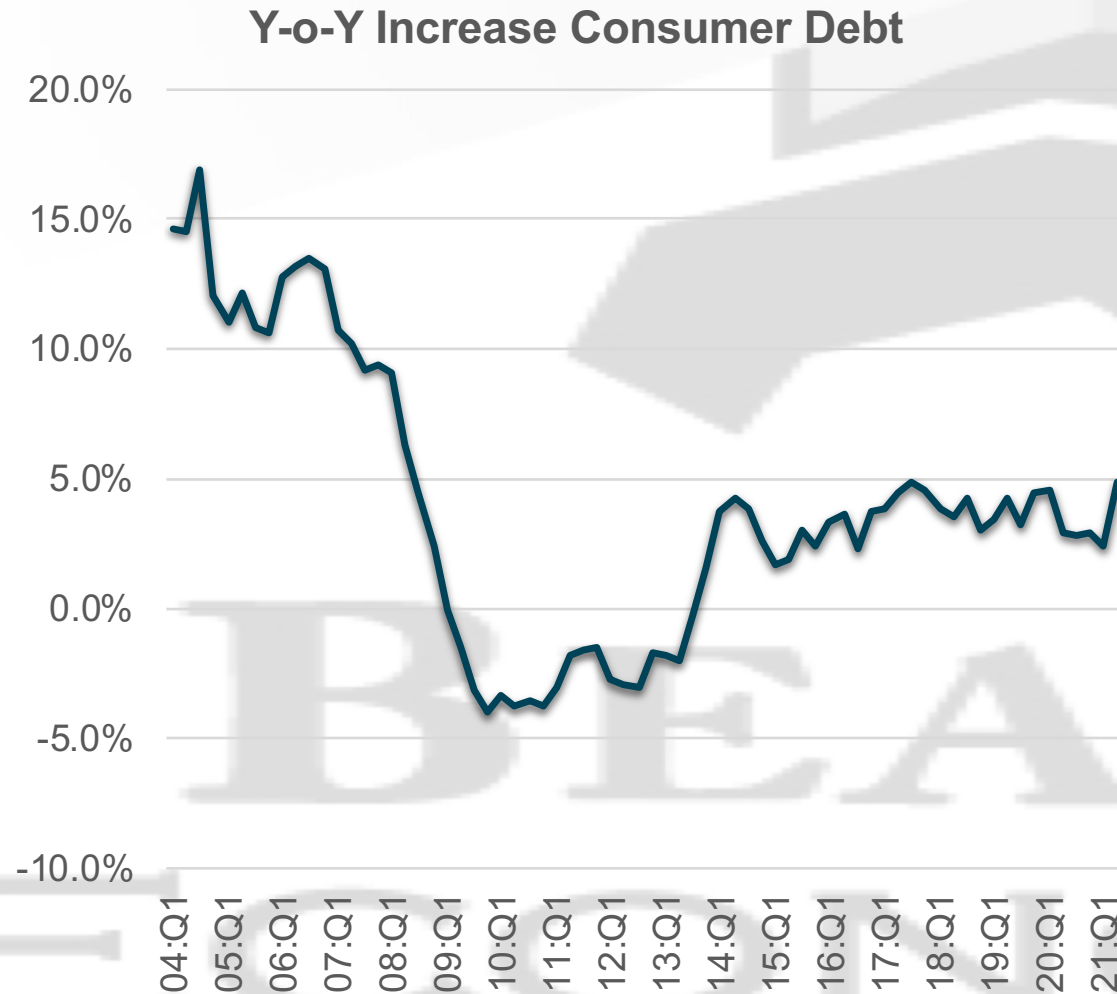
Cumulative Household Savings



Bank Cash Deposits



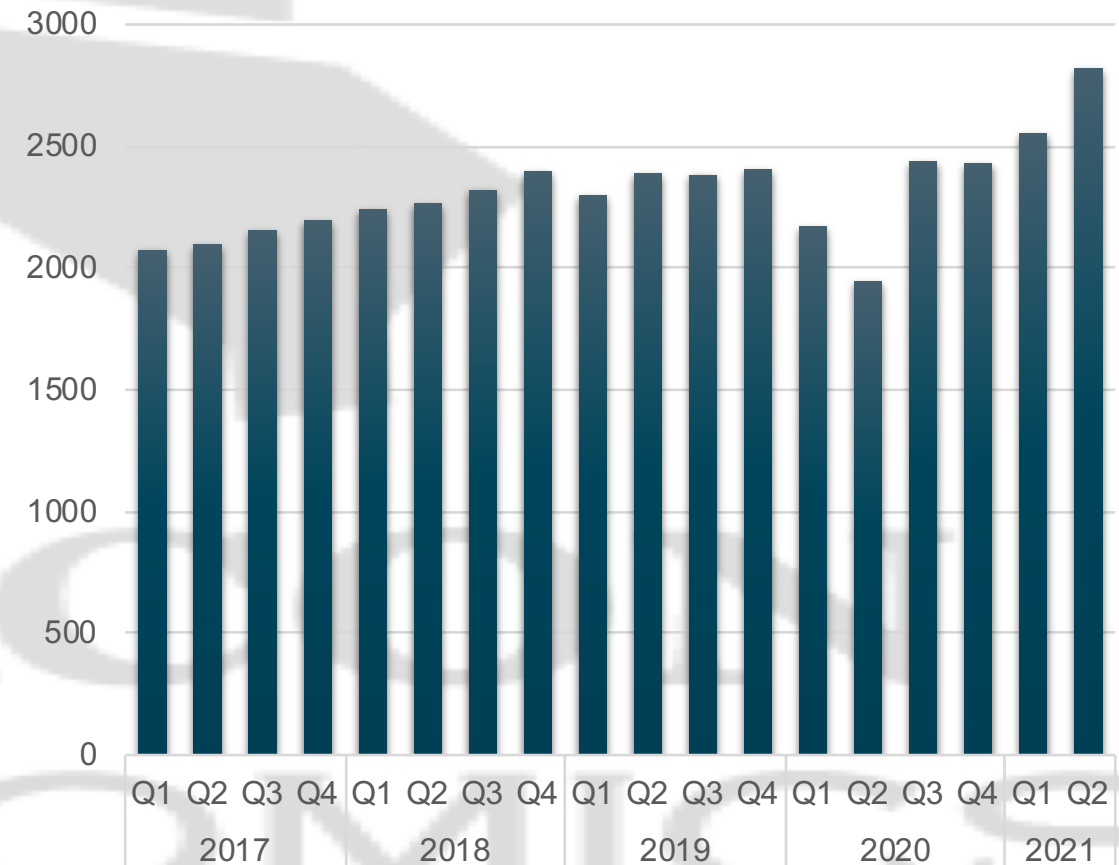
Consumer Credit



Profits and Investments

Real Investment by Type		
	Q2	Q1 19 to Q2 21
Private fixed investment	3590.7	4.4%
Information processing equipment	590.8	20.4%
Residential	712.1	16.3%
Software	561	16.0%
Industrial equipment	260.3	10.4%
Other equipment	263.2	8.3%
Research and development	492.9	6.4%
Entertainment, literary, and artistic	79.6	-7.4%
Commercial and health care	152.4	-12.3%
Manufacturing	52.3	-15.4%
Transportation equipment	236.6	-16.3%
Mining exploration, shafts, and wells	84.2	-23.7%
Power and communication	94.8	-25.2%
Other structures	74.2	-26.8%

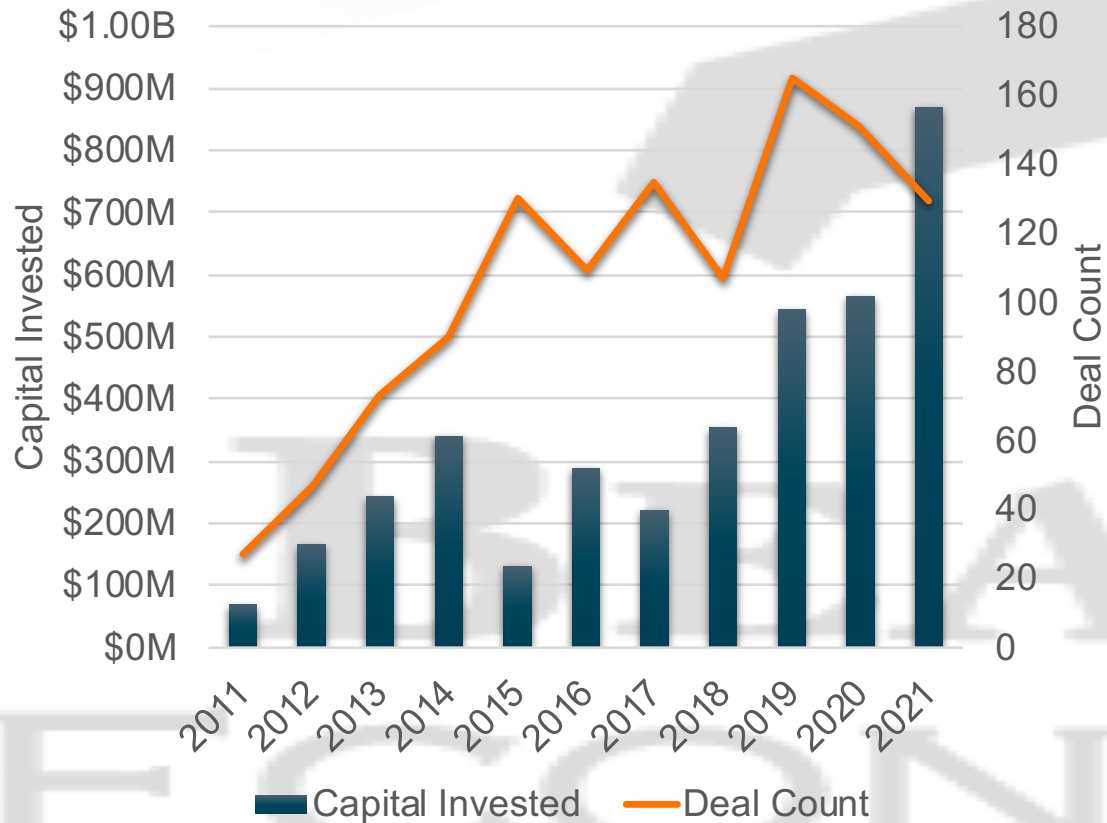
Corporate profits with inventory valuation and capital consumption adjustments



Venture Capital



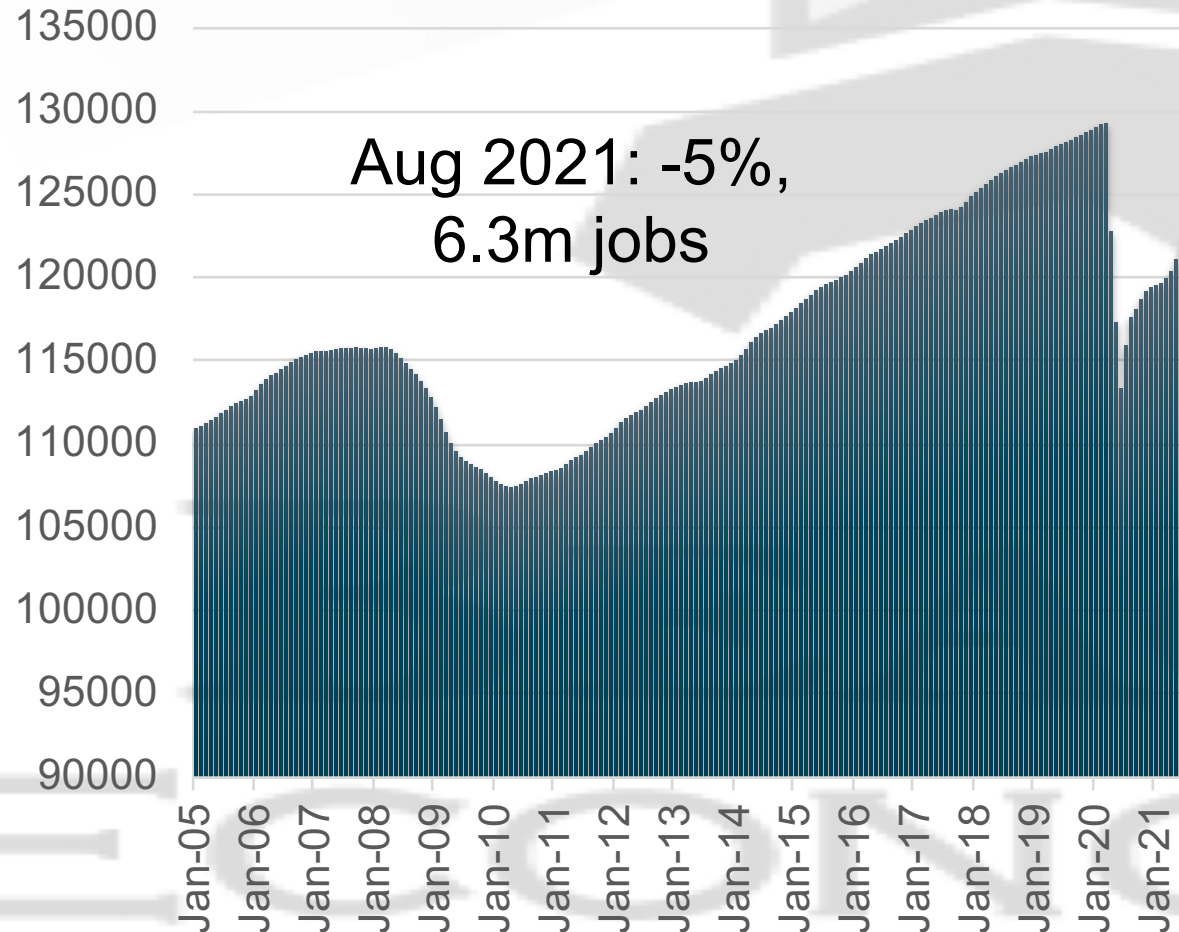
**Capital Invested and Deal Count
Phoenix**



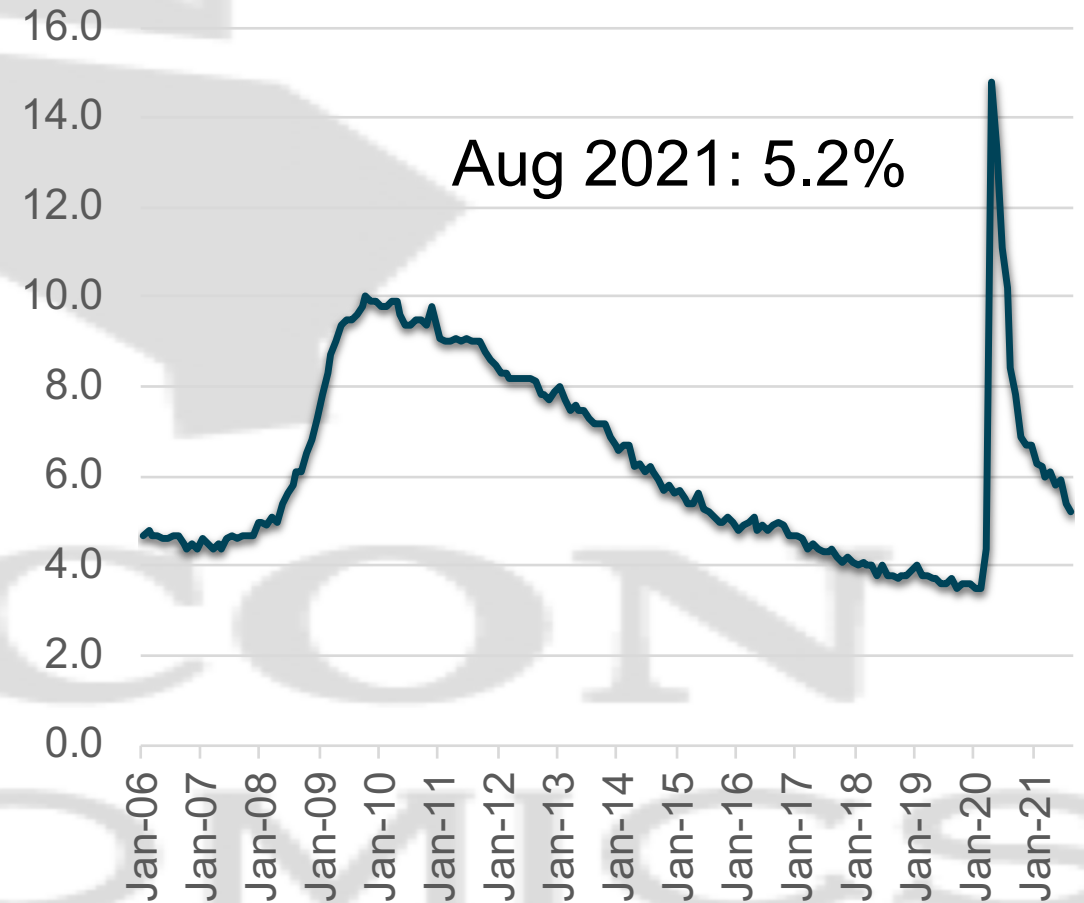
Company	Deal Size (\$, Mil.)	Industry
Nextiva	200	Comm. Software
EmergeTech	130	Media/Information
Postscript	47	Business/Productivity
eVisit	45	Clinics/Outpatient
Mosaic	40	Constr./Engineering
Lessen	35	Real Estate Services
Trainual	27	Business/Productivity
Salucro Healthcare Solutions	21	Healthcare
Nectero Medical	20	Therapeutic Devices
Prenda	19	Education/Training

A Labor Market Paradox?

US Payroll Employment

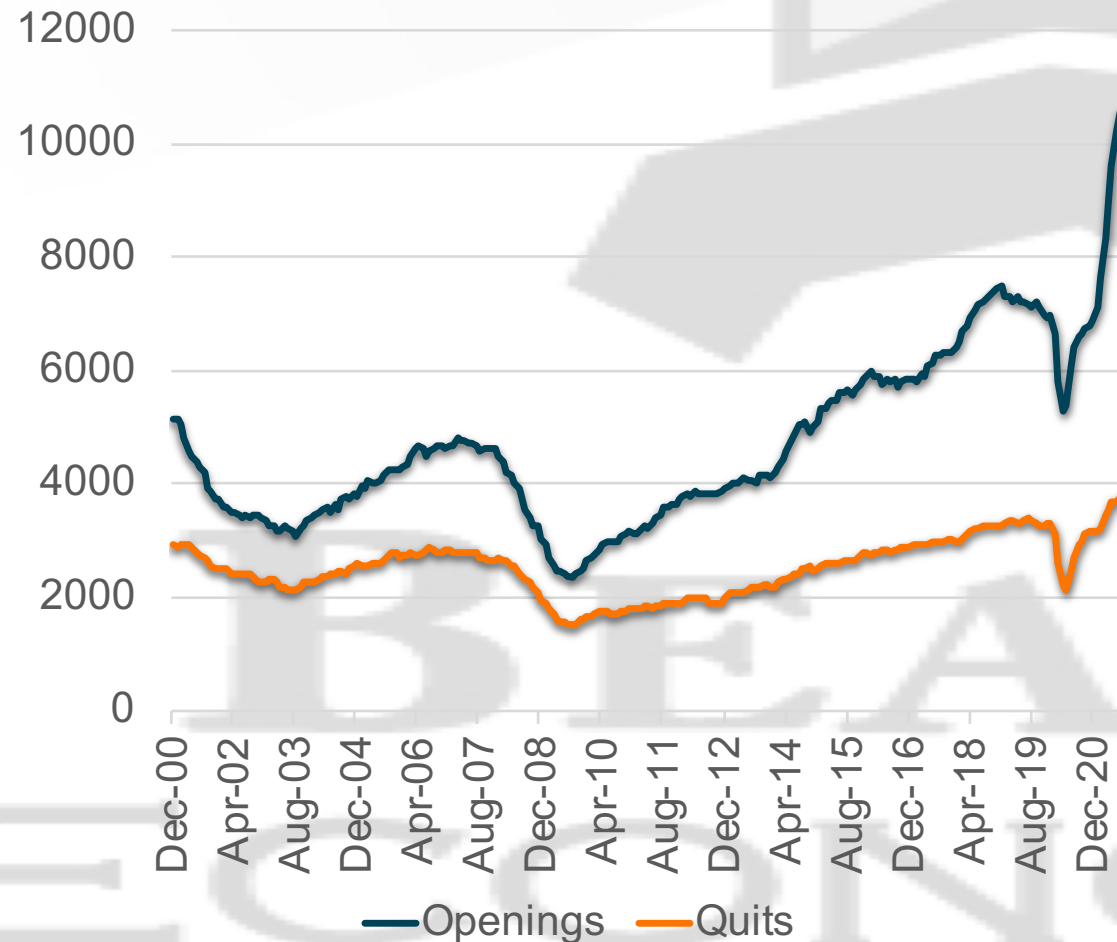


US Unemployment Rate

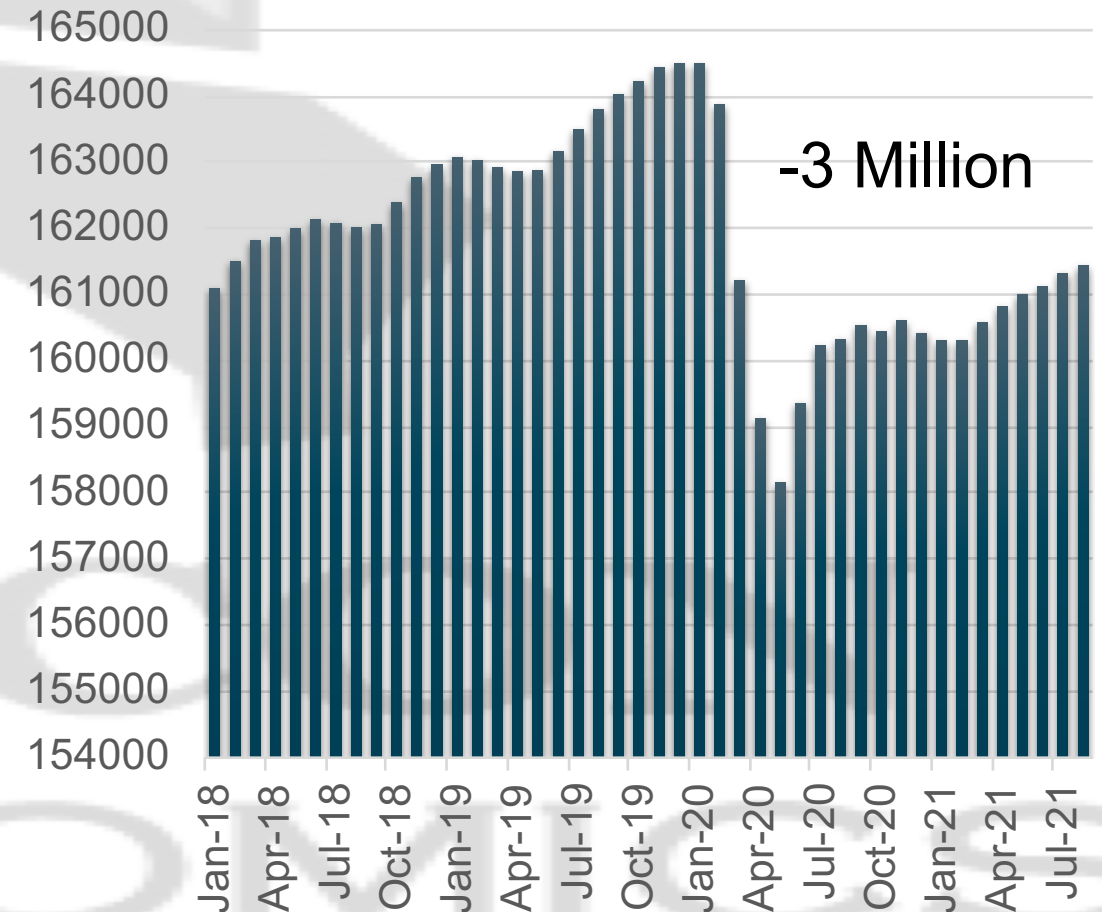


Labor Supply, Not Labor Demand

Job Openings and Quits

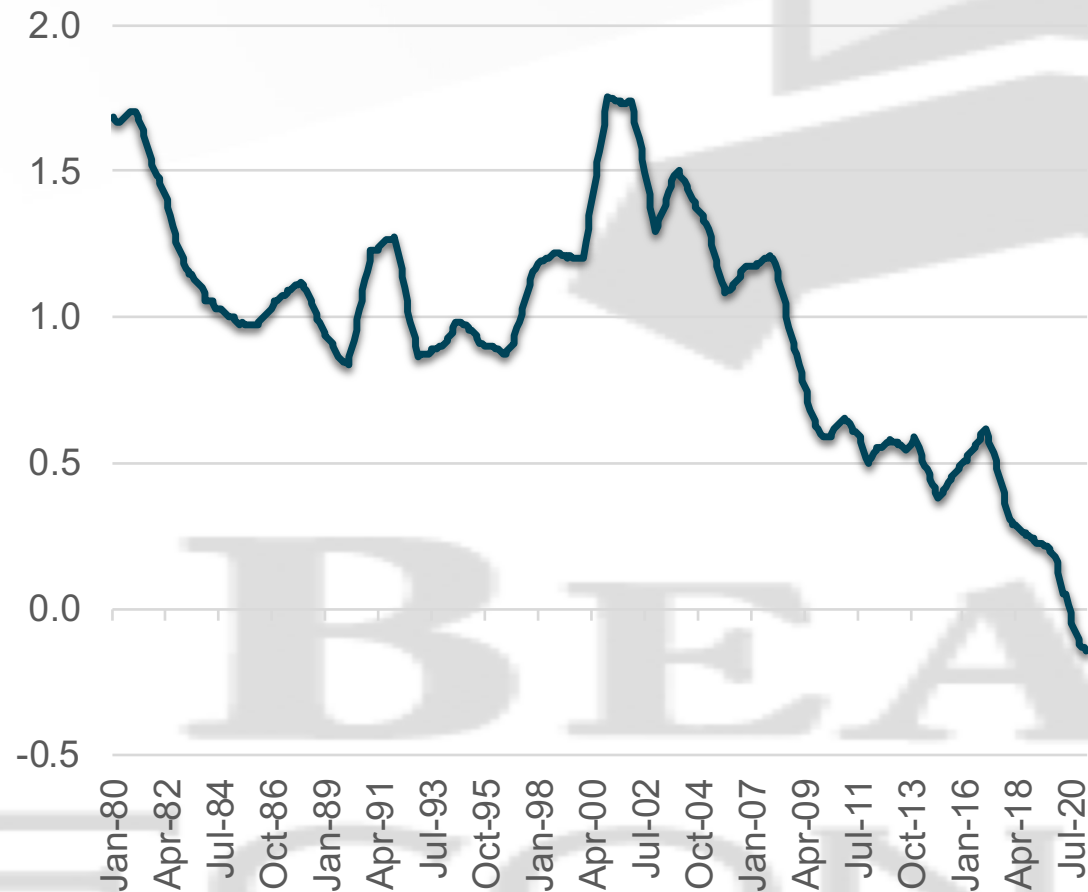


US Labor Force Level

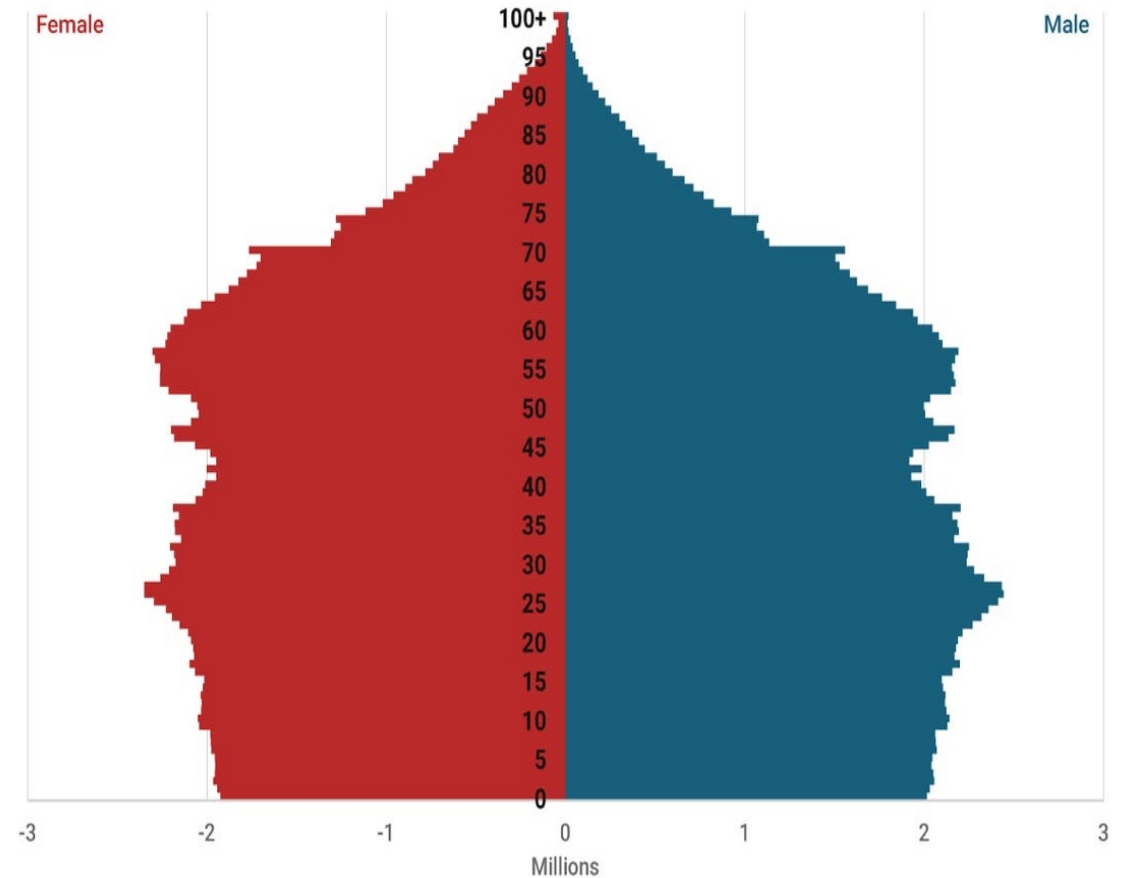


The Labor Force Issue

Growth in Working Age US Population

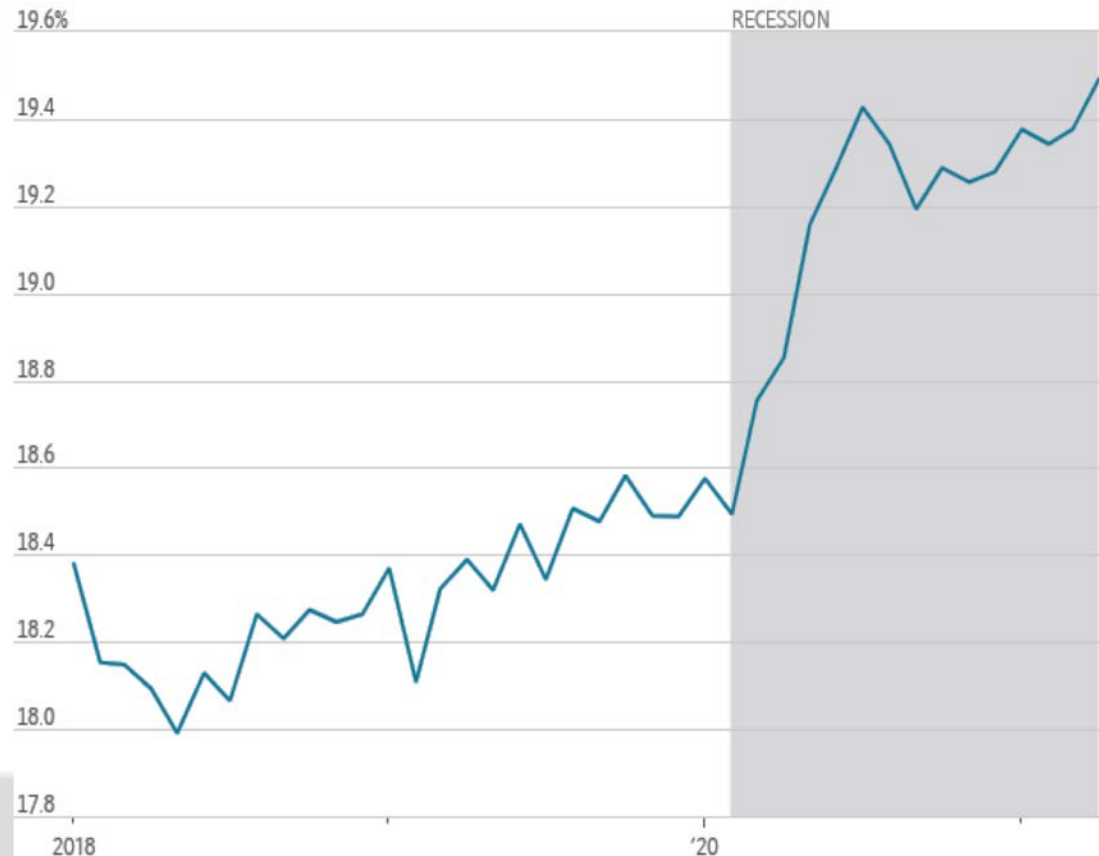


US population by age and sex, 2017



The Labor Force Issue

Share of Population Retired



Source: Federal Reserve Bank of Dallas

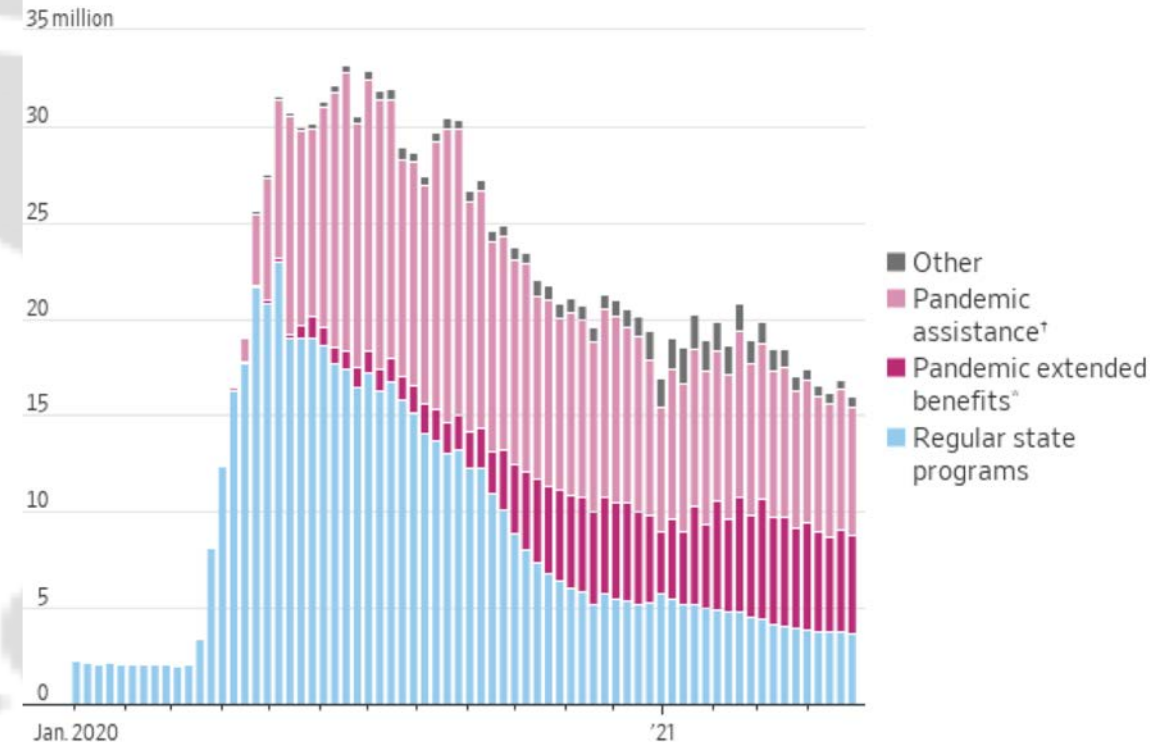
	Mar-20	Mar-21	
Men, 16 years and over	68.5	67.3	-1.2
16 to 19 years	35.1	35.3	0.2
20 to 24 years	71.5	72.4	0.9
25 to 34 years	88.7	87.3	-1.4
35 to 44 years	90.7	89.6	-1.1
45 to 54 years	87.4	85.7	-1.7
55 years and over	45.6	43.9	-1.7
Women, 16 years and over	57.1	56.1	-1.0
16 to 19 years	36.0	36.5	0.5
20 to 24 years	68.5	68.2	-0.3
25 to 34 years	76.3	76.0	-0.3
35 to 44 years	76.2	74.5	-1.7
45 to 54 years	76.0	75.1	-0.9
55 years and over	34.5	33.4	-1.1

Supply and Demand For Jobs

Labor Force Accounting

- Current unemployment: 8.4 million
- Pre-Pandemic Level: 5.7 million
- Down 6.3 million payroll jobs
- Only 2.7 million additional unemployed,
- 3 million fewer in workforce, 60%+ have opted for early retirement
- 11 million job opening for 2.7 million surplus unemployed workers with 1.5 million potential re-entrants

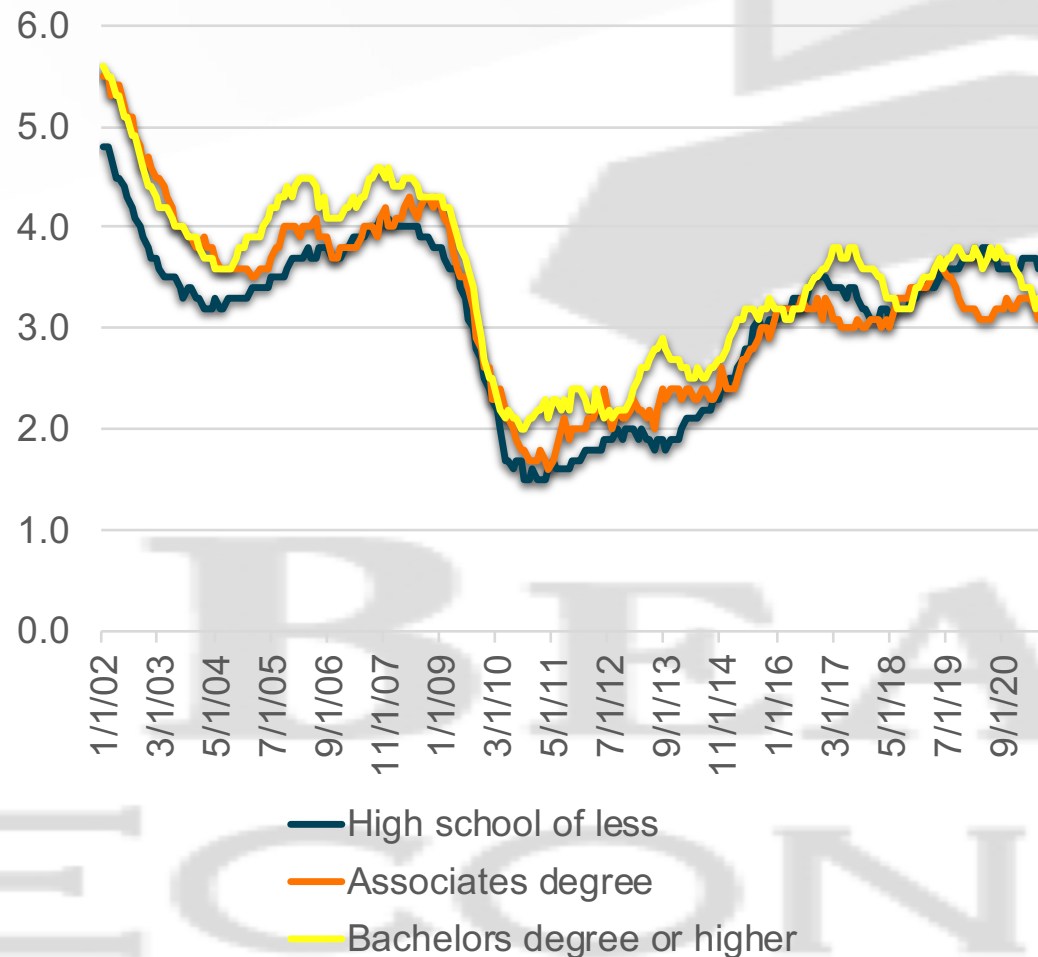
Number of people claiming unemployment benefits, by program



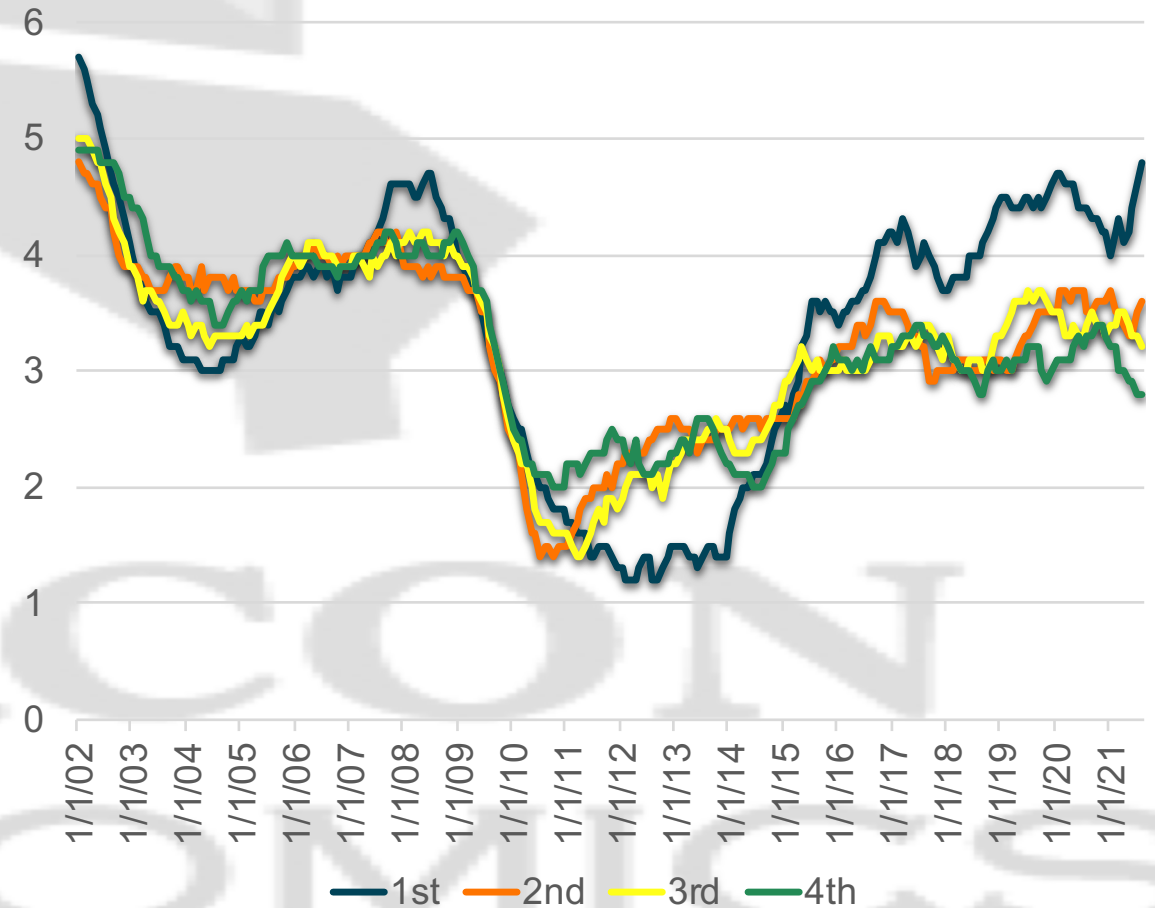
* Reflects Pandemic Emergency Unemployment Compensation for those who exhausted other programs.*
† Reflects Pandemic Unemployment Assistance for self-employed and others not typically eligible.
Source: Labor Department

What Is a K Shaped Recovery?

Earnings Growth by Level of Education

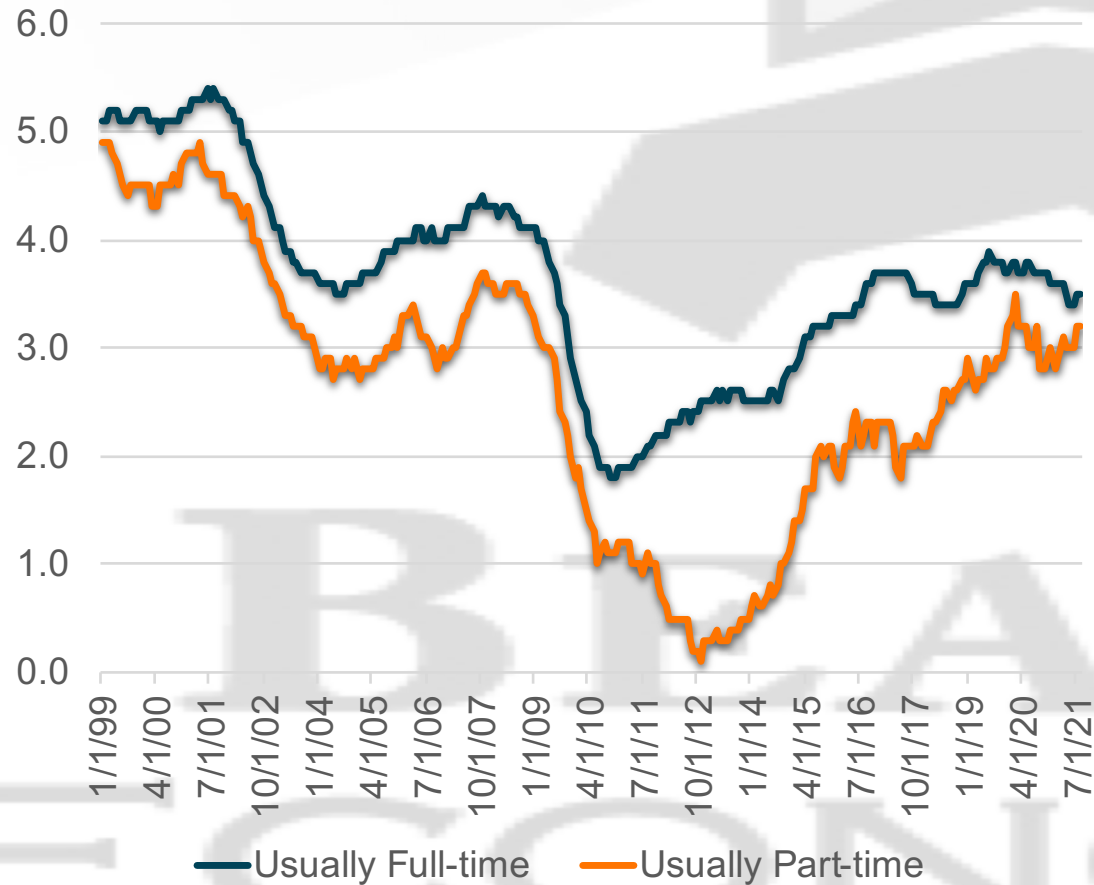


Earnings Growth by Quartile

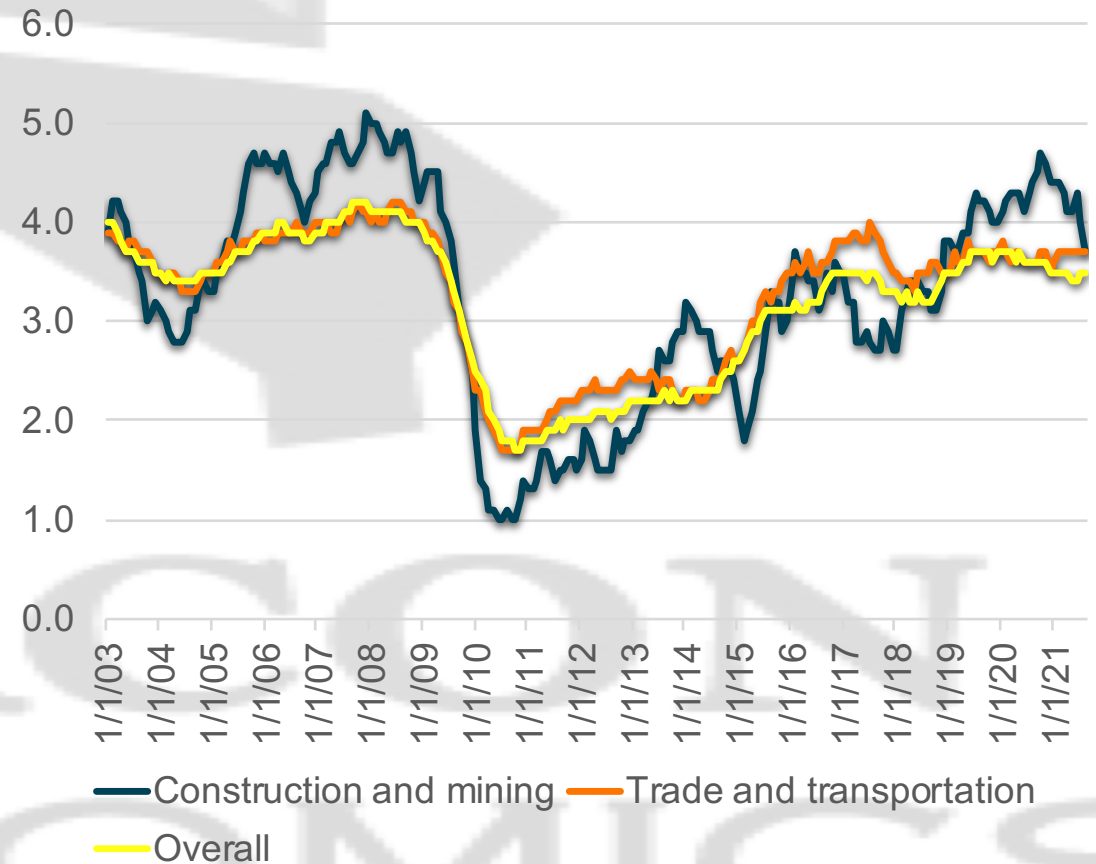


This Is Not a K

Earnings Growth by Hours



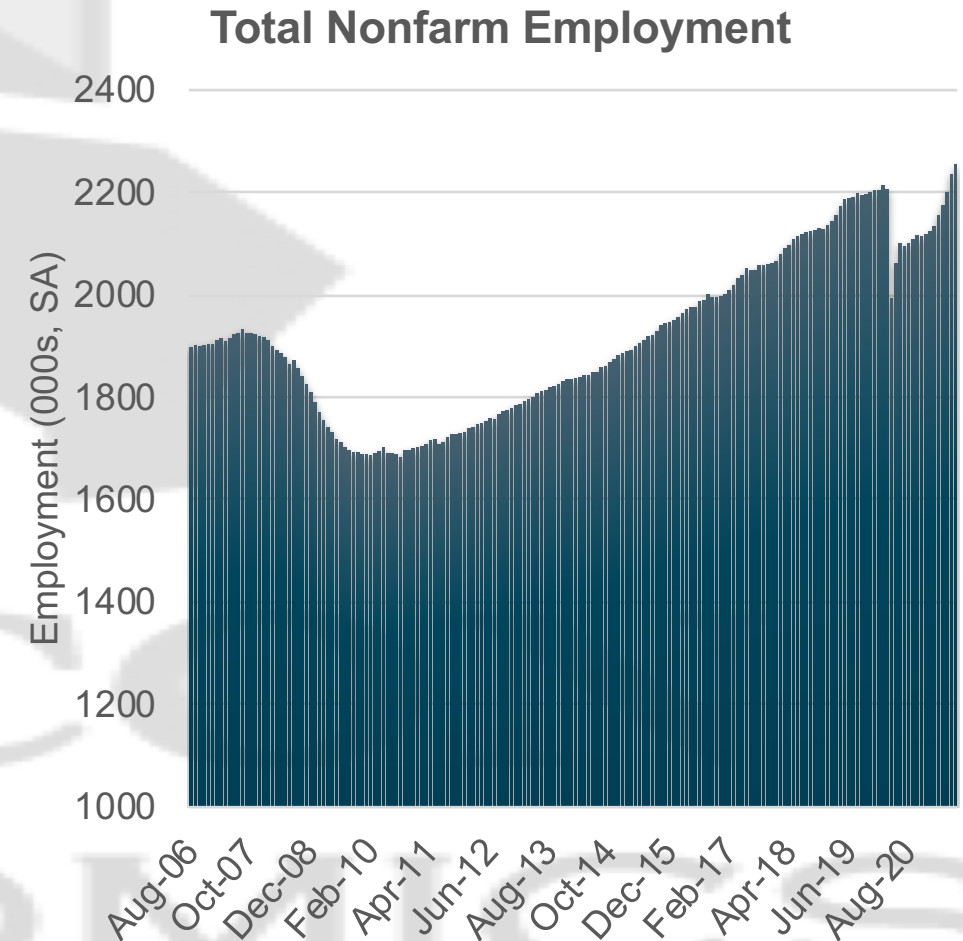
Earnings Growth by Industry



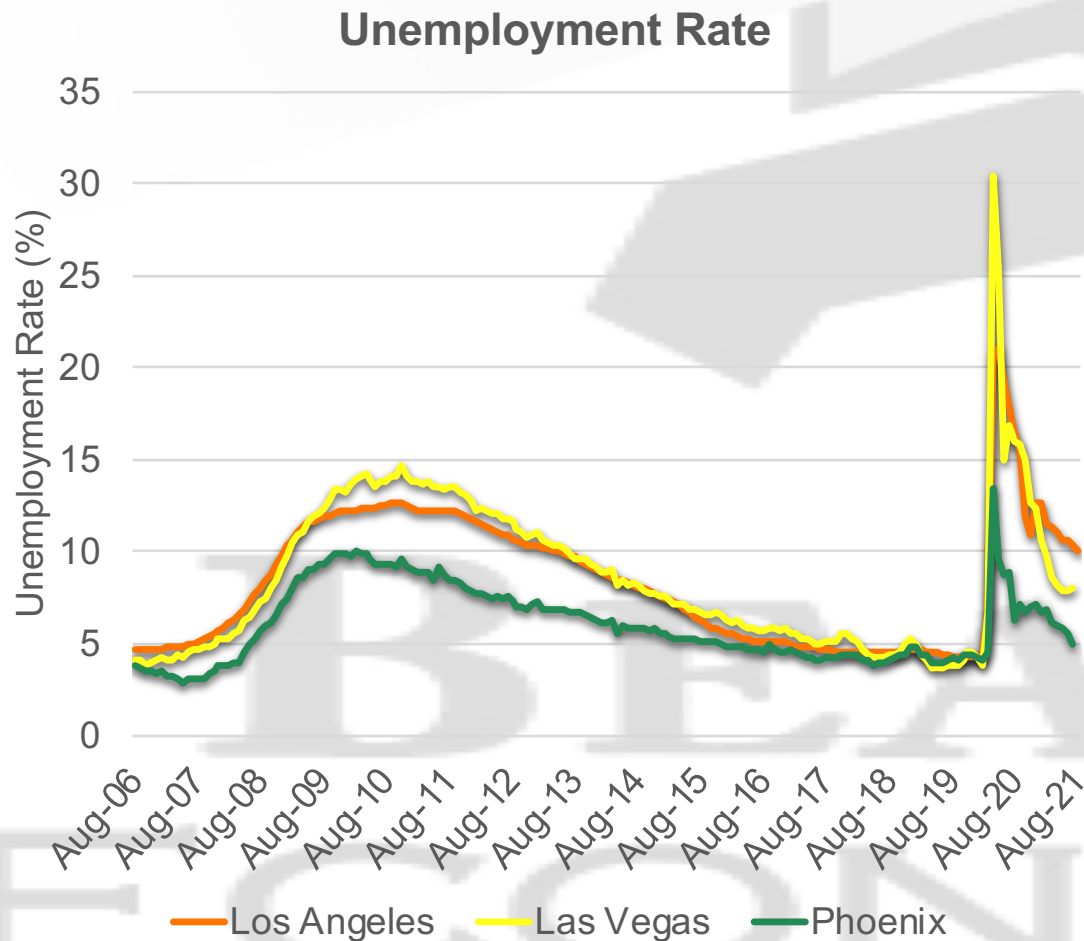
Phoenix Labor Market



	2021(p)	Percent
Los Angeles-Long Beach-Anaheim	5838.9	7.2
Phoenix-Mesa-Scottsdale	2217.3	6.5
Boston-Cambridge-Nashua	2679.2	5.9
Seattle-Tacoma-Bellevue	2051.9	5.5
Dallas-Fort Worth-Arlington	3814.9	5.4
Miami-Fort Lauderdale-West Palm Beach	2605.7	5.4
New York-Newark-Jersey City	9163.1	5.3
Houston-The Woodlands-Sugar Land	3052.3	4.8
Atlanta-Sandy Springs-Roswell	2793.1	4.7
Detroit-Warren-Dearborn	1931.6	4.7
Minneapolis-St. Paul-Bloomington	1949.6	3.8
Washington-Arlington-Alexandria	3204.9	3.3
Chicago-Naperville-Elgin	4494.5	2.7



Phoenix Employment

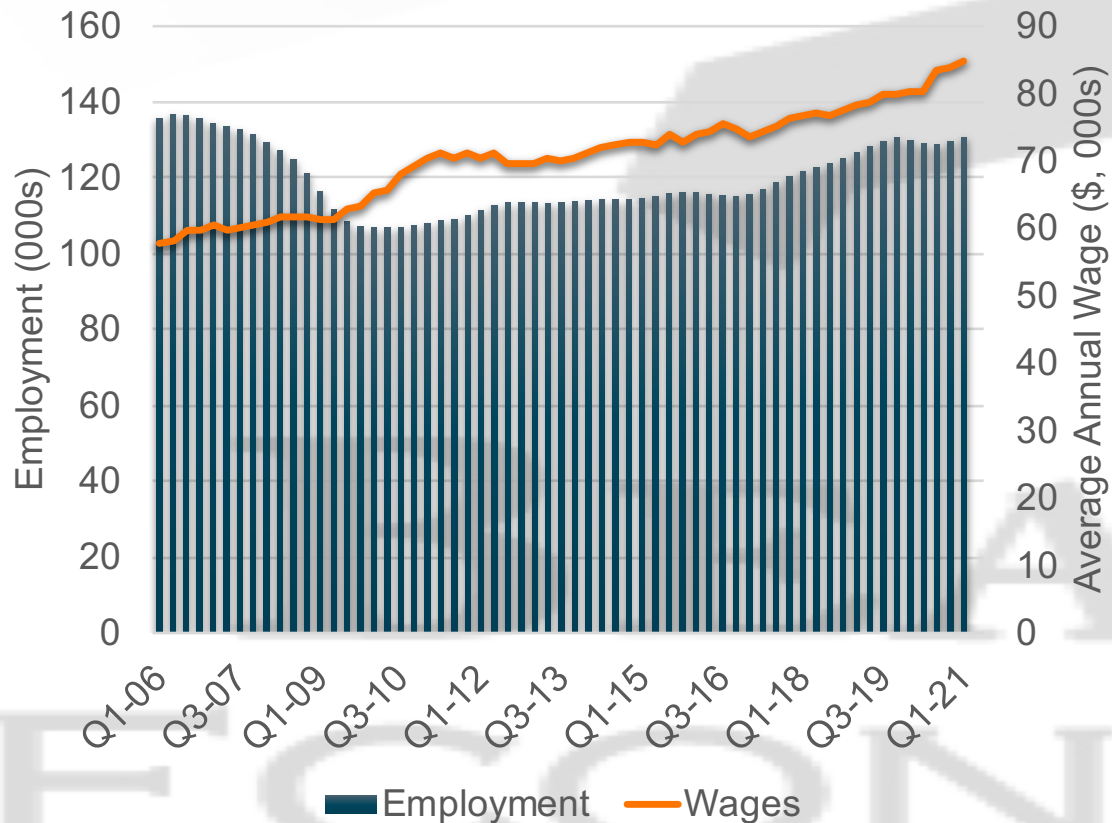


Industry	Aug-21 Phoenix Emp (000s)	Change from Feb-2020		
		Phx Abs. (000s)	Phx % Chg	AZ % Chg
Total Nonfarm	2,236	143.2	6.8	6.3
Hospitality	226	45.2	25.1	23.1
Prof/Sci/Tech	146	16.8	13.0	10.9
Admin Support	206	15.8	8.3	6.5
Logistics	443	31.8	7.7	6.9
Wholesale Trade	87	6.2	7.6	6.1
Education/Health	357	21.1	6.3	5.4
Retail Trade	241	11.4	5.0	4.0
Manufacturing	136	5.4	4.1	3.6
Construction	138	4.4	3.3	2.5
Government	245	3.9	1.6	-0.2
Finance	207	2.9	1.4	1.3
Management	30	0.2	0.7	3.2
Information	37	0.1	0.3	2.3

Manufacturing Employment



**Manufacturing Employment and Wages
Maricopa County**



Subsector	Q1-21 Emp	1-Year % Growth	
		Maricopa	AZ
Miscell. manuf.	8,950	7.7	-1.4
Chemical manuf.	6,104	6.8	5.1
Nonmetallic mineral manuf.	5,242	3.2	1.6
Machinery manuf.	5,887	0.9	-0.8
Furniture	4,754	0.2	-0.3
Fabricated metals manuf.	16,361	-0.5	-0.1
Computer/Elect.	29,057	-1.0	-2.3
Food manuf.	11,916	-2.0	-1.4
Printing	4,261	-7.3	-7.8
Transport. equip.	18,958	-7.4	-2.0

Nonresidential Rents and Vacancies



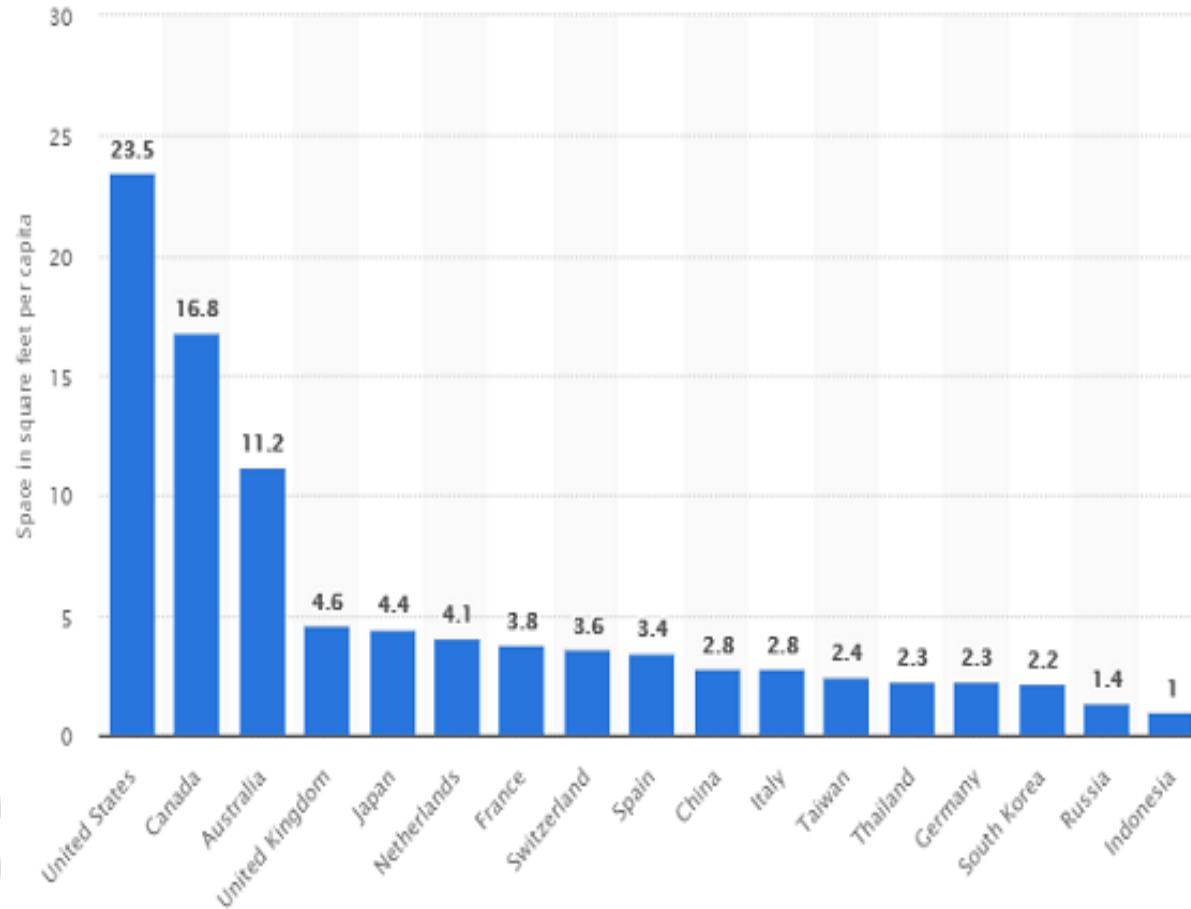
Office	Cost of Rent		Vacancy Rate	
	Q2-21 (\$)	1-Yr % Growth	Q2-21 (%)	1-Yr Change
Phoenix	27.4	1.8	21.5	-0.1
Inland Empire	23.6	0.9	17.8	0.7
Los Angeles (MD)	40.8	0.1	15.6	1.3
Las Vegas	25.4	-0.4	23.3	-0.2

Retail				
Las Vegas	22.7	-0.4	13.0	0.0
Phoenix	20.7	-0.8	9.8	0.2
Los Angeles (MD)	33.4	-1.1	7.6	0.4
Inland Empire	22.5	-2.6	9.9	0.0

Warehouse/Distribution				
Phoenix	6.4	2.4	12.8	-2.2
Las Vegas	7.1	2.0	7.5	0.7
Inland Empire	5.9	1.5	8.2	-2.3
Los Angeles (MD)	8.1	1.5	5.3	-0.8

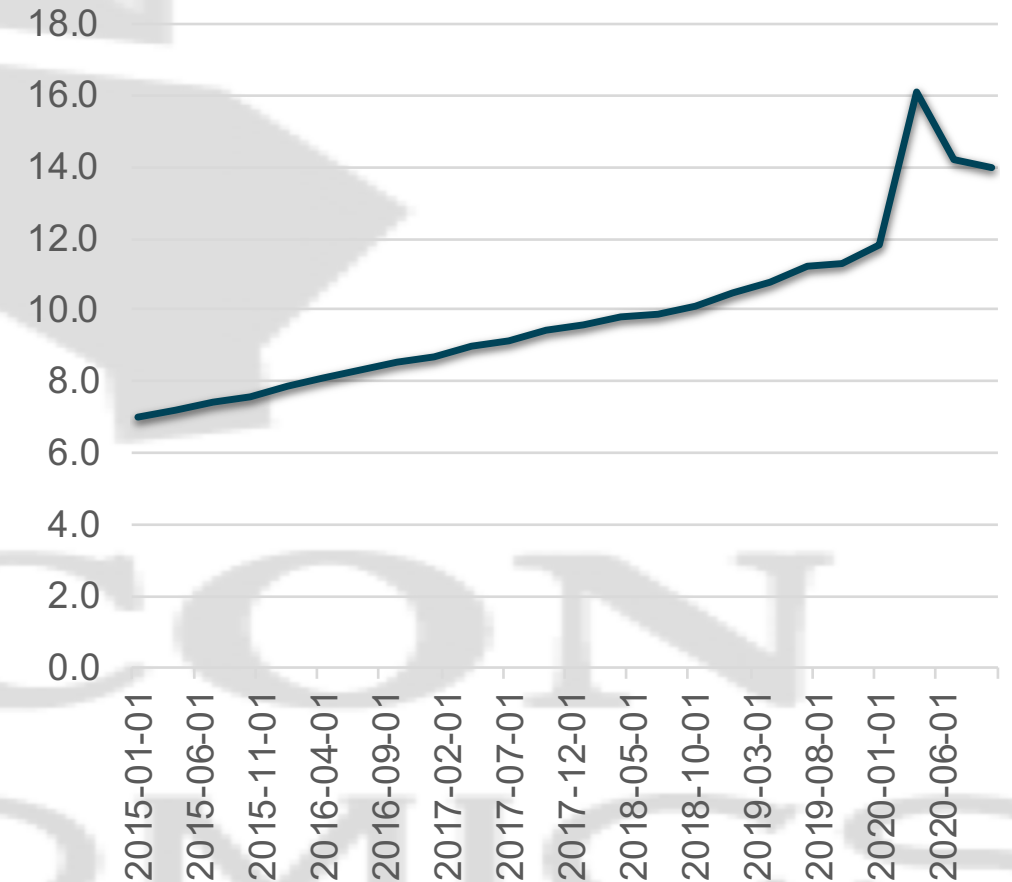
The Retail Dilemma

Retail space per capita in selected countries worldwide in 2018
(in square feet)



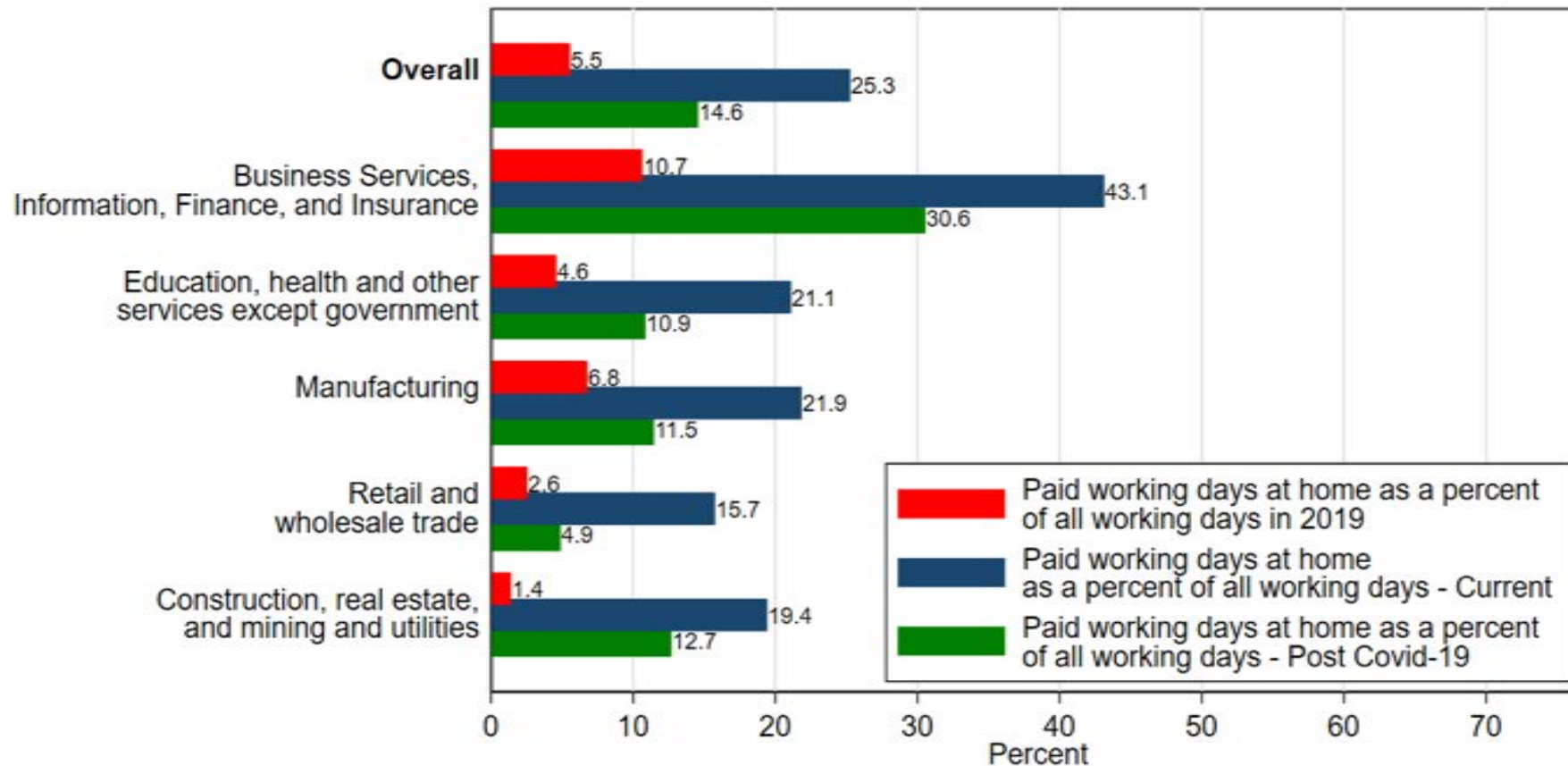
© Statista 2020

E-Commerce Share Retail Sales



WFH Before, During, and After COVID

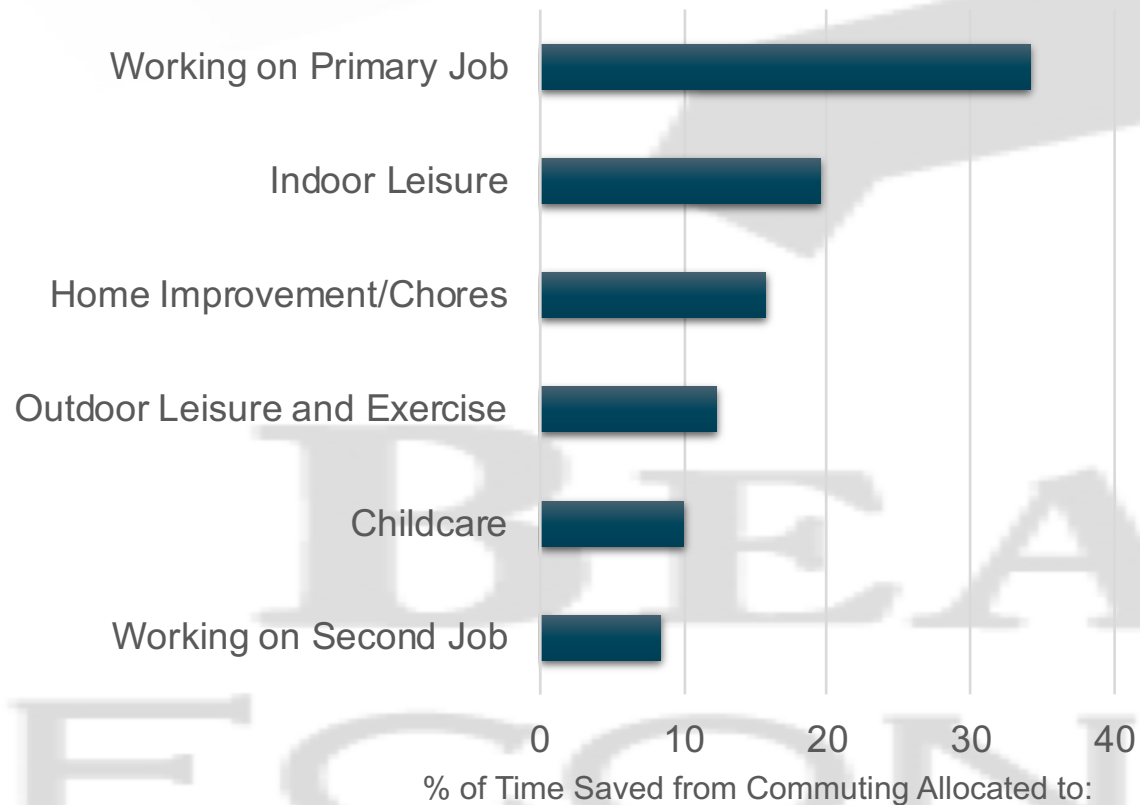
Chart 2: Paid WFH Days as a Share of All Working Days before, during, and after the Pandemic



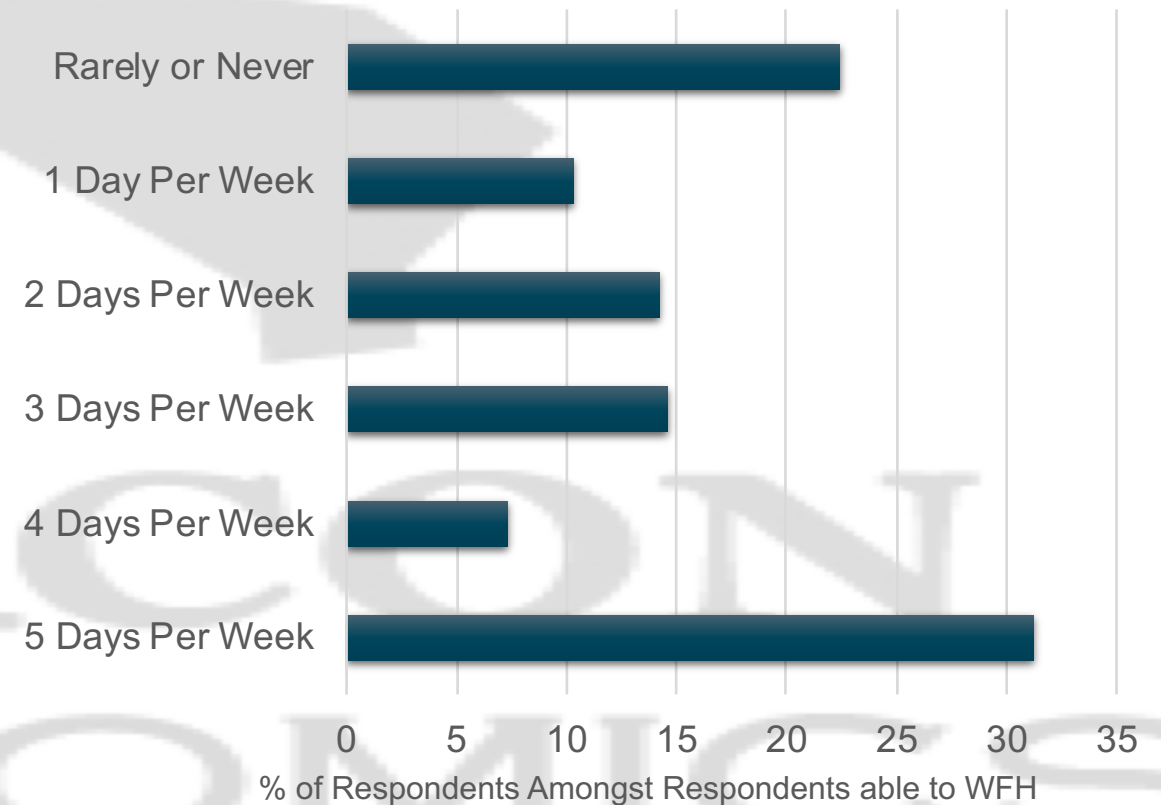
WFH – Time and Preferences



How are you now spending time you saved by not commuting?

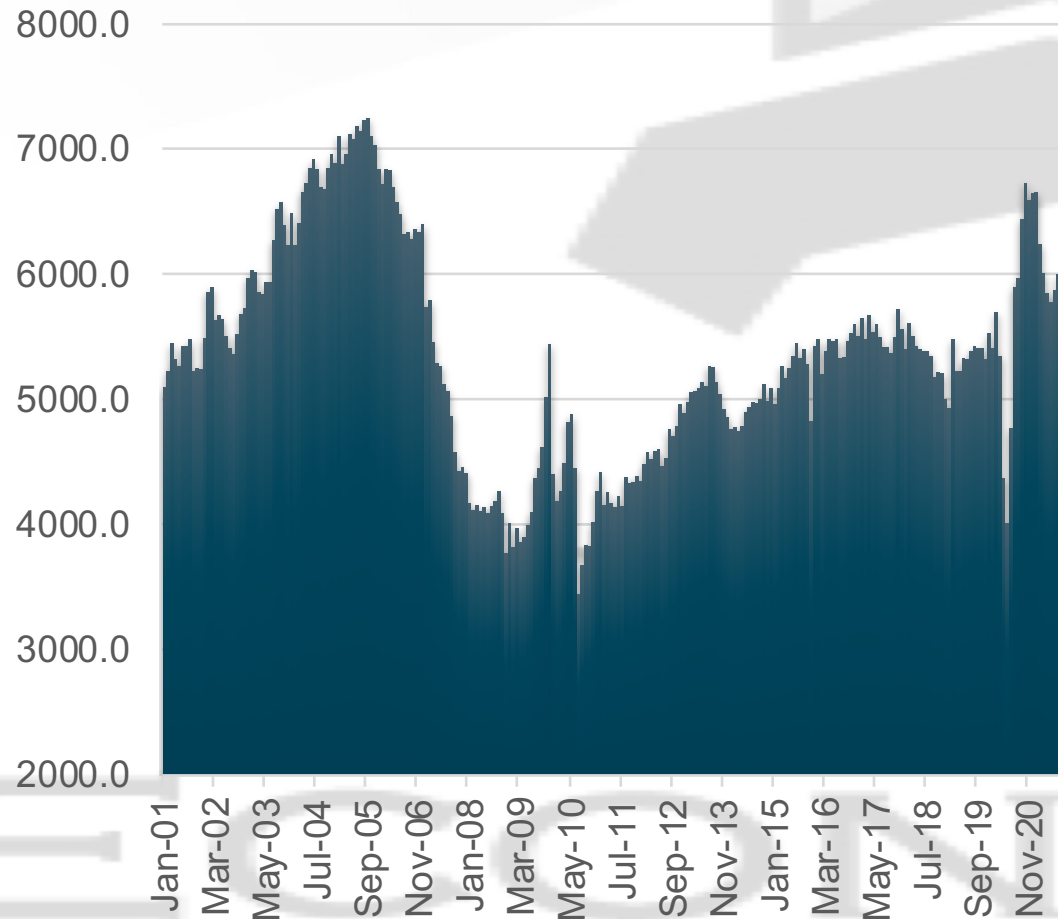


Workers' desired amount of post-COVID WFH days

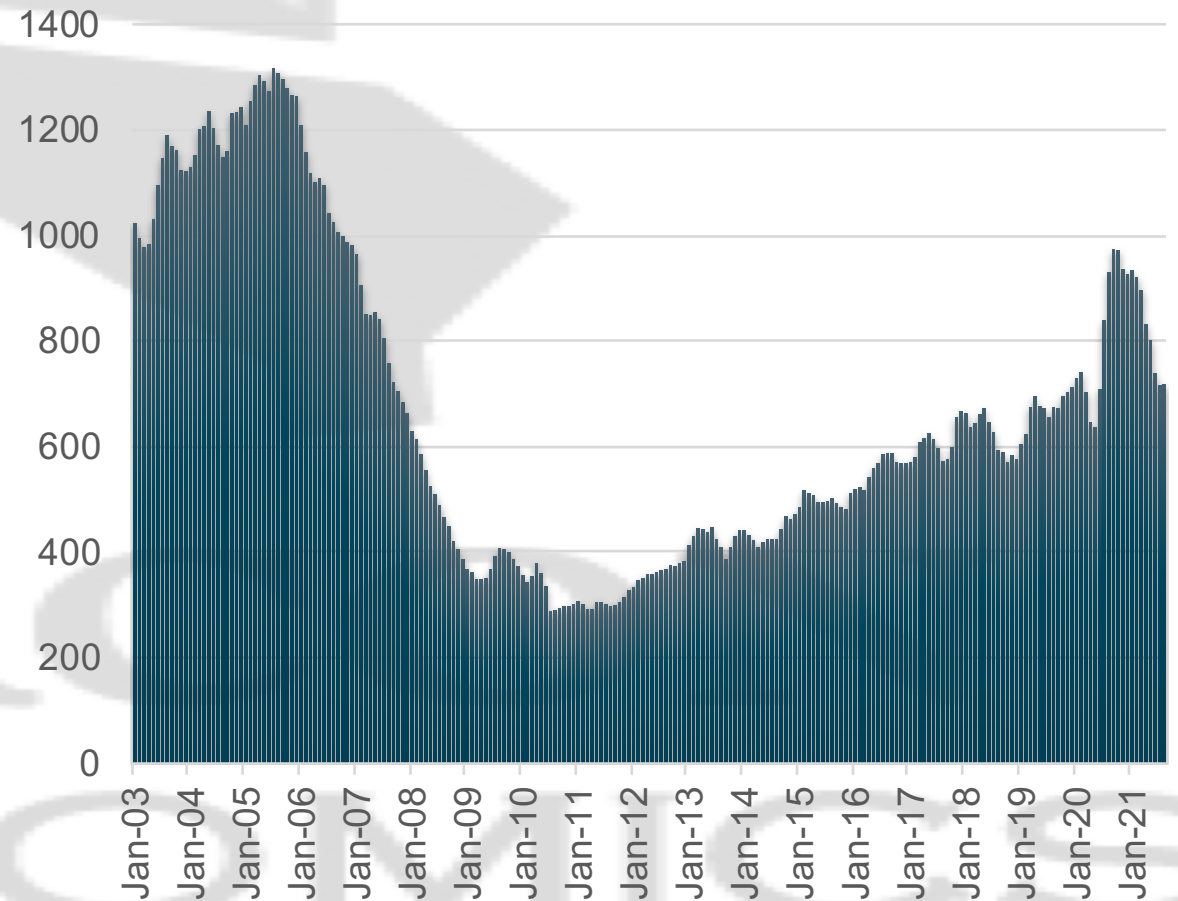


Housing – U.S.

Existing Home Sales

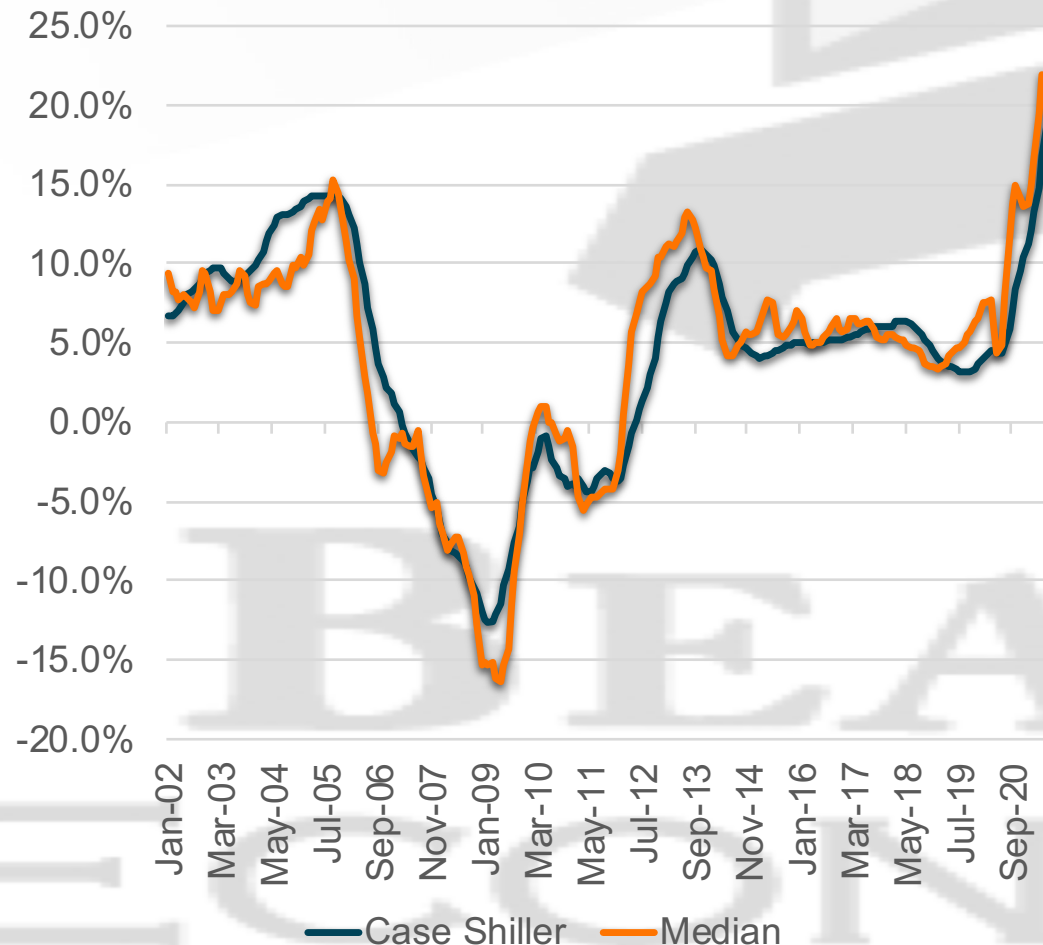


New Home Sales



Housing – U.S.

HPA: YoY Growth

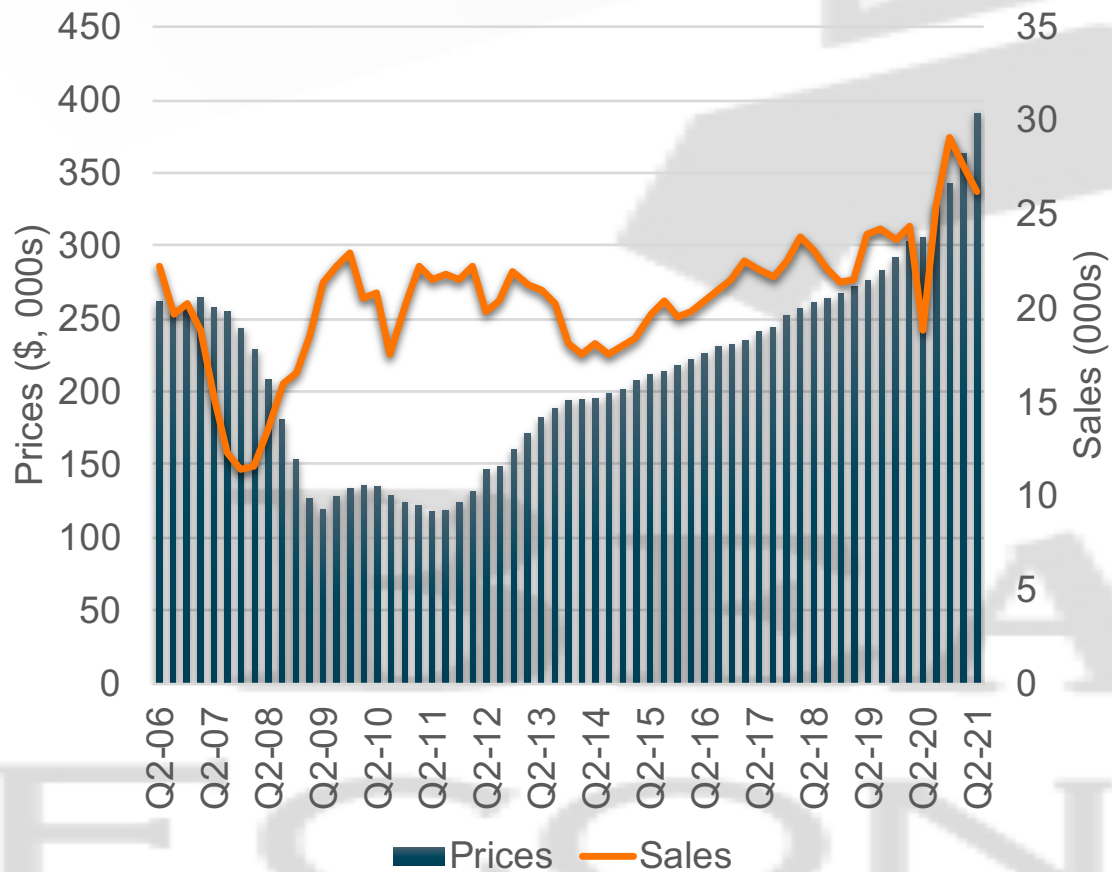


	18-19	19-20	20-21
Phoenix	5.8%	9.2%	28.3%
San Diego	2.0%	5.5%	26.0%
Seattle	-0.6%	7.0%	24.1%
Dallas	2.8%	3.3%	20.7%
Tampa	4.6%	5.9%	20.7%
San Francisco	0.2%	2.8%	20.4%
Miami	2.7%	4.1%	19.4%
Las Vegas	4.7%	3.4%	19.3%
Denver	3.1%	4.4%	18.9%
Charlotte	4.6%	6.0%	18.0%
Portland	2.5%	5.1%	18.0%
Los Angeles	1.2%	5.4%	17.2%
New York	1.2%	2.3%	16.7%
Atlanta	4.2%	4.9%	15.8%
Cleveland	3.2%	5.4%	15.1%
DC	2.7%	4.4%	15.0%
Chicago	1.8%	1.3%	12.5%

Home Prices and Sales



Phoenix Home Prices and Sales



MSA	Home Prices (\$)		Sales	
	Q2-21	1-Yr % Chg	Q2-21	1-Yr % Chg
Pinal County (AZ)	327,000	33.5	3,713	49.5
Maricopa (AZ)	410,000	27.1	26,197	38.2
Inland Empire (CA)	485,000	24.6	18,172	61.7
Los Angeles (CA)	901,500	24.3	24,575	89.7
Clark County (NV)	375,000	21.0	12,201	81.6

Drivers of the Housing Boom

Mortgage Rates (30 Yr Fixed)

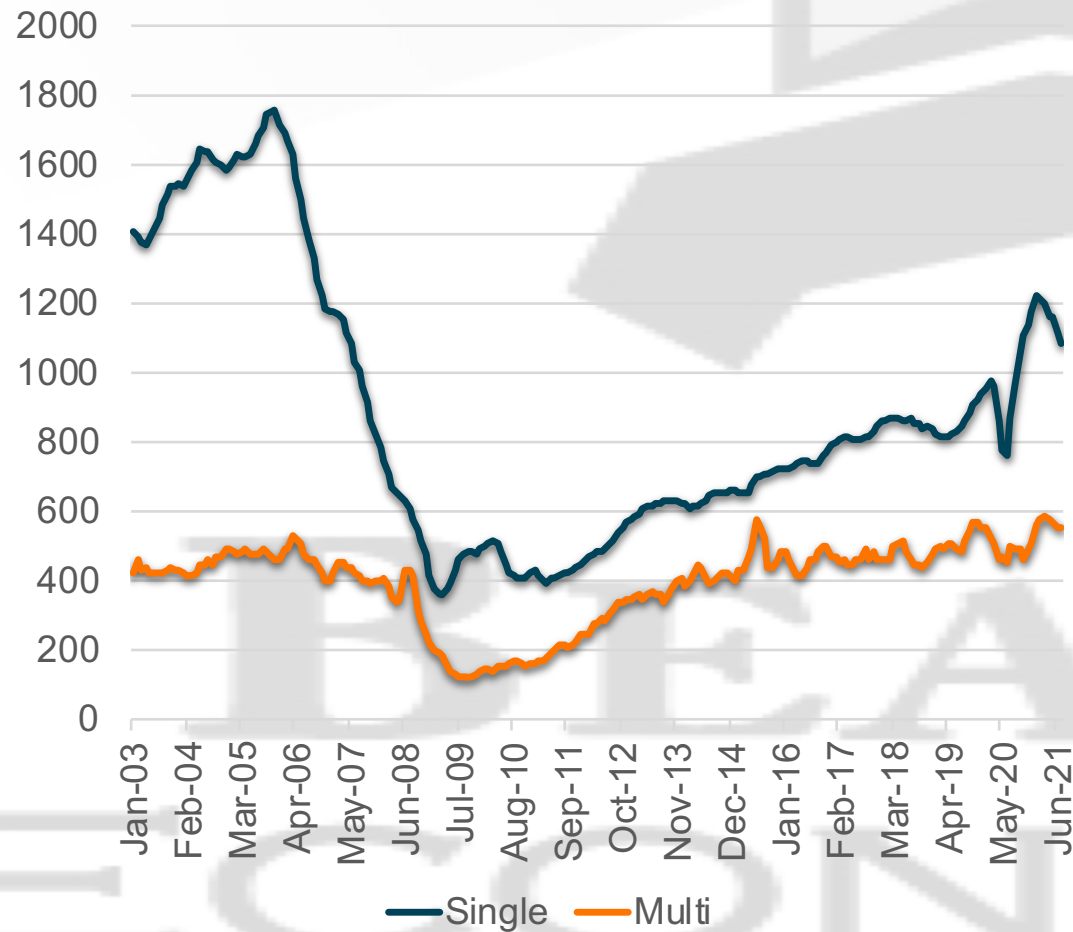


Drivers of Housing Volatility

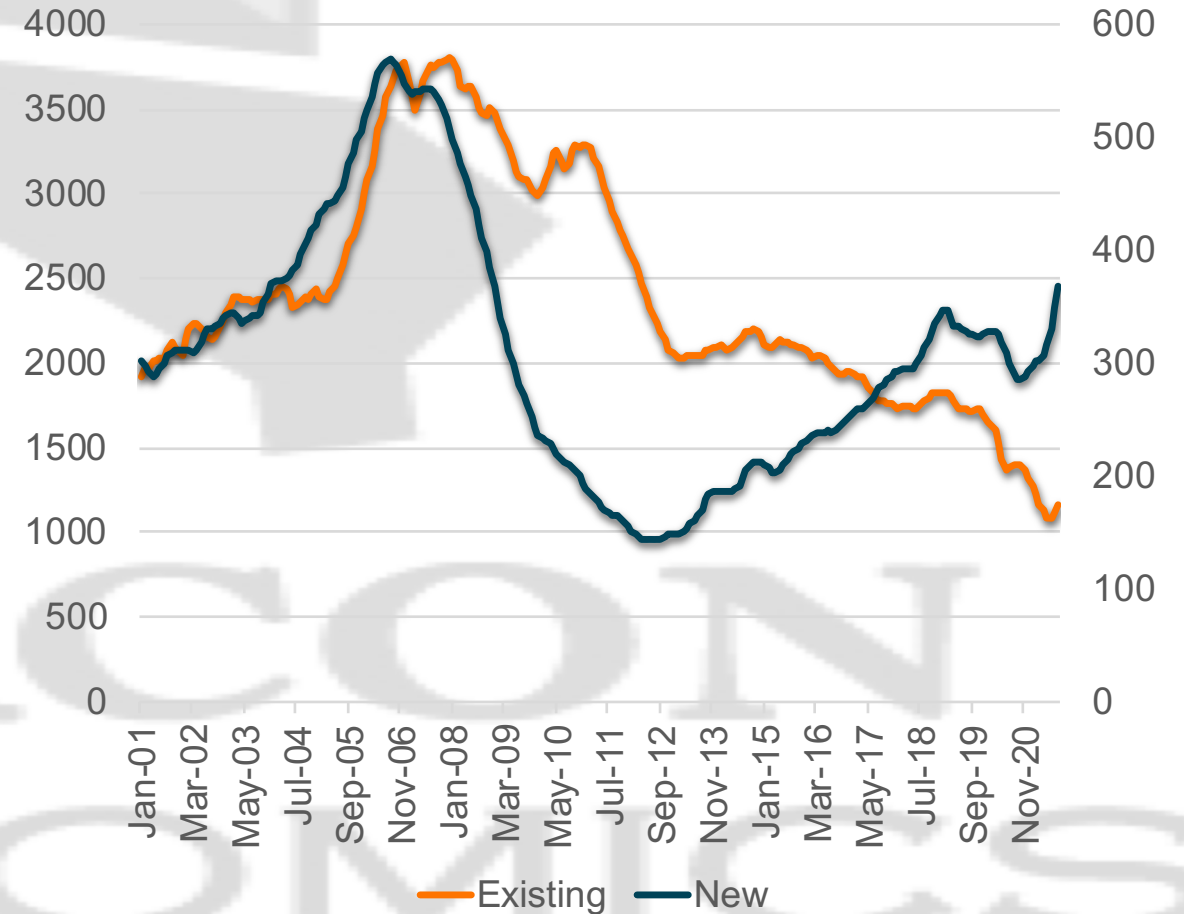
- **Long Run**
 - Ownership rates
 - Pace of construction
 - Household Growth
- **Short Run**
 - Mortgage Rates
 - Cash savings
 - Wealth effects
 - Changes in tax laws
- **Feedback effects**

Construction Activity

Residential Permits

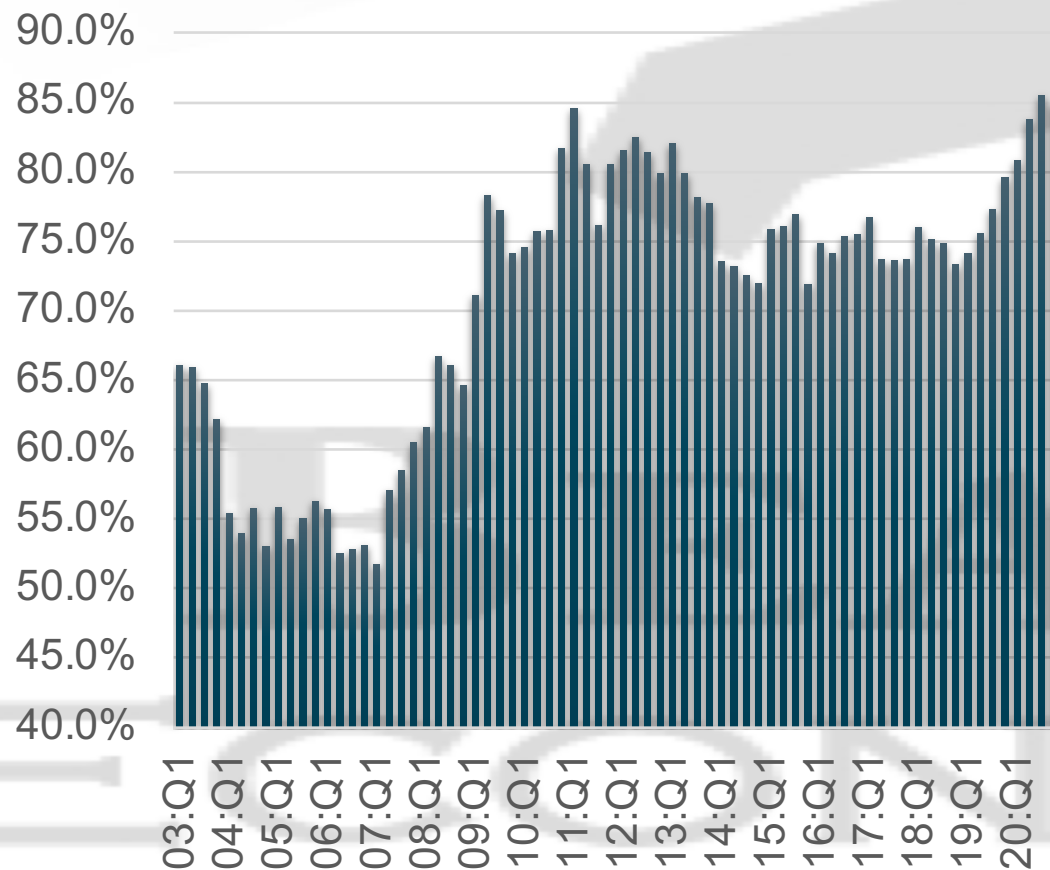


Inventory of Homes for Sale



Bubble Alert? Not Yet...

Share Mortgage Originations > 720
Fico



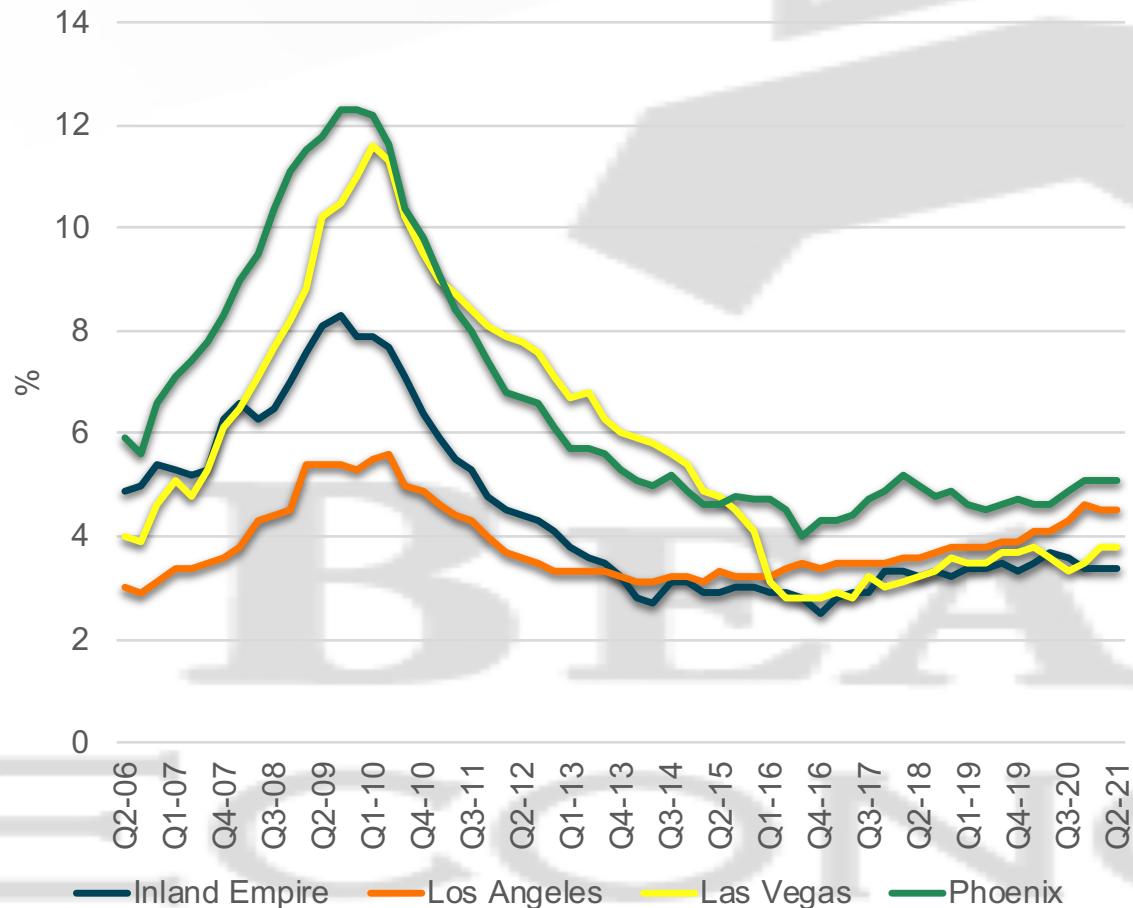
Owner Costs as % Income

		2011	2019
	Units w/ Mortgage	Less than 20.0 percent	
US	49,049,732	34.9%	47.6%
Arizona	1,023,943	32.8%	48.0%
California	5,064,795	23.8%	35.1%
Colorado	948,904	36.2%	45.1%
Nevada	403,792	29.8%	44.2%
Utah	446,690	33.6%	47.7%
		35.0 percent or more	
US	49,049,732	28.1%	19.9%
Arizona	1,023,943	30.5%	19.3%
California	5,064,795	38.6%	28.5%
Colorado	948,904	26.1%	20.7%
Nevada	403,792	33.4%	21.0%
Utah	446,690	24.9%	16.9%

Apartments

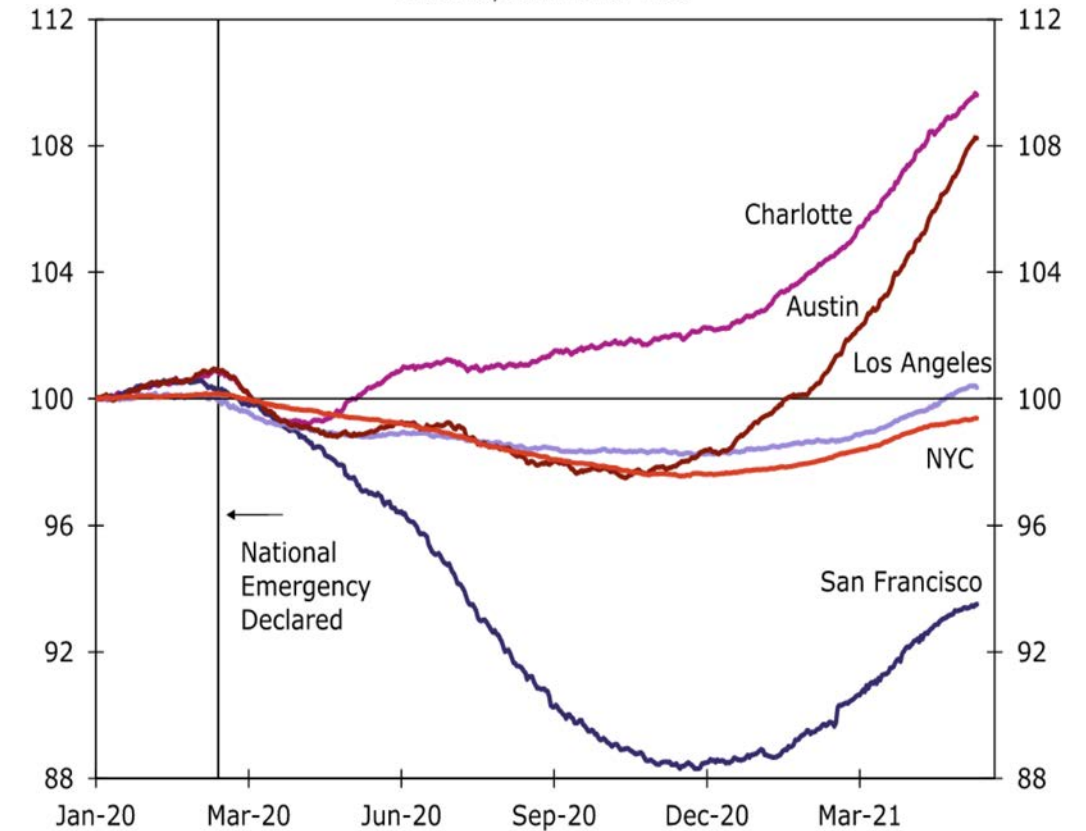


Vacancy Rate



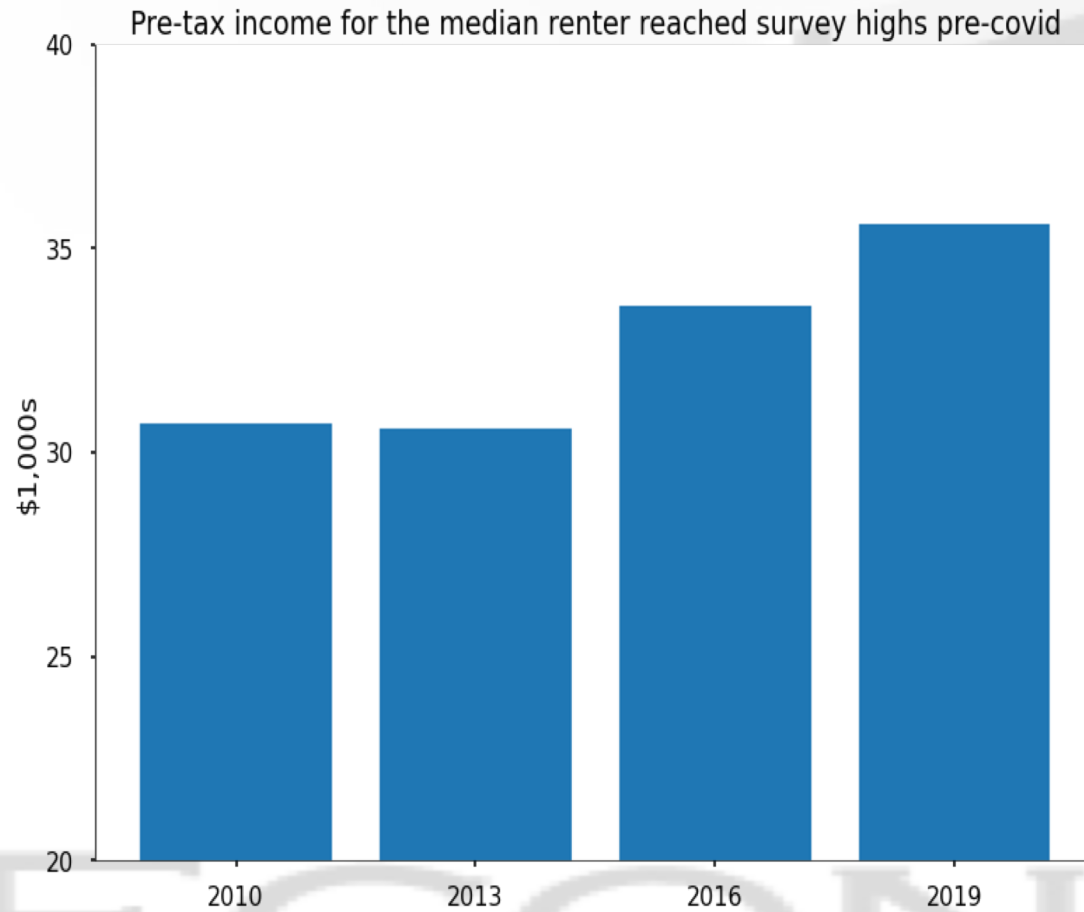
Daily Asking Apartment Rents per SF

Indexed, Jan. 2020=100

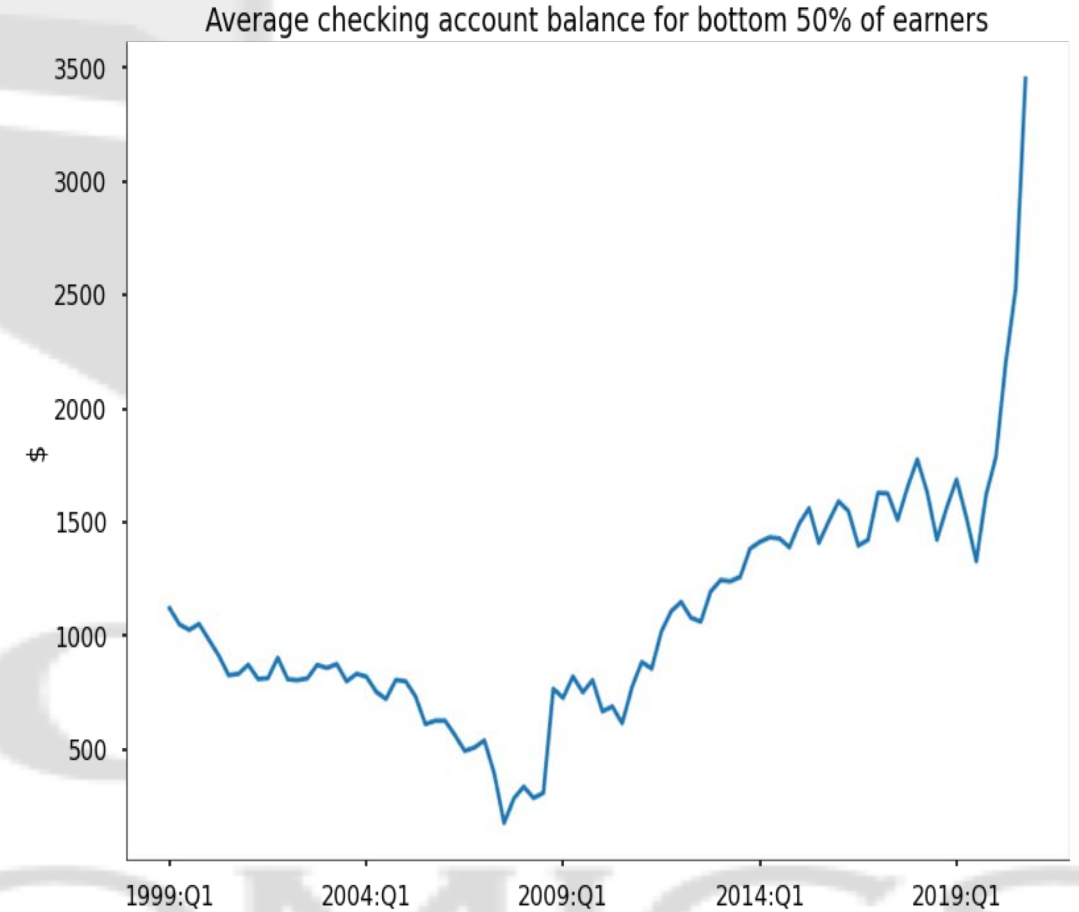


Source: CoStar Inc. and Wells Fargo Securities

Financial Status



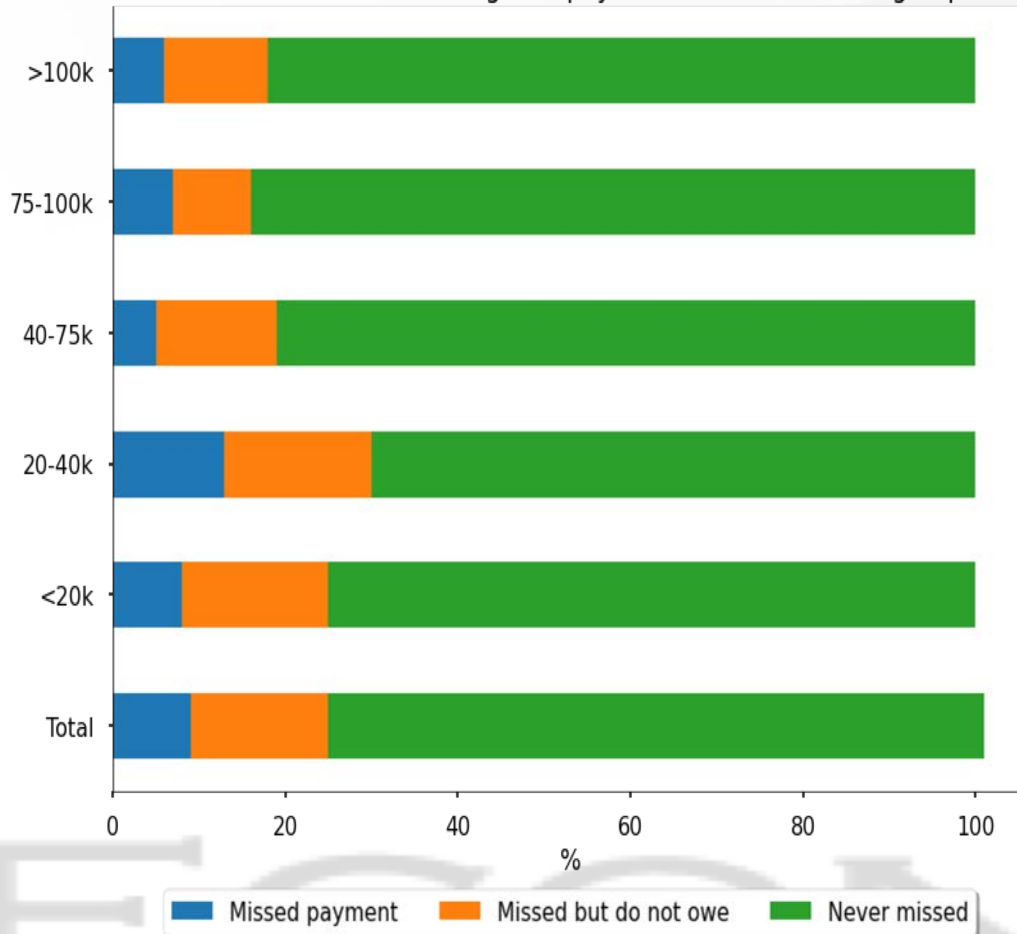
SRC: Federal Reserve Board, SCF



SRC: Federal Reserve Board, DFA

Rental Status: Pulse vs Other Data

Lowest earners not missing rent payment more than other groups



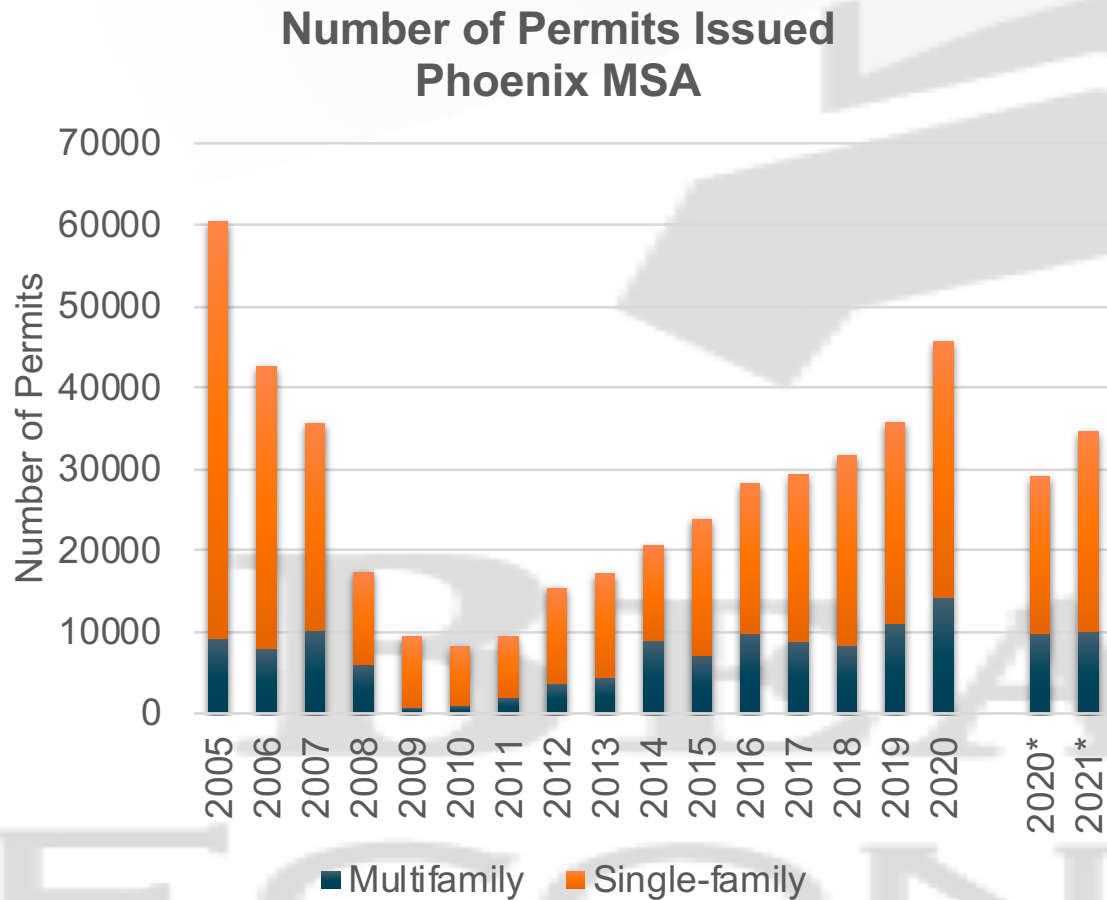
SRC: Federal Reserve Bank of Philadelphia

Figure 1: Households behind on rent have decreased since April 2020



Source: U.S. Census Bureau, ACS, BLS; Analysis by Beacon Economics

Residential Permits



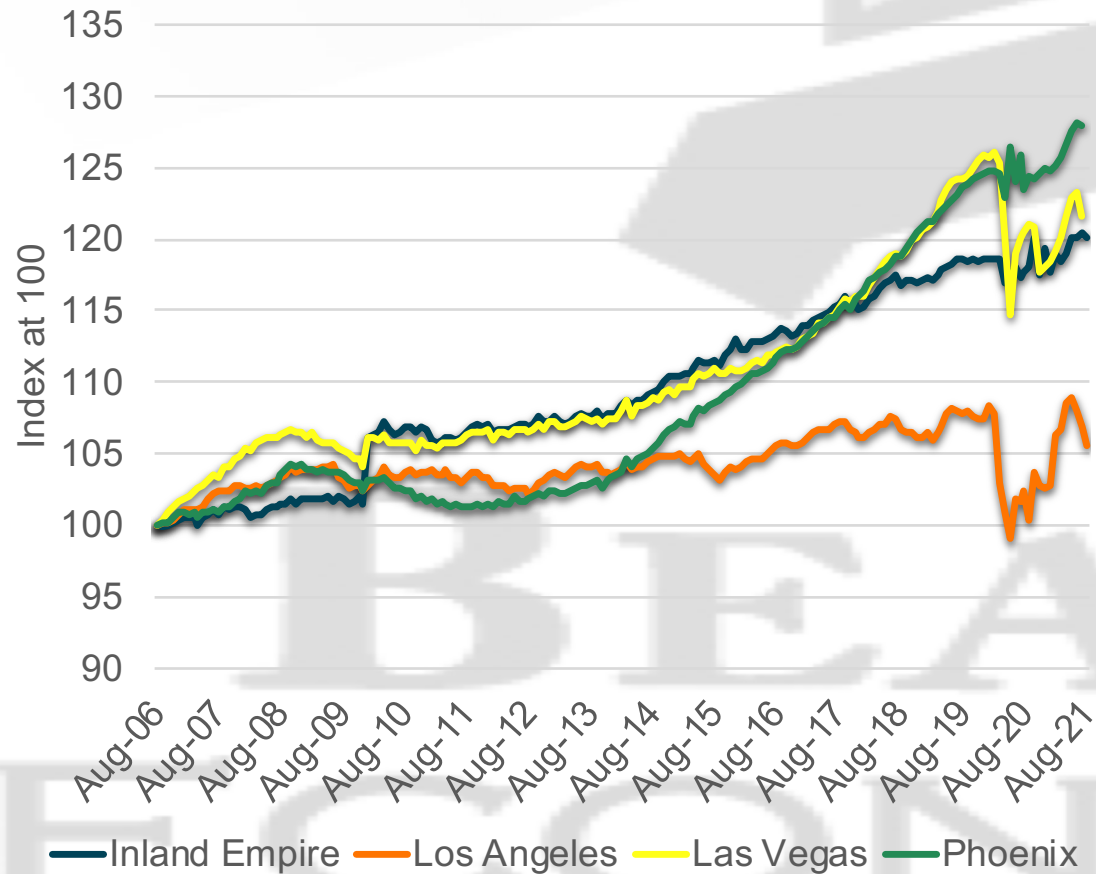
*YTD August

MSA	Single-family		Multifamily	
	2021*	1-Yr Chg	2021*	1-Yr Chg
Phoenix	24,585	5,316	10,016	161
Tucson	3,555	830	600	153
Prescott	1,109	266	147	61
Yuma	820	48	195	108
Flagstaff	393	31	443	135

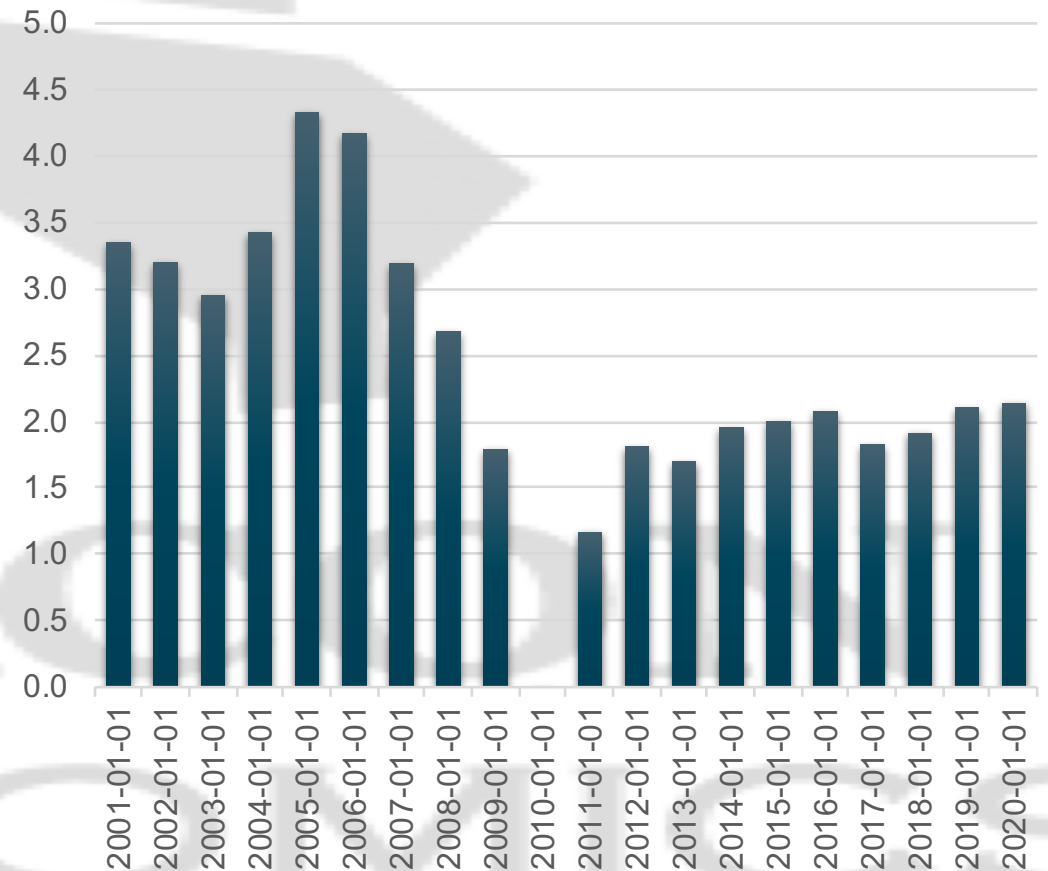
Phoenix Labor Market



Labor Force



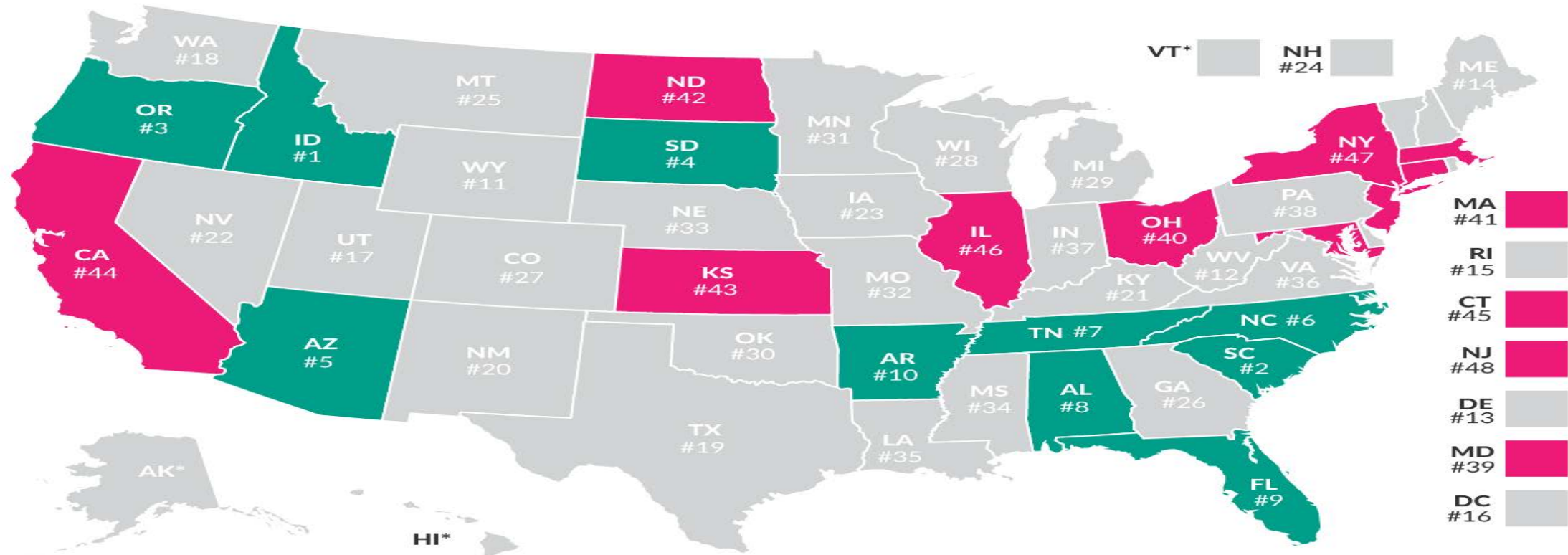
Phoenix Population growth



State to State Movements

Where Did Americans Move in 2020?

State Migration Patterns, from Most Inbound to Most Outbound, 2020

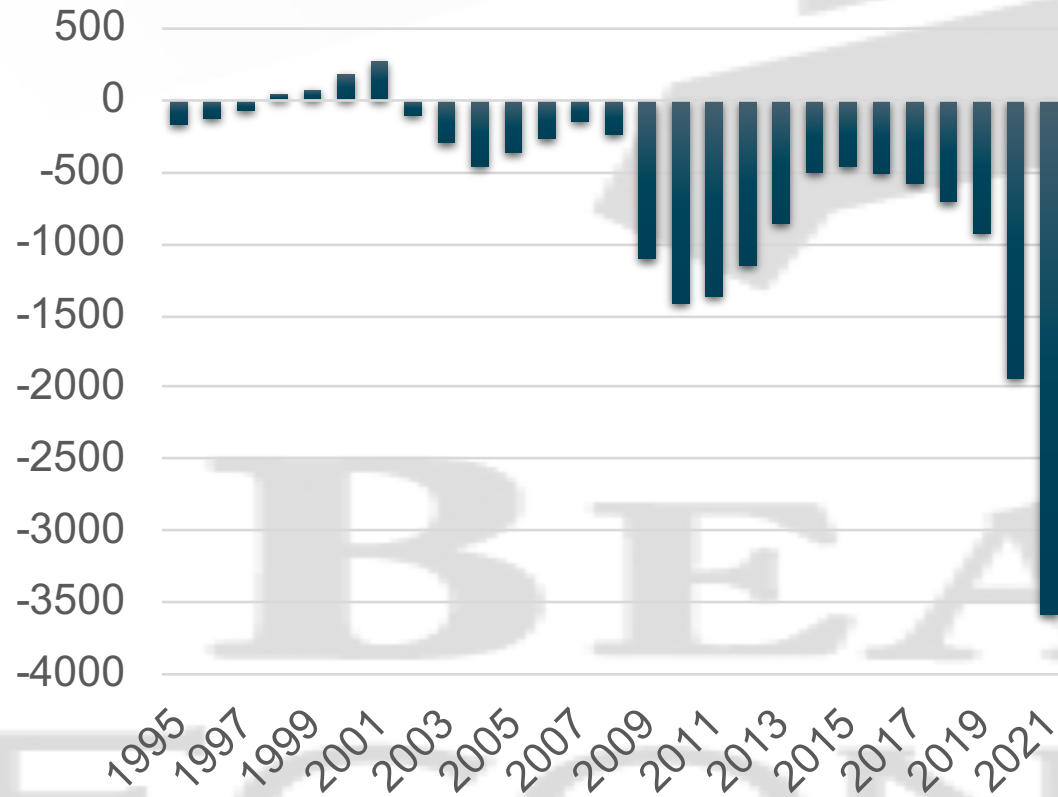


Note: Rankings are determined based on the number of inbound moves as a percentage of total moves in a state. DC is included in state rankings while Vermont is excluded because of its small sample size. Alaska and Hawaii are not included in the study.

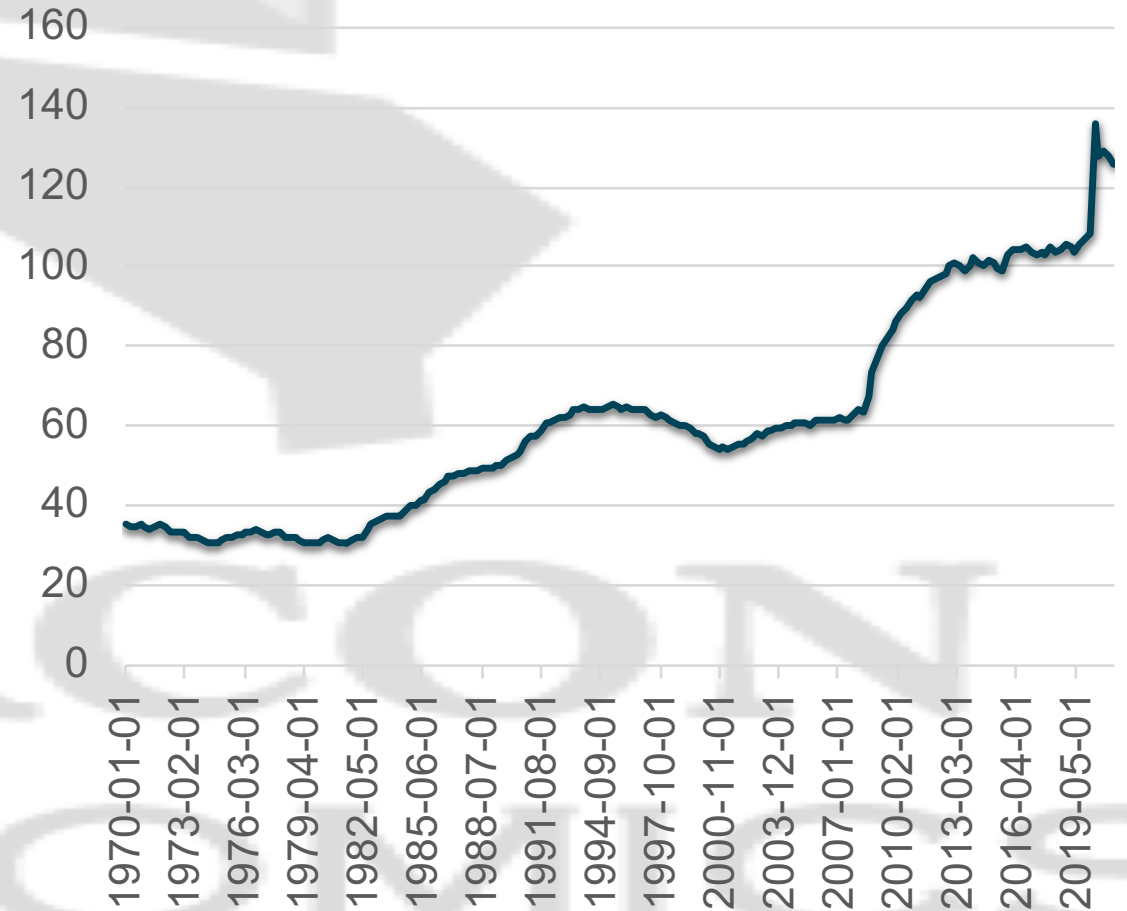
Source: United Van Lines, 2020 National Movers Study.

No Such Thing As a Free Lunch...

12 Month Budget Deficit to April
2021

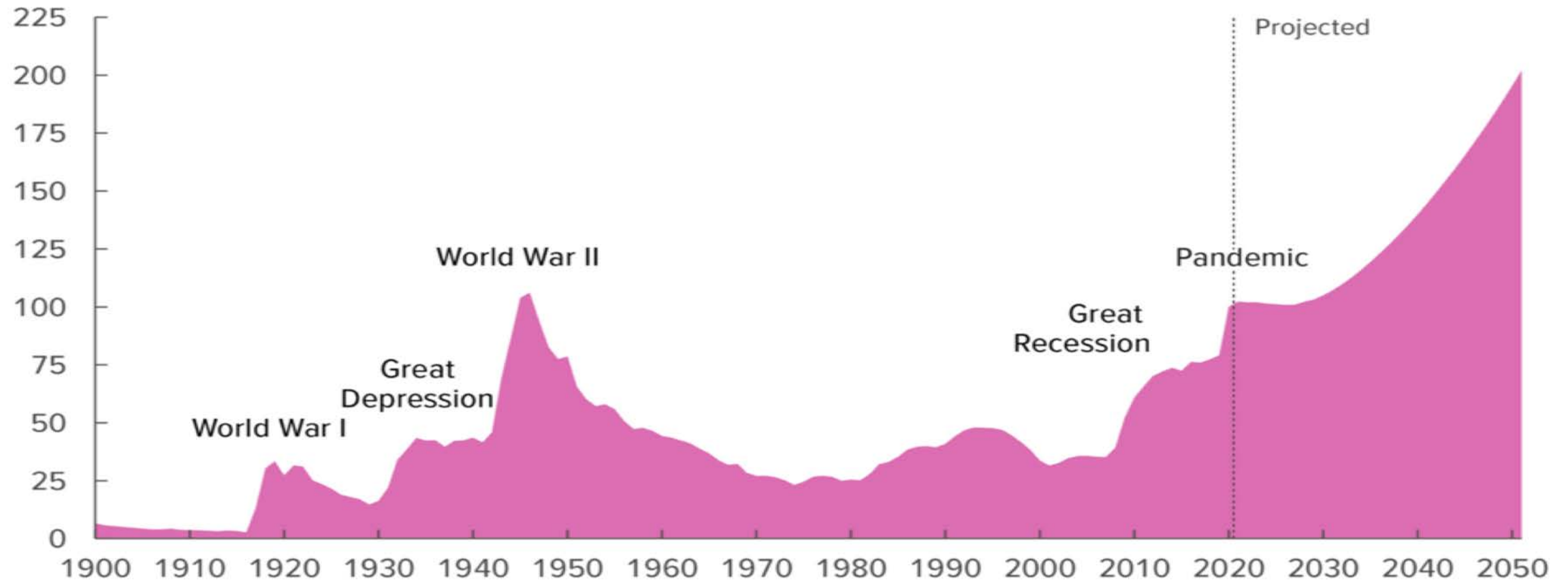


US Federal Debt to GDP



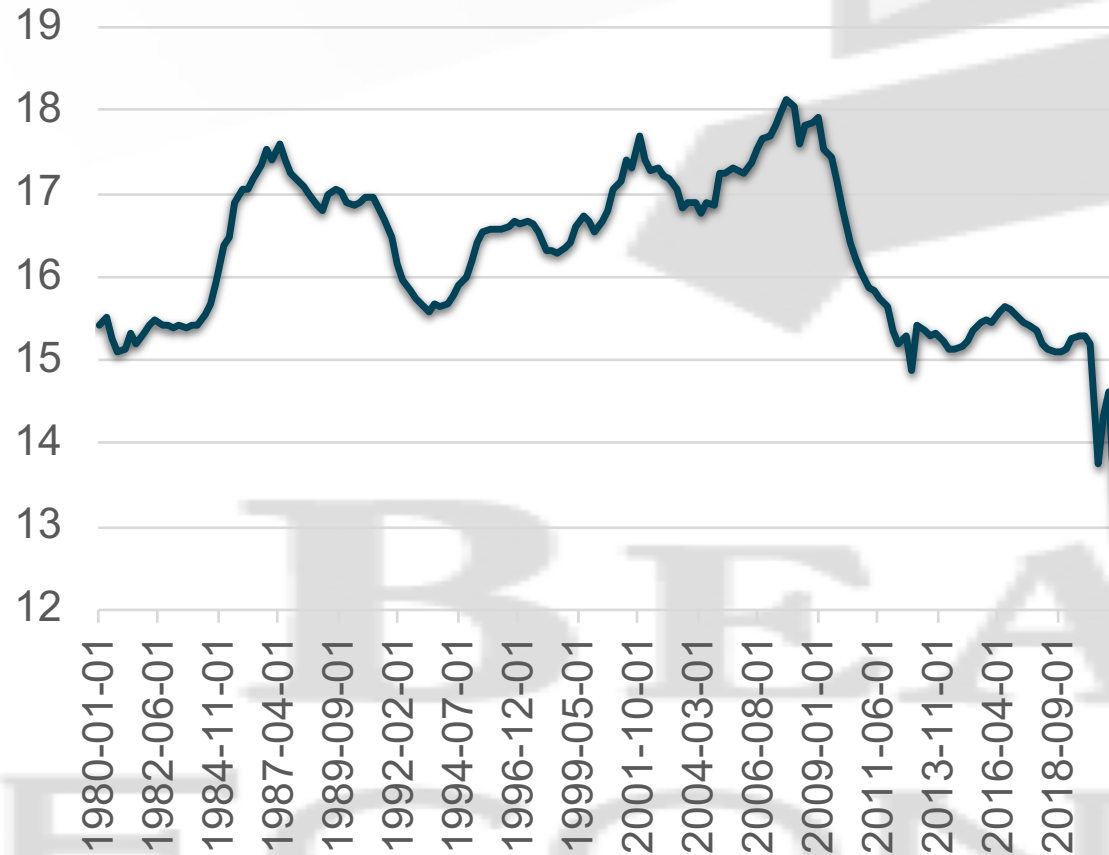
The Long Run

Percentage of Gross Domestic Product

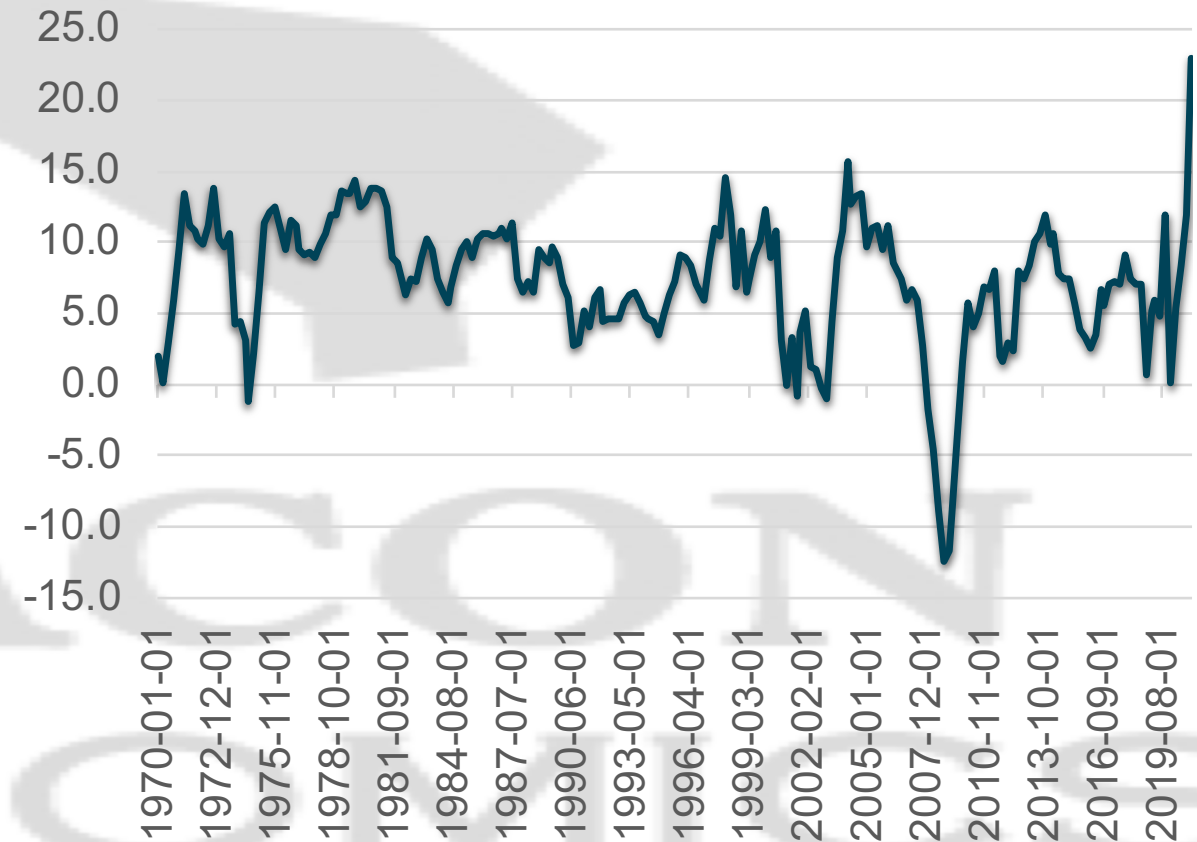


Swapping Public For Private Wealth

US Financial Obligations Ratio

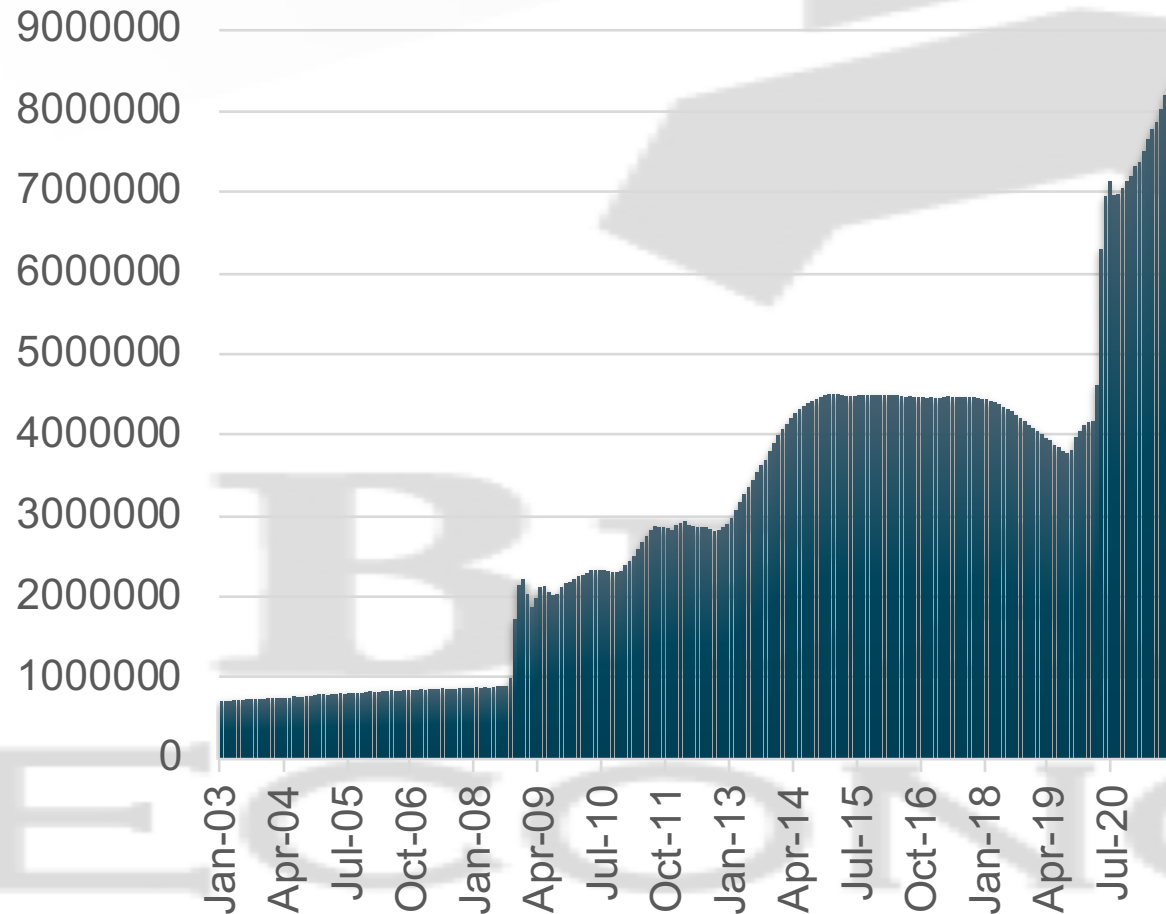


Y-o-Y Change US Aggregate Household Net Worth

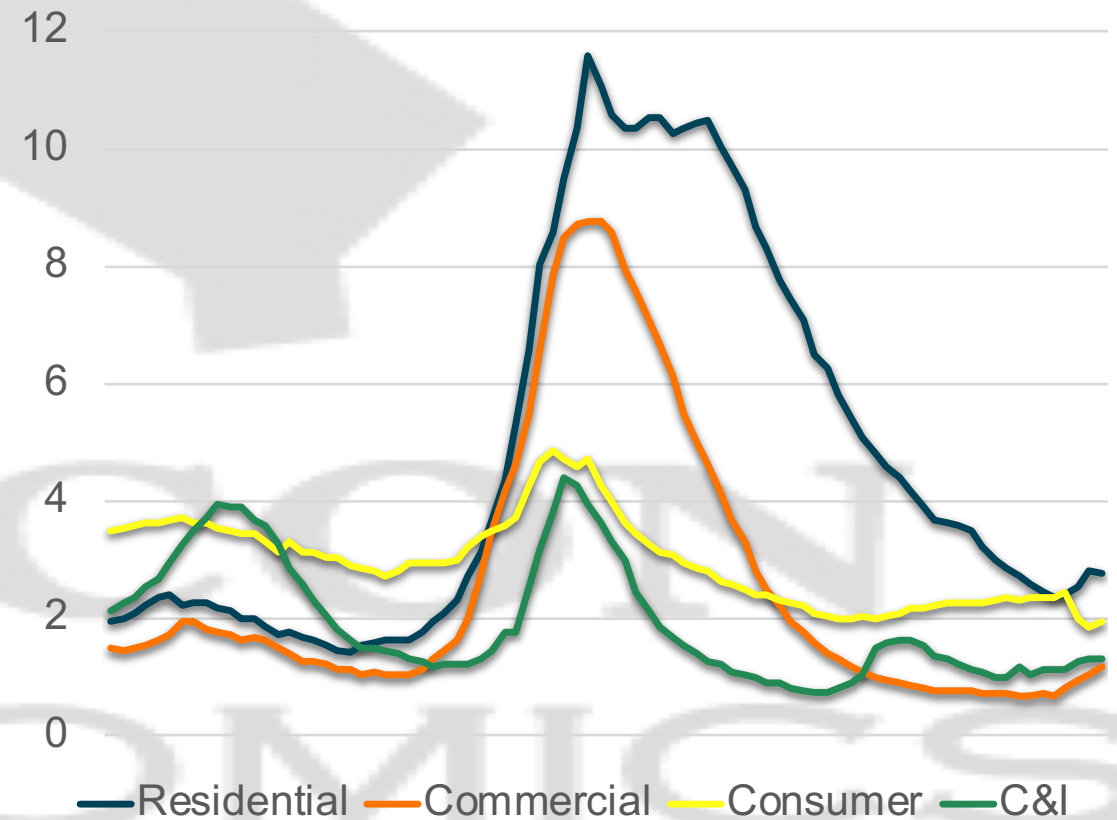


Federal Reserve Policy

Federal Reserve Balance Sheet

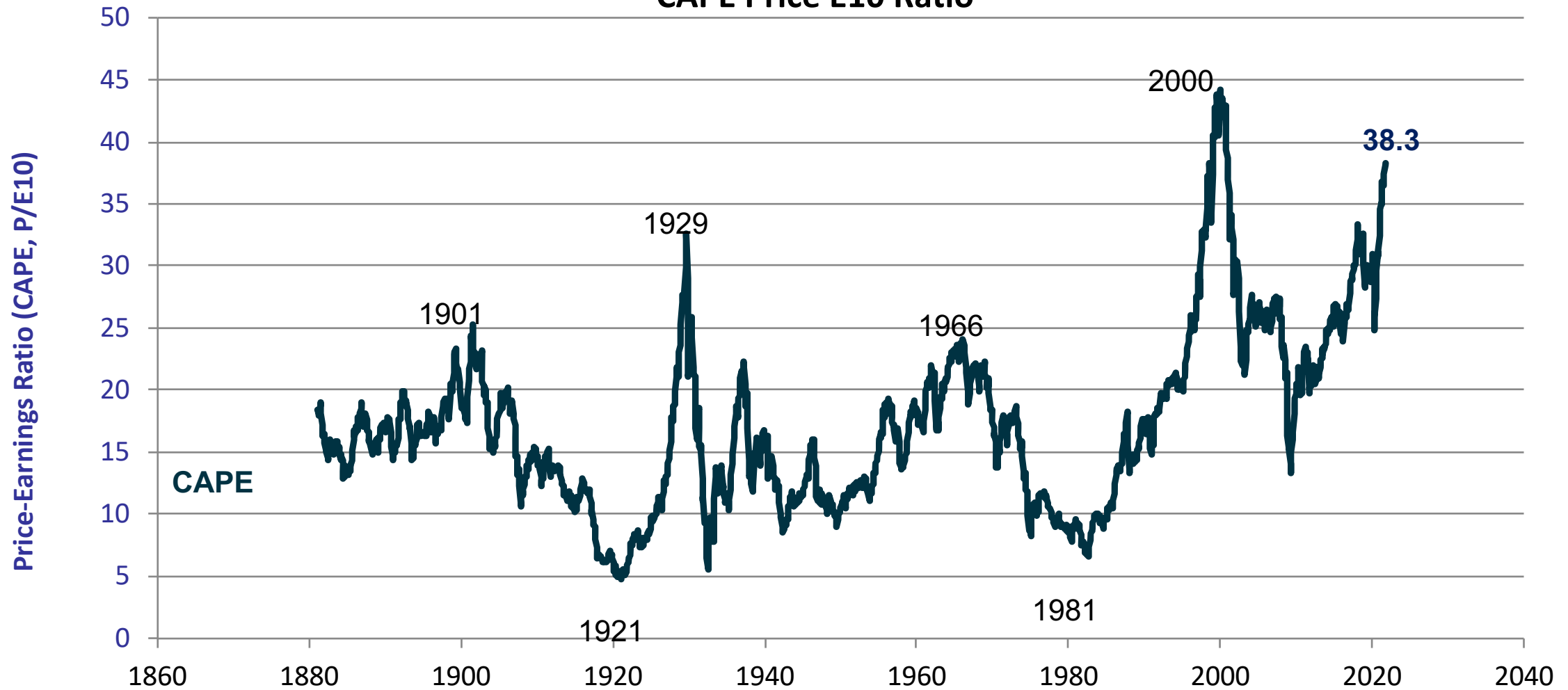


Commercial Bank Loan Delinquencies



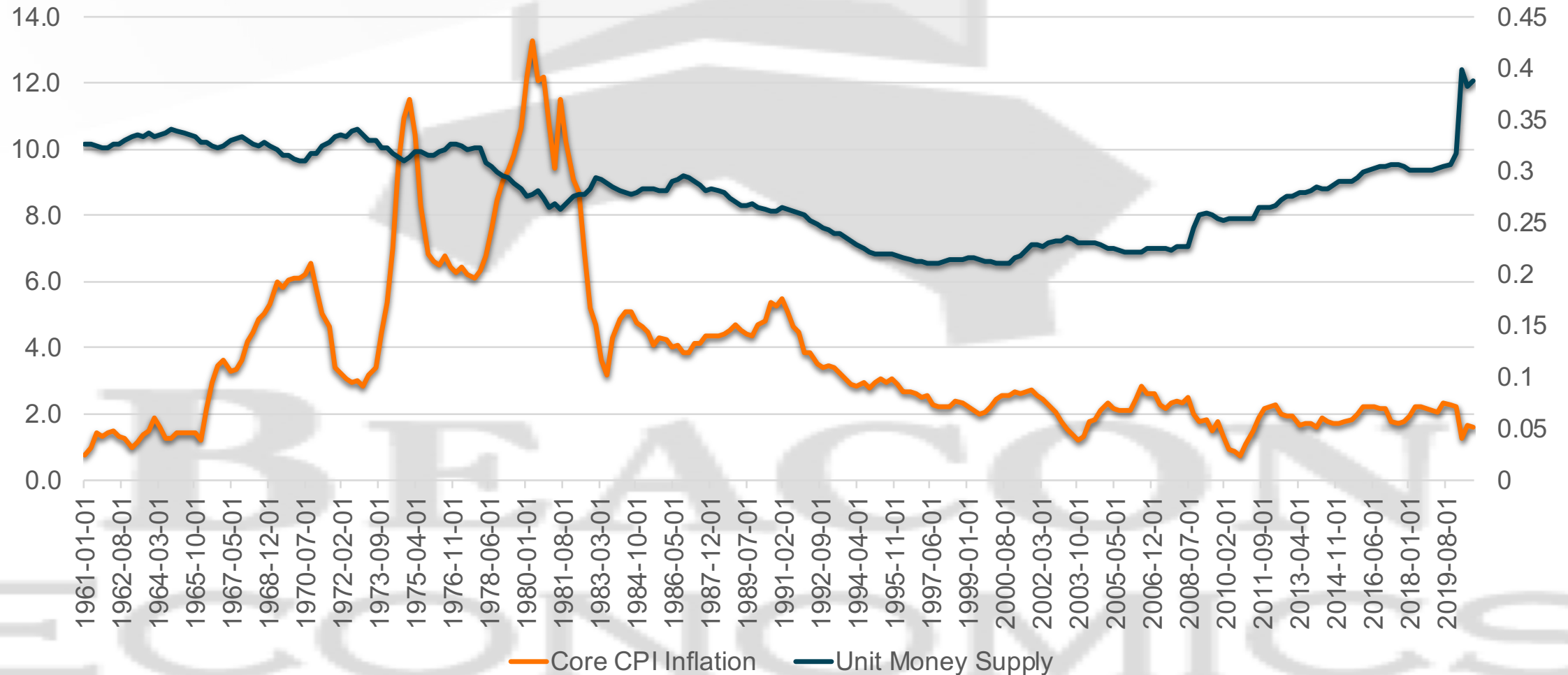
Asset Markets a Bit Frothy?

CAPE Price E10 Ratio



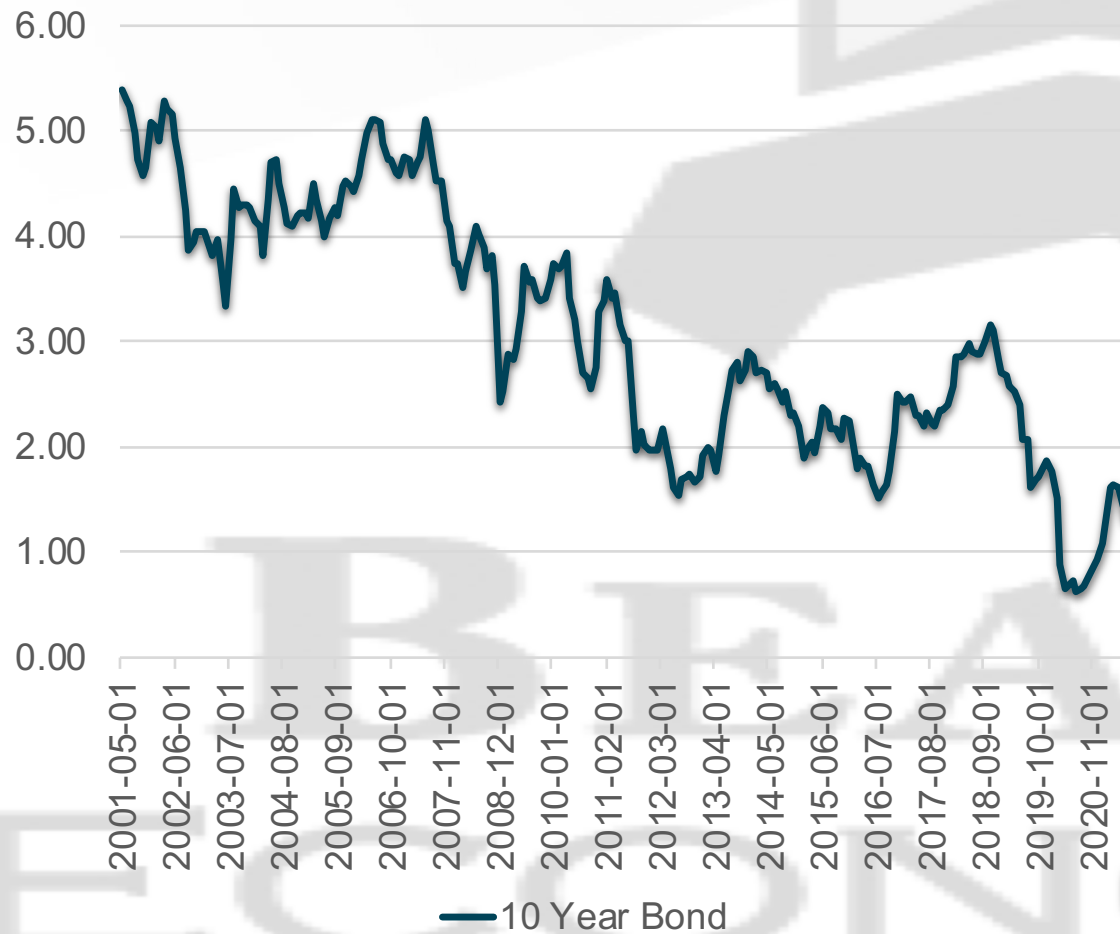
Inflation and Inflation Potential

Money and Prices

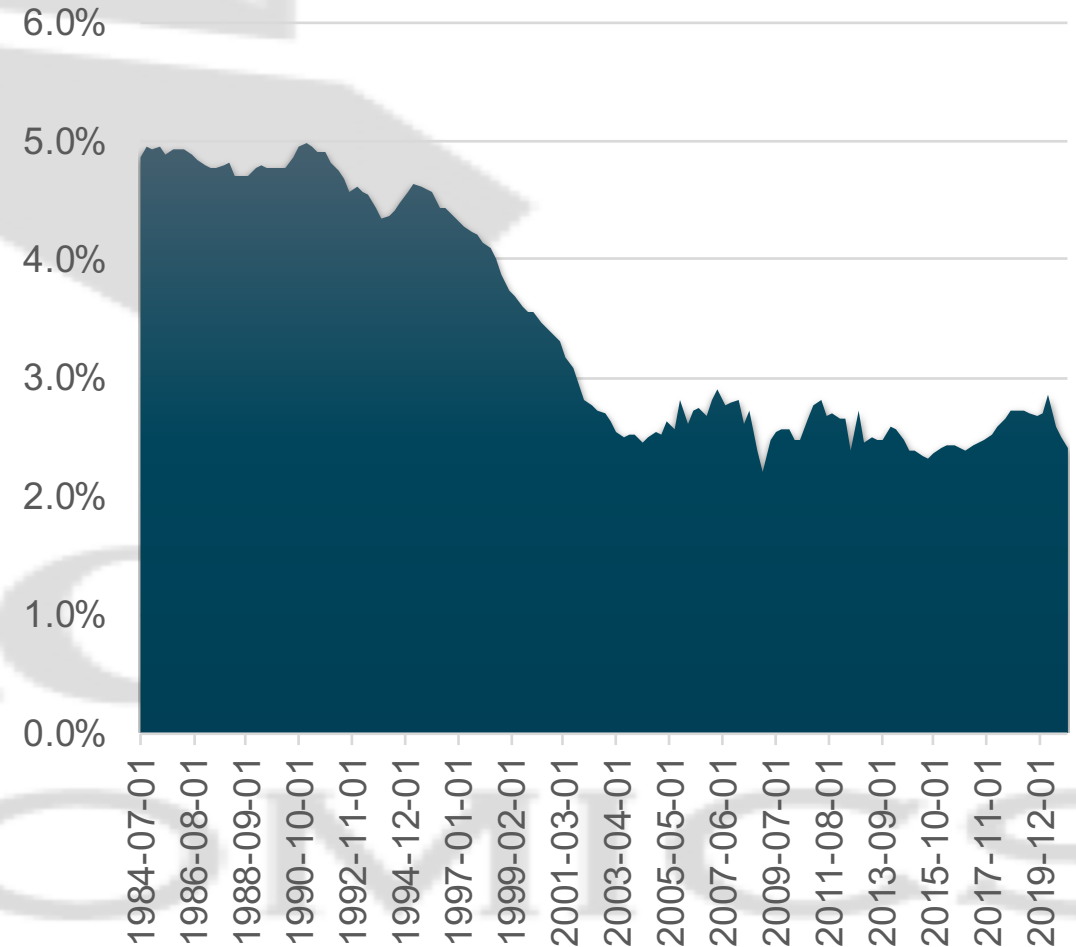


Interaction of Monetary and Fiscal Problems

Interest Rates

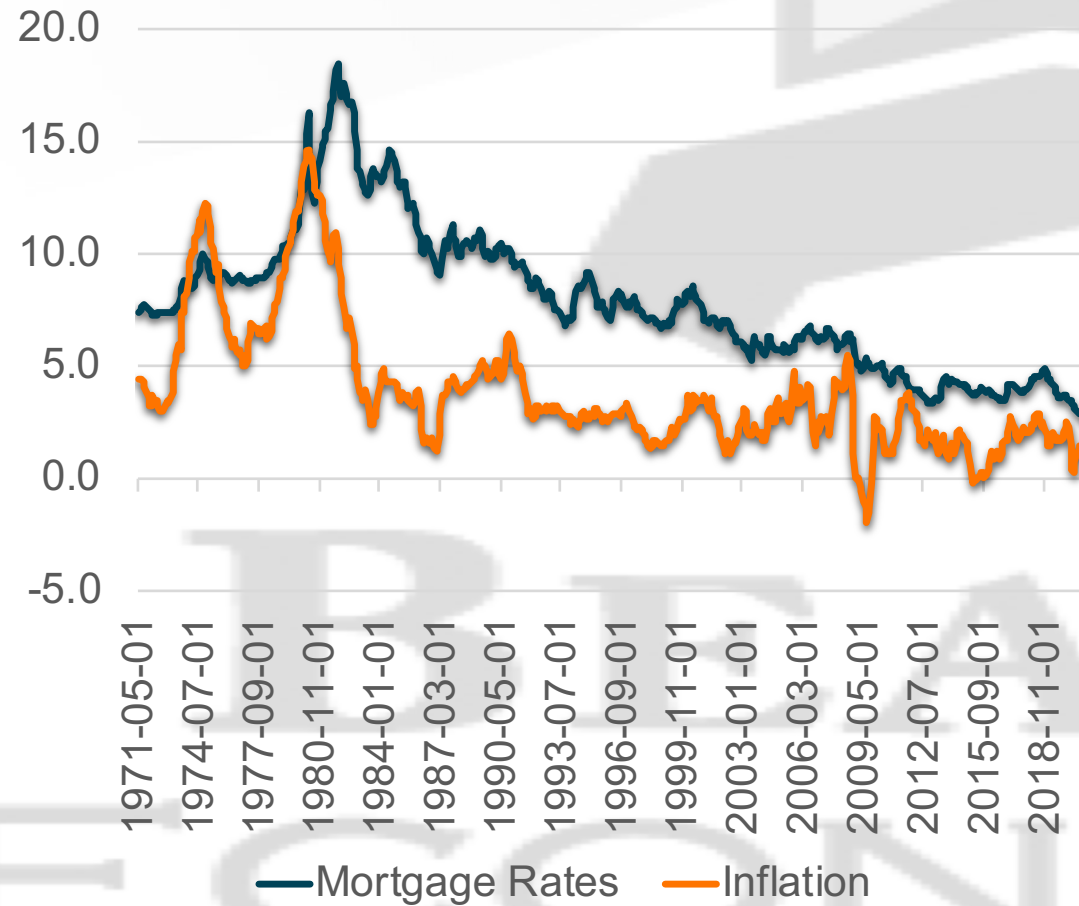


Federal Interest Payments as % of GDP

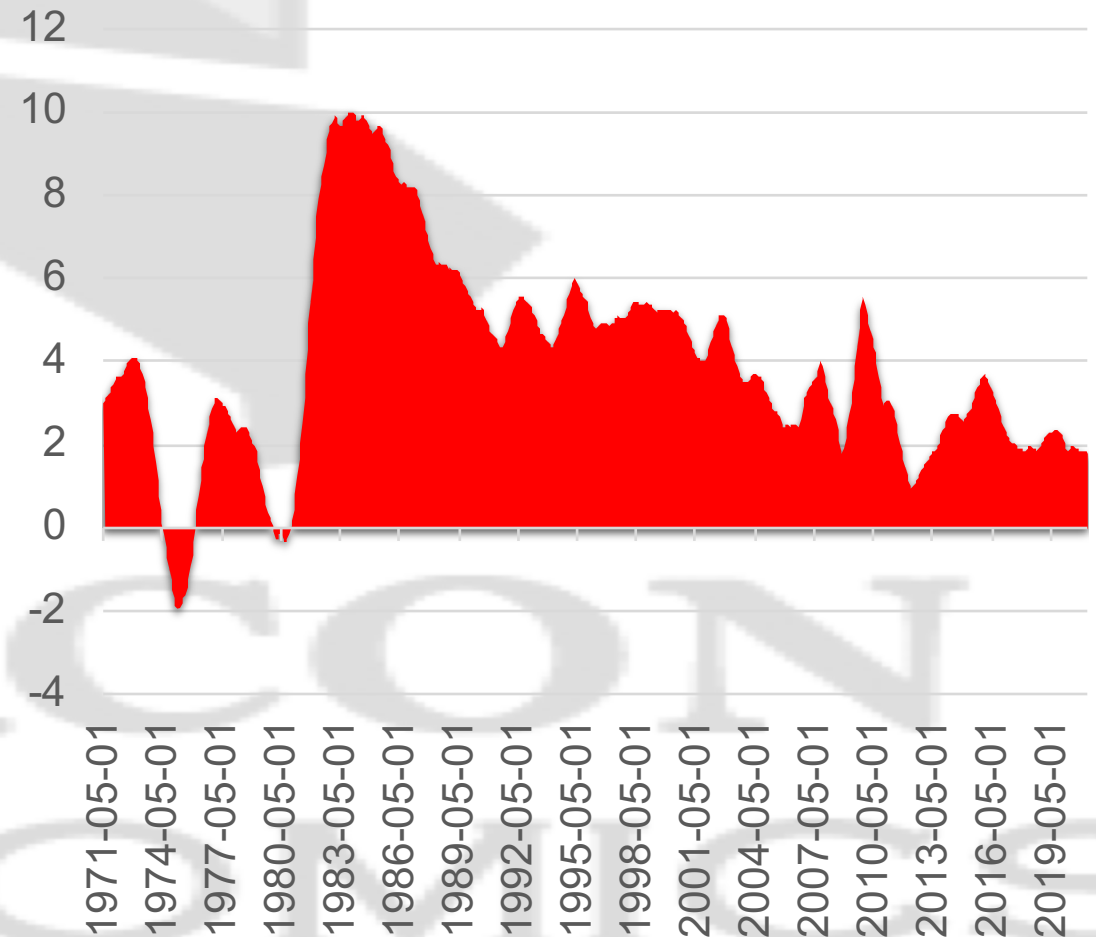


Mortgage Rates

Mortgage rates and Inflation

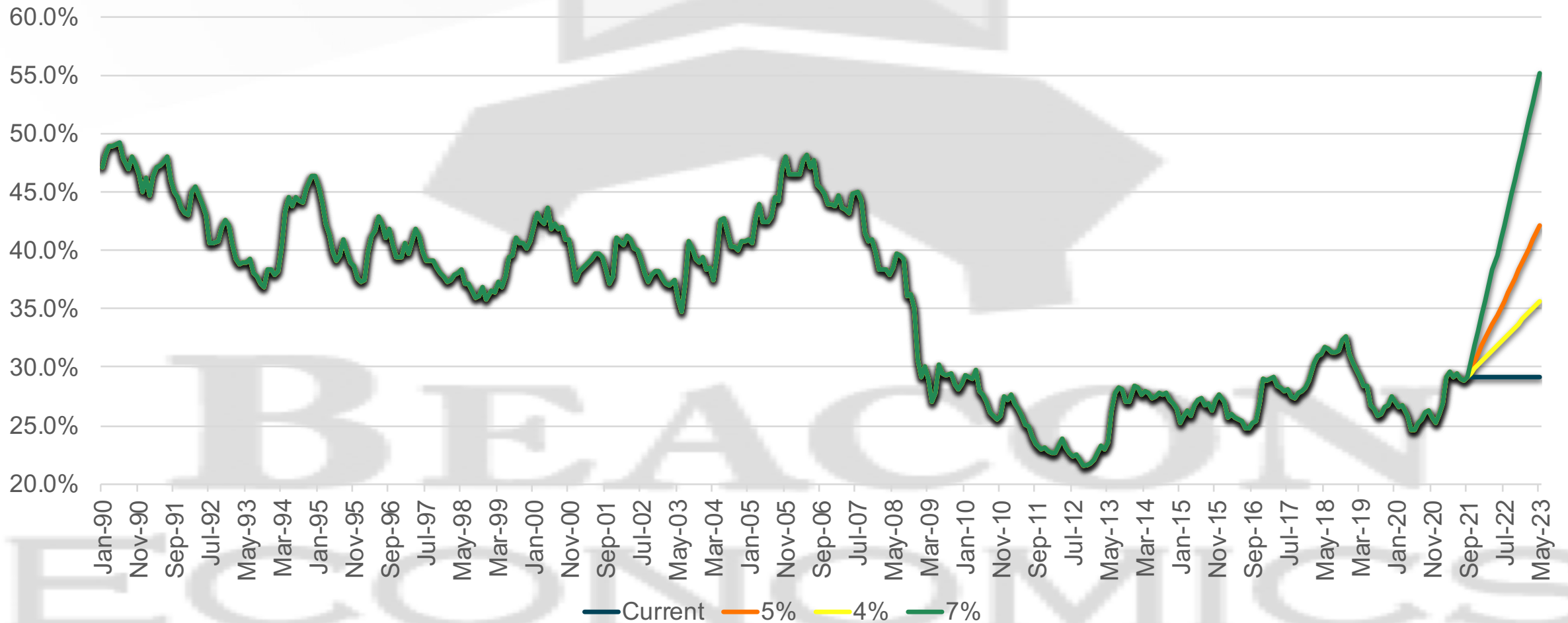


Inflation Rate Gap



Affordability and Interest Rates

% Annual Income to Support Mortgage and Taxes



The Long Run Still Matters



- The Economy is back..
 - The “V” was the only logical outcome
 - Recovery hampered not by lack of demand but by lack of supply
 - Lucky at some level: Spanish Flu 100x as deadly, record roll out of vaccines
- The Outlook
 - 3.5% Q3, 6% Q4
 - Unemployment below 5% by year end
 - US economy will remain heated for the next few years: a new roaring 20’s
 - Expect a sugar crash to come, combination of tight federal budget and inflation could crash the economy.
- Labor market slow recovery is a function of labor supply
 - Good for workers at all skill levels, reduces inequality issues
 - Bad for businesses, consumers in short run
 - Businesses will have to deal with labor supply shortages for the foreseeable future
- Policy Thoughts
 - Immigration policy
 - Programs to encourage senior and female employment
 - Infrastructure needs
 - Workforce of tomorrow

What can Beacon do for you?



Connect with us.

To view again or download this presentation and for further information, go to: **www.BeaconEcon.com**

Continue the conversation.

Contact **Dr. Chris Thornberg** directly at **chris@beaconecon.com** or **310.571.3399**

Let's discuss your goals and needs.

Beacon has **6 Practice Areas** covering a range of services and products.

Our 6 Practice Areas



*Housing, Land
Use, & Real Estate
Advisory*



*Sustainable
Growth and
Development*



*Economic &
Revenue
Forecasting*



*Economic, Fiscal
and Social Impact
Analysis*



*Regional and Sub-
Regional Analysis*



*Litigation and
Testimony*

Portfolio Spotlight



Regional and Sub-Regional Analysis

Beacon conducts analysis at an international, national, state, county, and city level -- and even down to the zip code, pending data availability. We analyze data on **Employment, Industry, Real Estate, and Consumption**.

Past Clients:

- City and County of Los Angeles
- City and County of Riverside
- East Bay Economic Dev. Agency



Impact (Economic, Fiscal, Social) & EB5 Analysis

Beacon has evaluated the impact of entities **like universities, music festivals, infrastructure projects, and real estate development projects**. Beacon has also conducted impact analyses that combine more than one of the above like that of **L.A's Olympic bid**.

Past Clients:

- University of Southern California
- Metropolitan Water District
- LA 2024 Olympic Bid Committee



Sustainable Growth & Development

Beacon conducts industry and policy analysis on topics like **green innovation, tech and workforce development, and industry sector strategies**. Beacon has strong in-house expertise around **housing policy** and **economic development** support.

Past Clients:

- California Apartment Association
- Long Beach Downtown Dev. Corp.
- Santa Cruz Workforce Dev. Board



Housing, Land Use, & Real Estate Advisory



Economic & revenue forecasting



Litigation and testimony



Thank You

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