



The Post-Covid New World Order Truth and Consequences.....

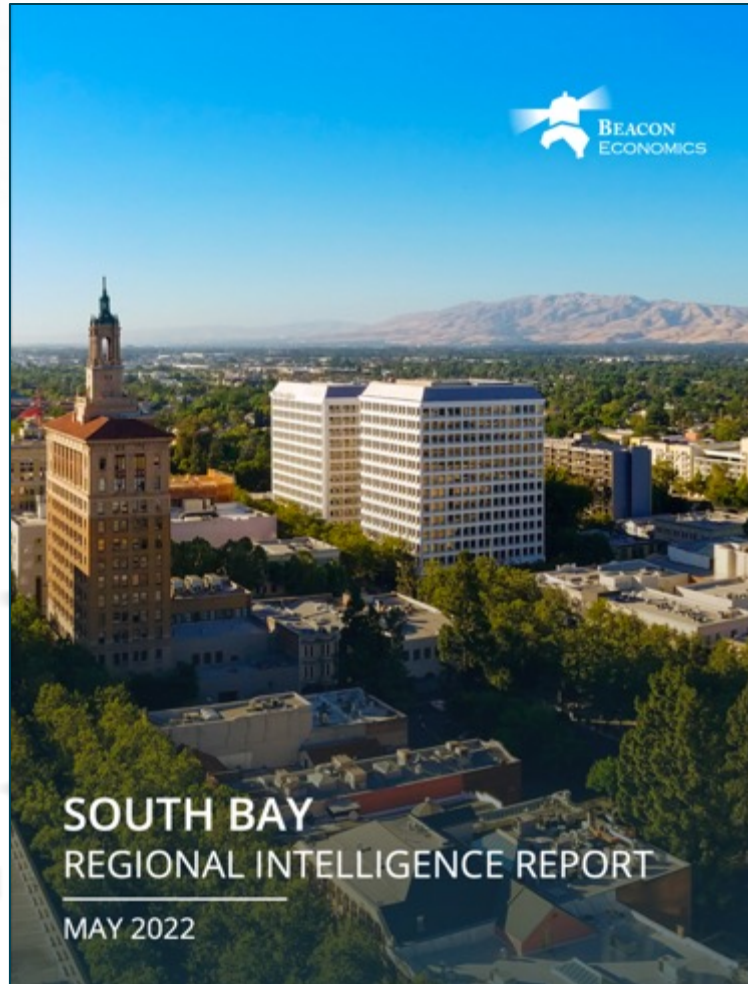
June 2022

Christopher Thornberg, PhD

Founding Partner, Beacon Economics

*Director, UCR SoBA Center for Economic Forecasting and
Development*

SJSU and Beacon Economics

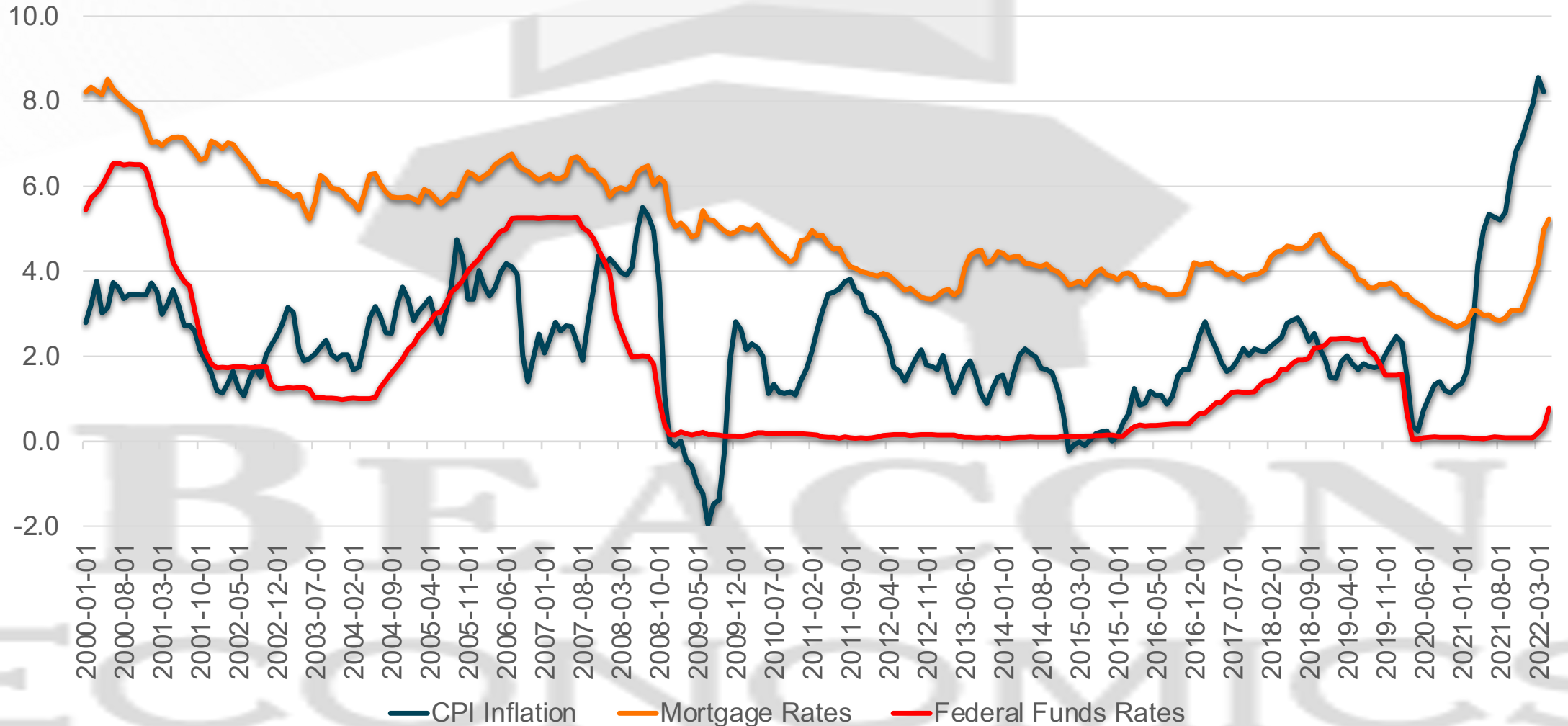


- This presentation done in tandem with the Western Alliance Bank and San Jose State University RIR
- 10 years of Collaboration!

Current Economic Issue

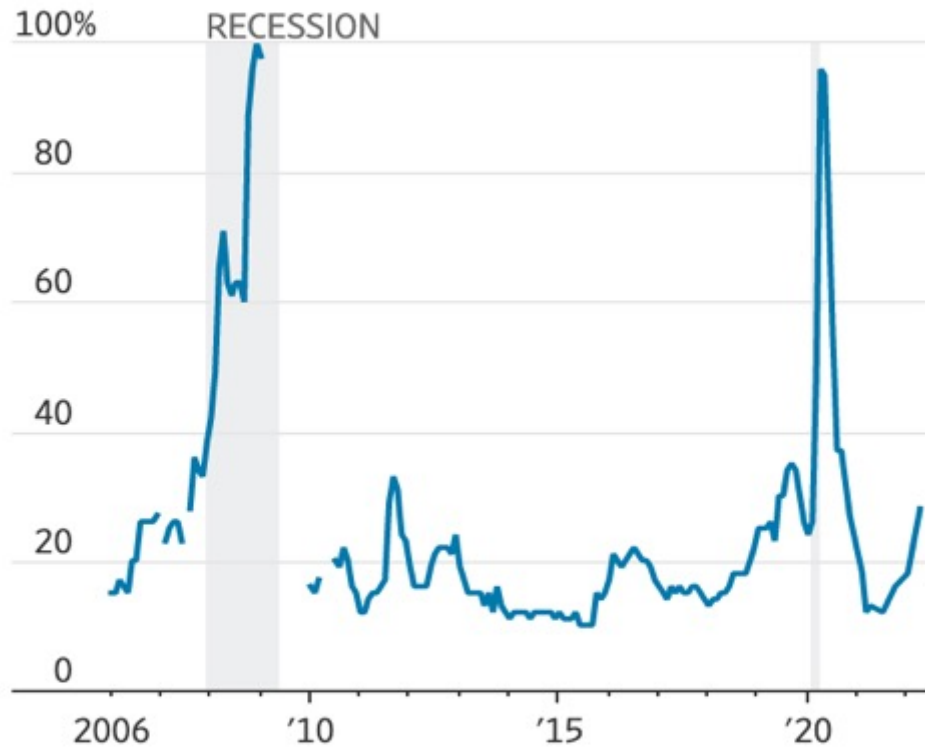


Rates are heading up



Pessimism on the Rise

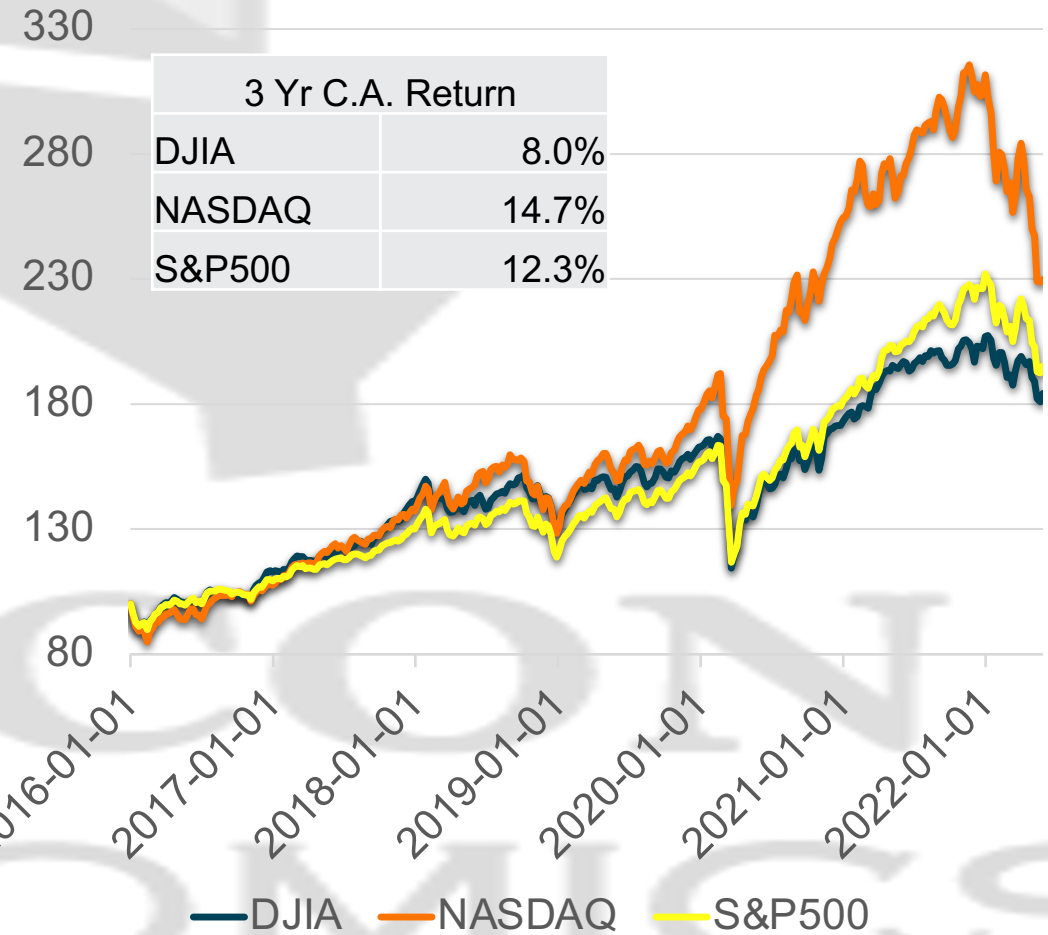
Probability the U.S. is in a recession in next 12 months including today




Note: Gaps indicate question not asked or data unavailable.

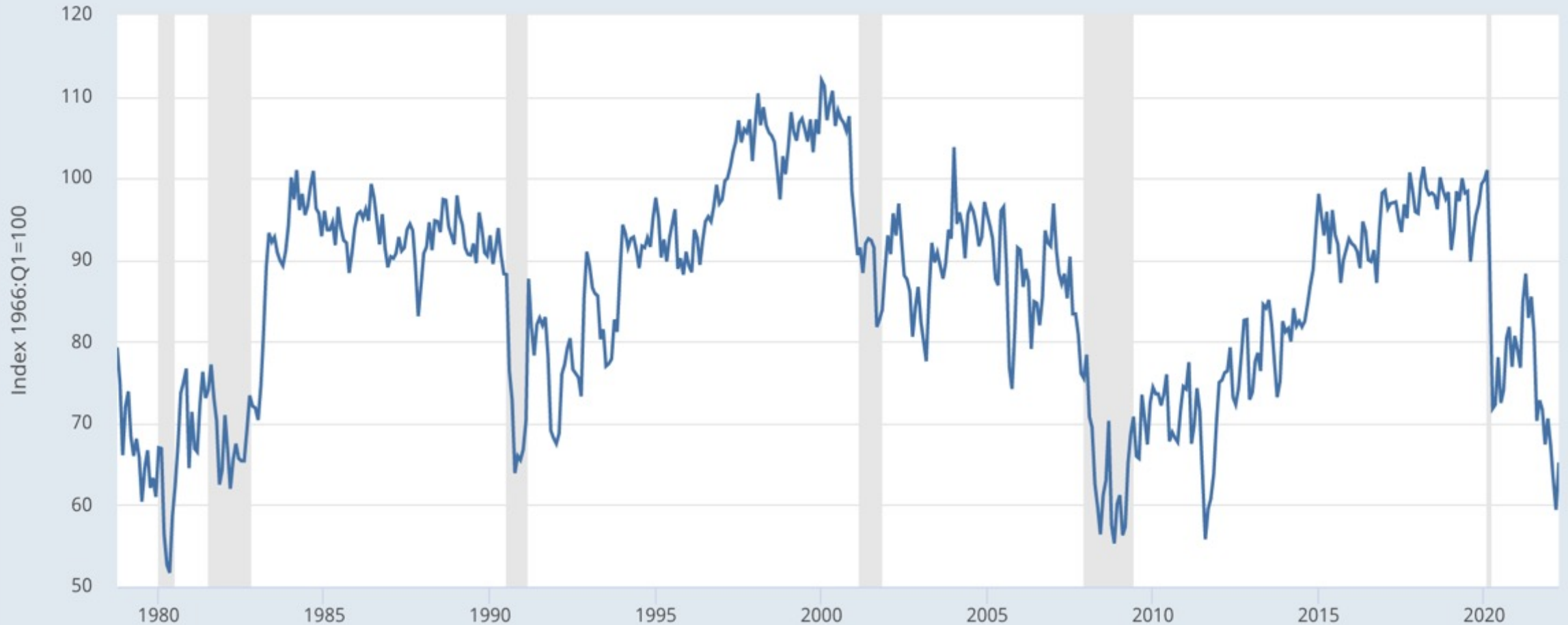
Source: Wall Street Journal surveys of economists

Indexes of Market performance



The Big Picture

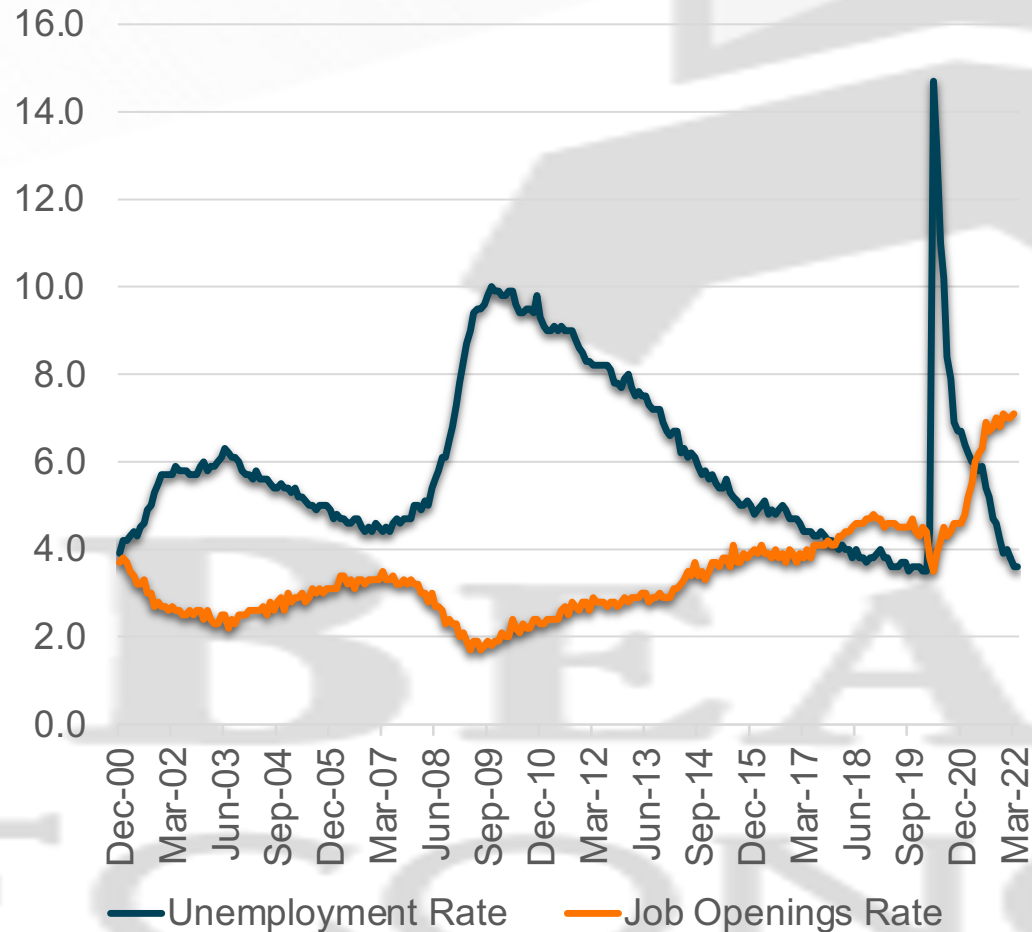
FRED  — University of Michigan: Consumer Sentiment



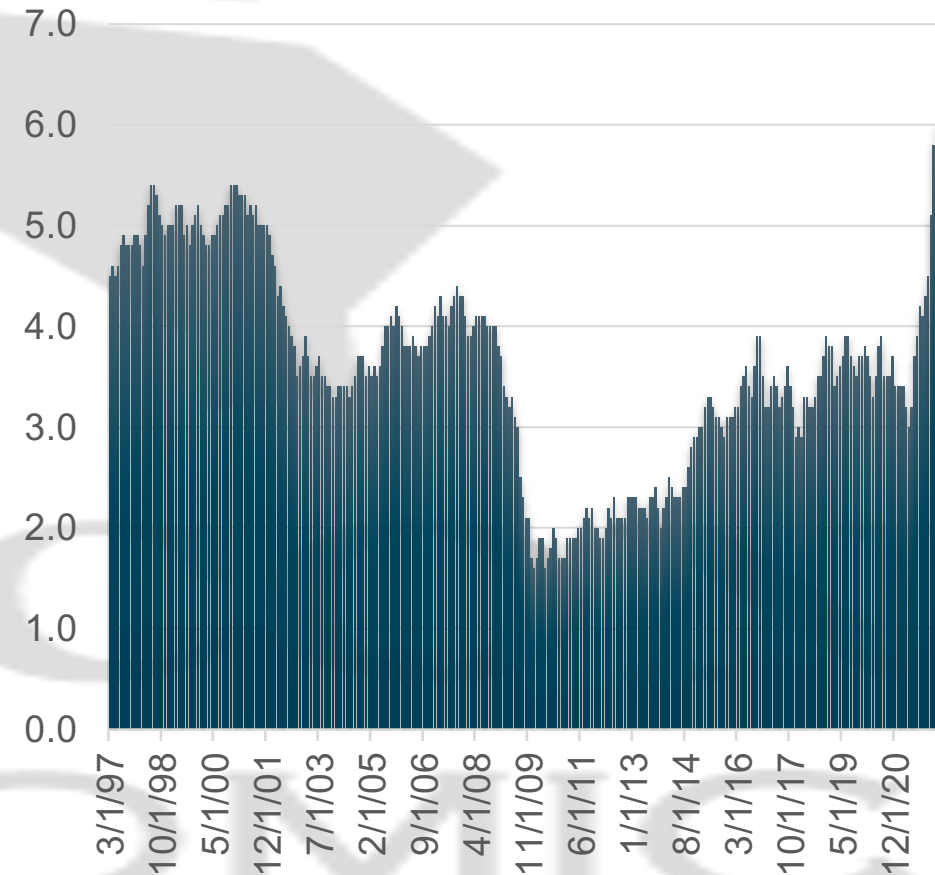
More Jobs Than Workers Win Labor The Day



Unemployment and Job Openings



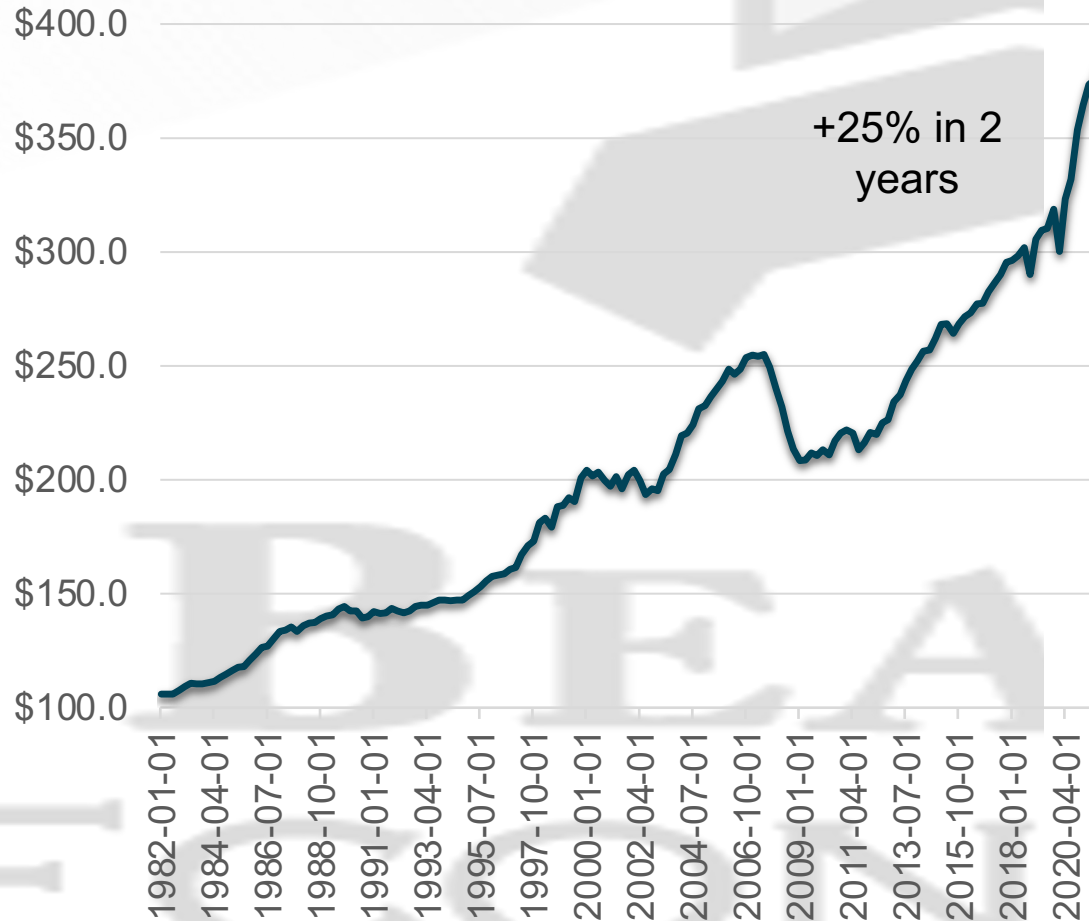
Worker Earnings Growth (Atlanta Fed)



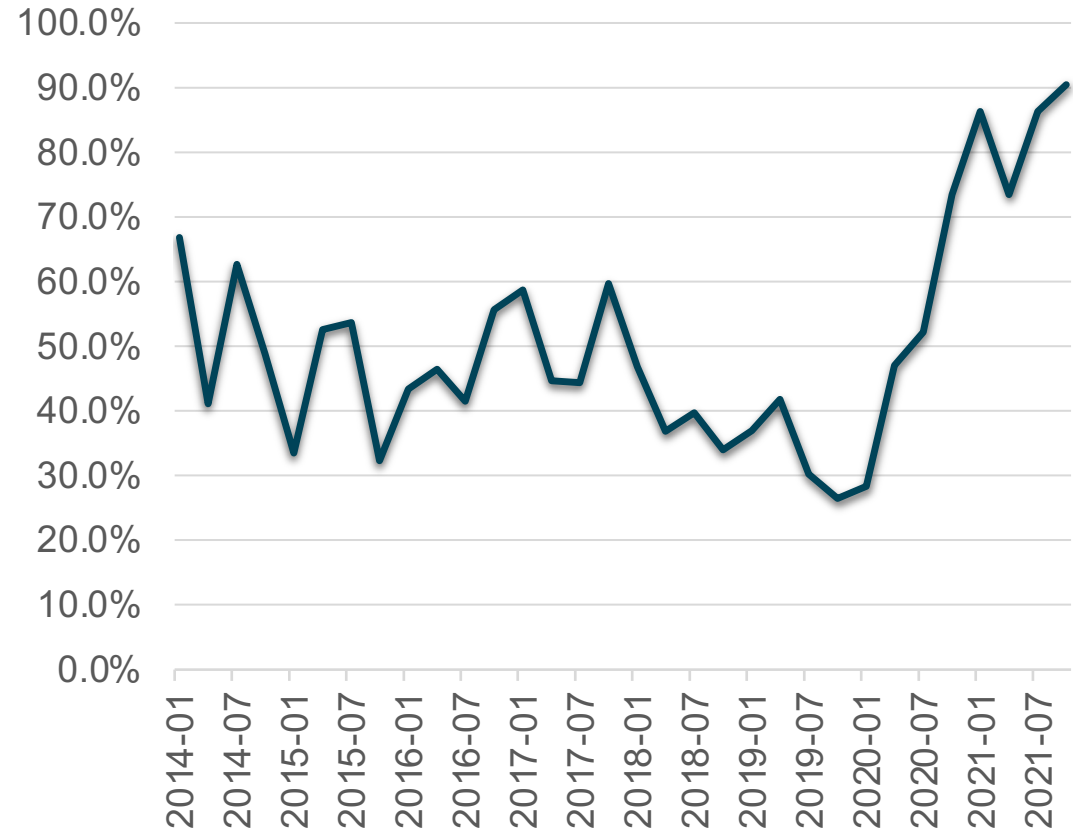
Wealthiest / Angriest Generation Ever?



Average US Net Worth (Real Per Capita)



2 Year Growth Net Worth bottom 50% of Households



The Big Picture



How did we get here?

- The pandemic was natural disaster, which have little long-run economic impact.
- The fragile economy narrative drove excessive fiscal and monetary policy reactions.
- The economy is overheated, but the tilt to populism has made this political poison to acknowledge.

The Coming Recession?

- Inflation, rising interest rates are a symptom of an overheated economy, not drivers of a contraction.
- True growing imbalances are asset market prices, the growing US trade deficit, the Federal deficit
- Geopolitical uncertainty mainly extends the US asset cycle due to the reserve currency status
- When? Hard to predict but the longer policy makers fail to act, the harder the landing will be

Social Changes

- There are no economic “new-normals” from the pandemic, but it has accelerated underlying trends that were already in place, with implications for land use, retail, housing, and debt.
- Labor markets have flipped, and shortages are here to stay. Local economic development will shift from “jobs jobs jobs” to “workers workers workers”.
- The Bay area saw a larger than normal outflow we see as temporary: symptom of its own success?
- San Jose and California are riding high on the capital glut, but there will be lean times ahead

Wall of Forecast Shame



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

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

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

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 economist for Moody's Analytics.

'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

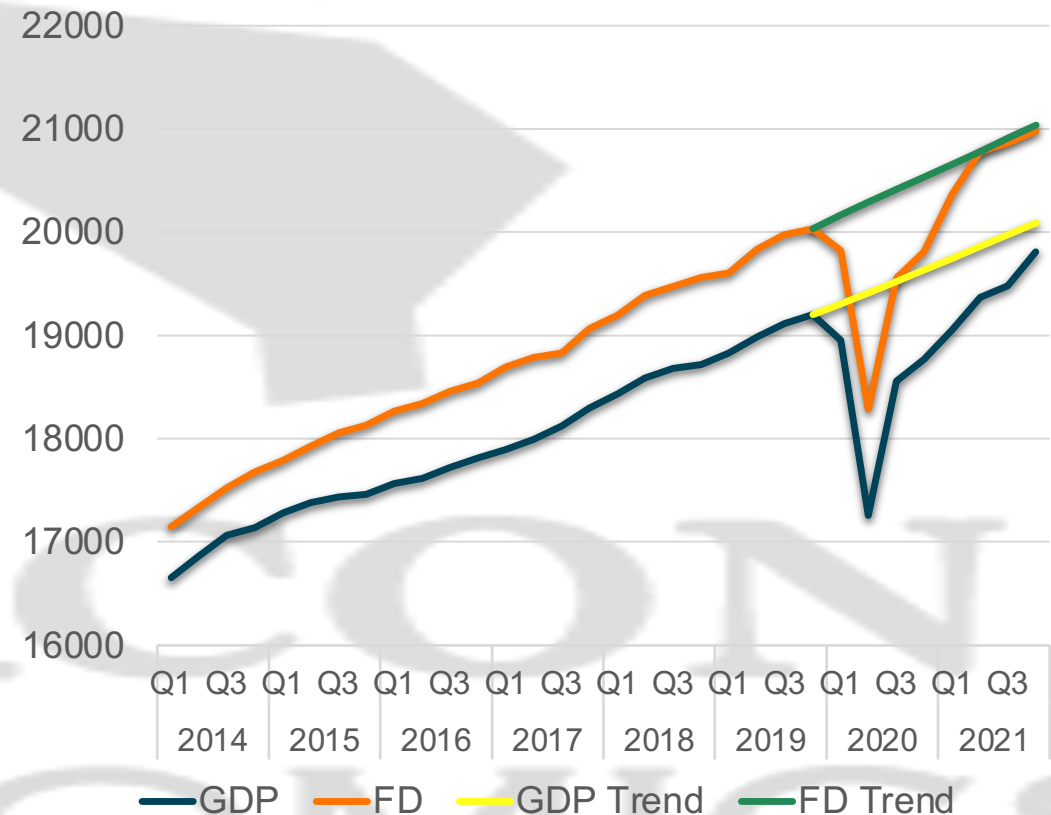
Why a “V”?

- Pre-pandemic economy was healthy and well-balanced
 - Tight labor markets
 - Conservative growth in capacity
 - Good financial fundamentals
- Supply shock recession, rather than a demand shock
 - Pandemic shifted spending over time and across sectors, not cancel it
- Government support
 - Scale of effort was massively overdone

It Was a “V”...

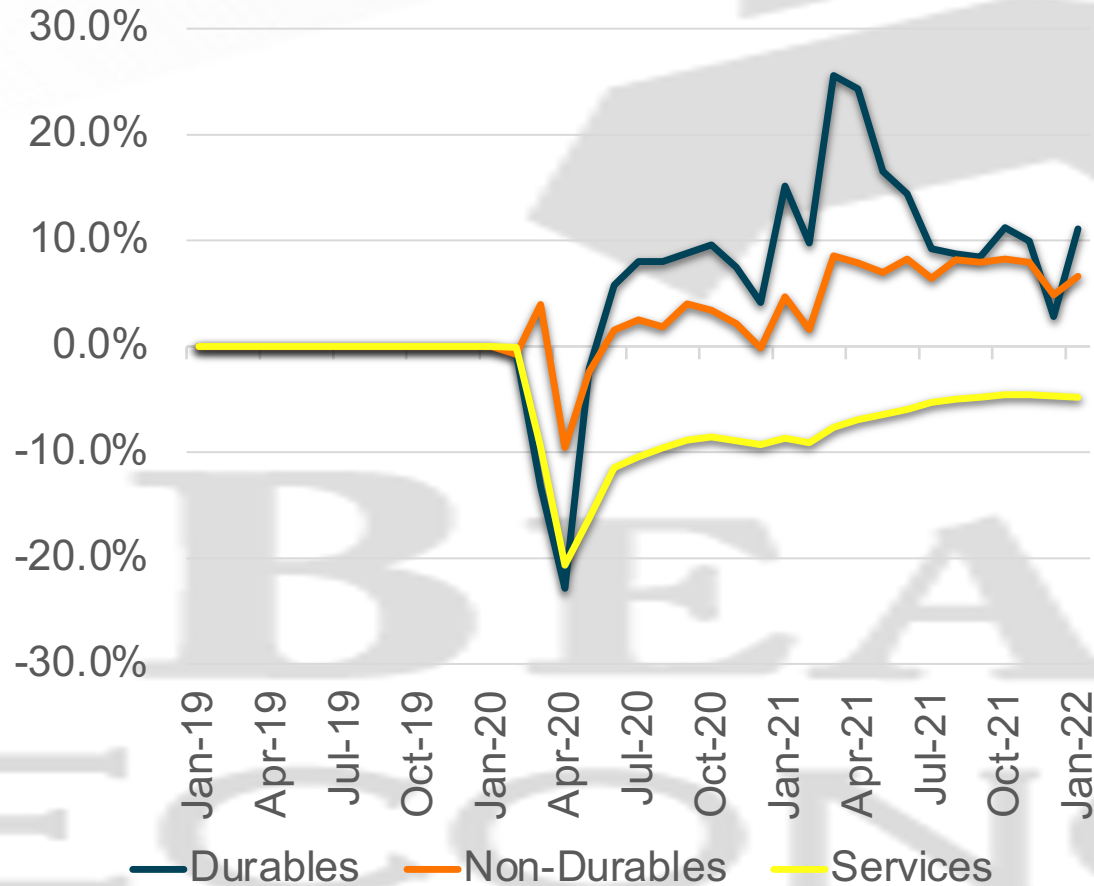
	2019	2020	2021	2022Q1
GDP	2.30	-3.40	5.70	-1.40
Final Demand	2.43	-2.59	6.75	2.64
Consumption	1.48	-2.55	5.27	1.83
Durable goods	0.30	0.54	1.39	0.35
Nondurable goods	0.40	0.42	1.31	-0.38
Services	0.78	-3.52	2.58	1.86
Fixed investment	0.55	-0.47	1.37	1.27
Nonresidential	0.59	-0.73	0.97	1.17
Structures	0.06	-0.39	-0.23	-0.02
Equipment	0.19	-0.48	0.69	0.79
Intellectual prop	0.33	0.14	0.51	0.40
Residential	-0.04	0.26	0.39	0.10
Change in inventories	0.05	-0.52	0.35	-0.84
Net exports	-0.18	-0.29	-1.40	-3.20
Exports	-0.01	-1.57	0.47	-0.68
Imports	-0.17	1.28	-1.88	-2.53
Government	0.38	0.43	0.09	-0.48
Federal	0.25	0.33	0.04	-0.39
State and local	0.14	0.10	0.04	-0.08

Real GDP and Final Demand relative to long run trend

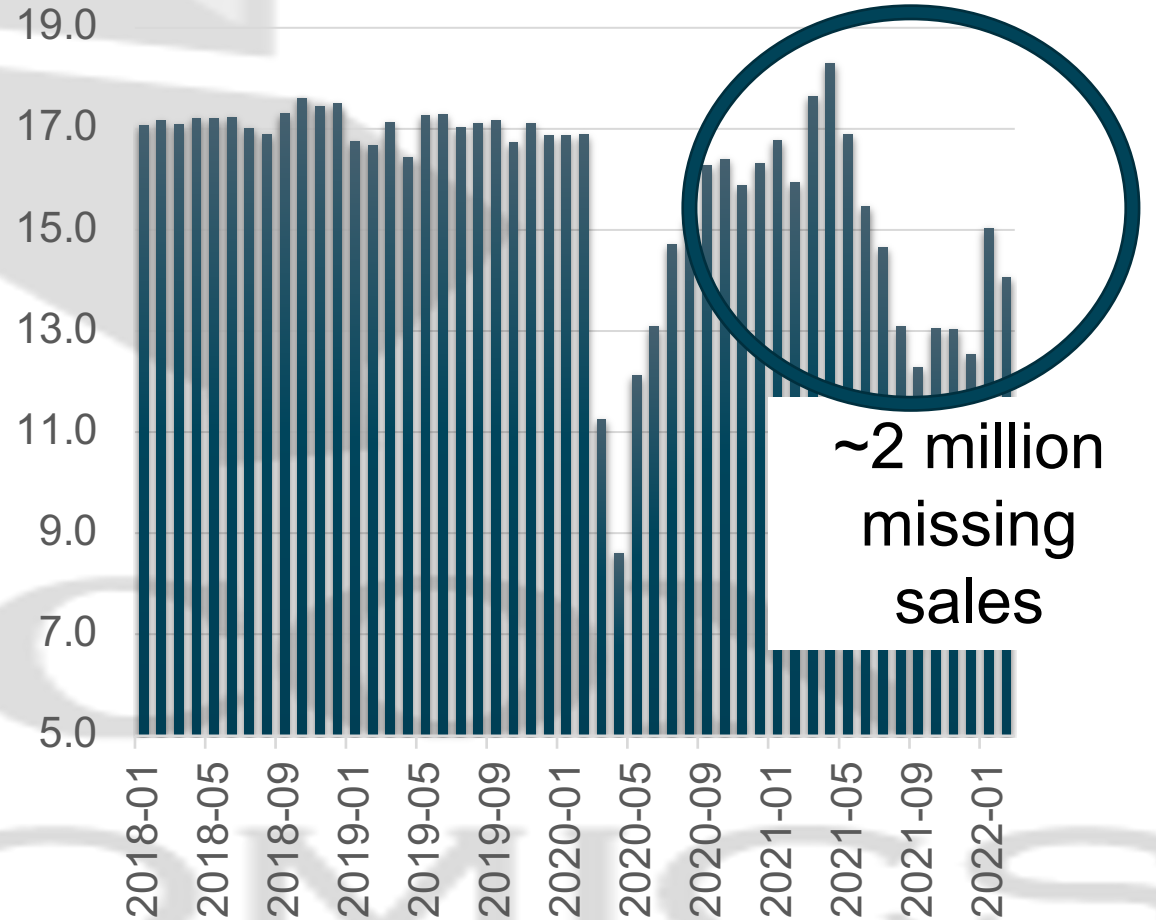


An Uneven Recovery

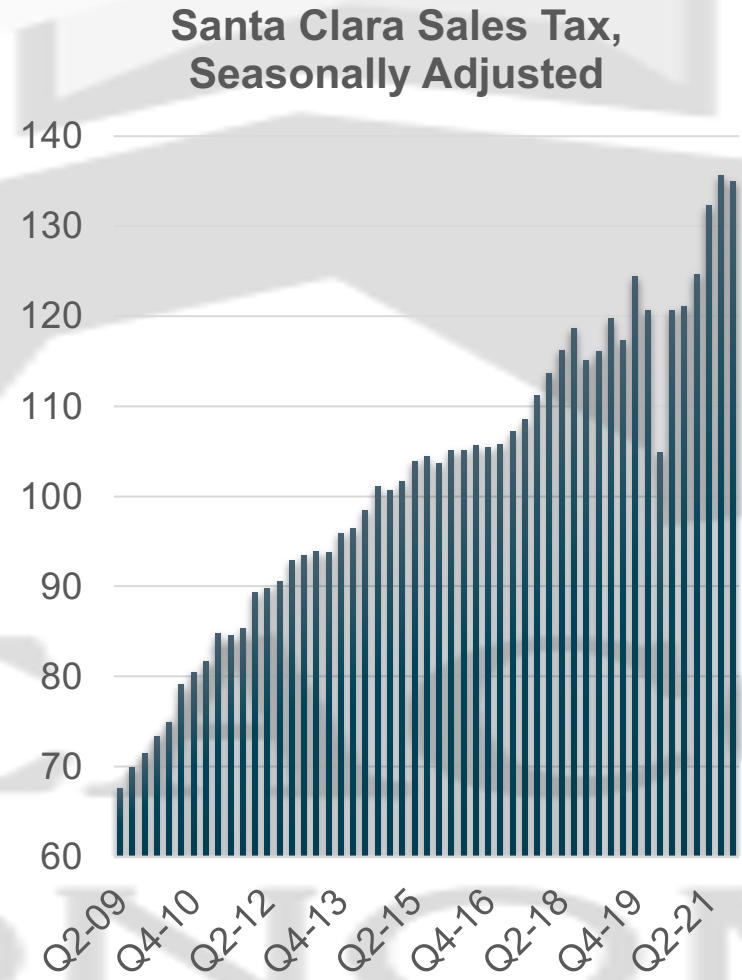
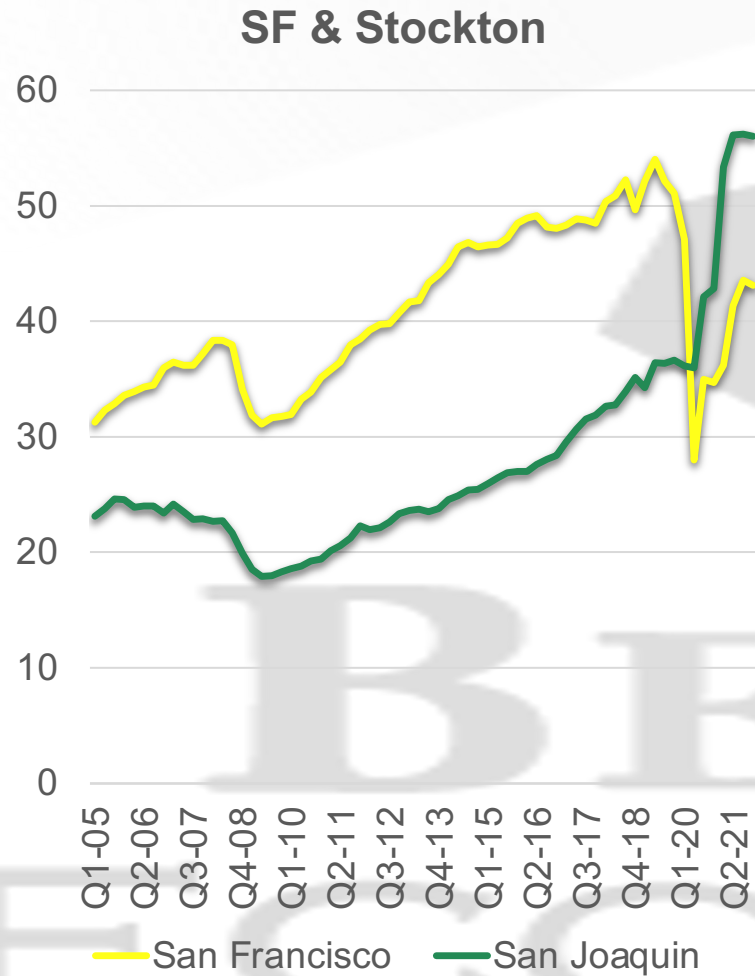
Real Consumer Spending Relative to Pre-Covid Trends



US Auto Light Truck Sales SAAR



Santa Clara County Sales Tax Receipts



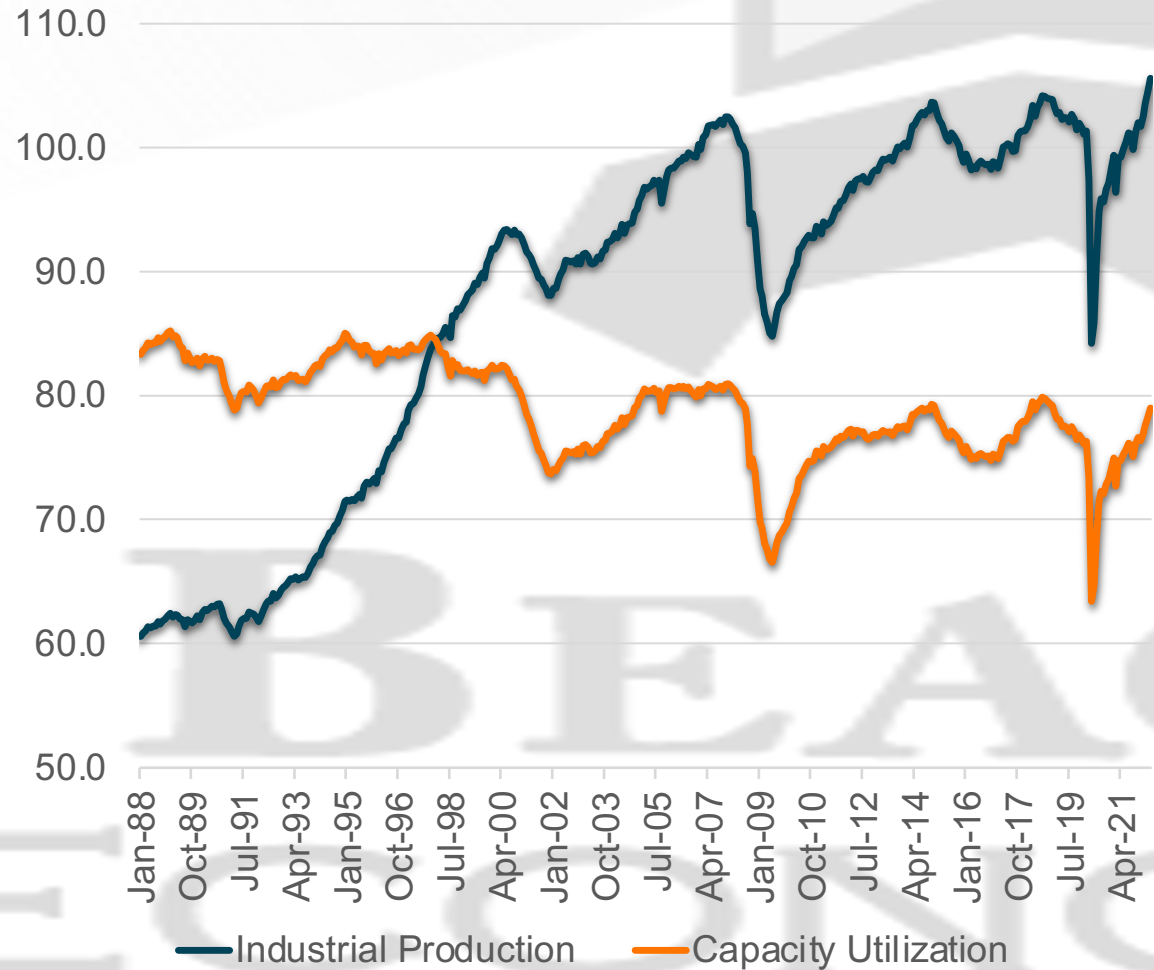
Sales Tax Receipts By Category – Santa Clara

Category	Q4-21 (\$ Mil)	2-Yr	
		Abs Chg (\$ Mil)	% Chg
Total	135.0	10.5	8.5
Business and Industry	42.3	8.2	24.0
County & State Pool	25.5	2.5	10.8
General Consumer Goods	17.9	-0.3	-1.7
Autos and Transportation	16.2	0.6	4.0
Restaurants and Hotels	12.6	-1.2	-8.4
Building Construction	9.0	0.6	7.0
Fuel and Service Stations	6.4	0.0	-0.3
Food and Drugs	4.6	0.1	2.4

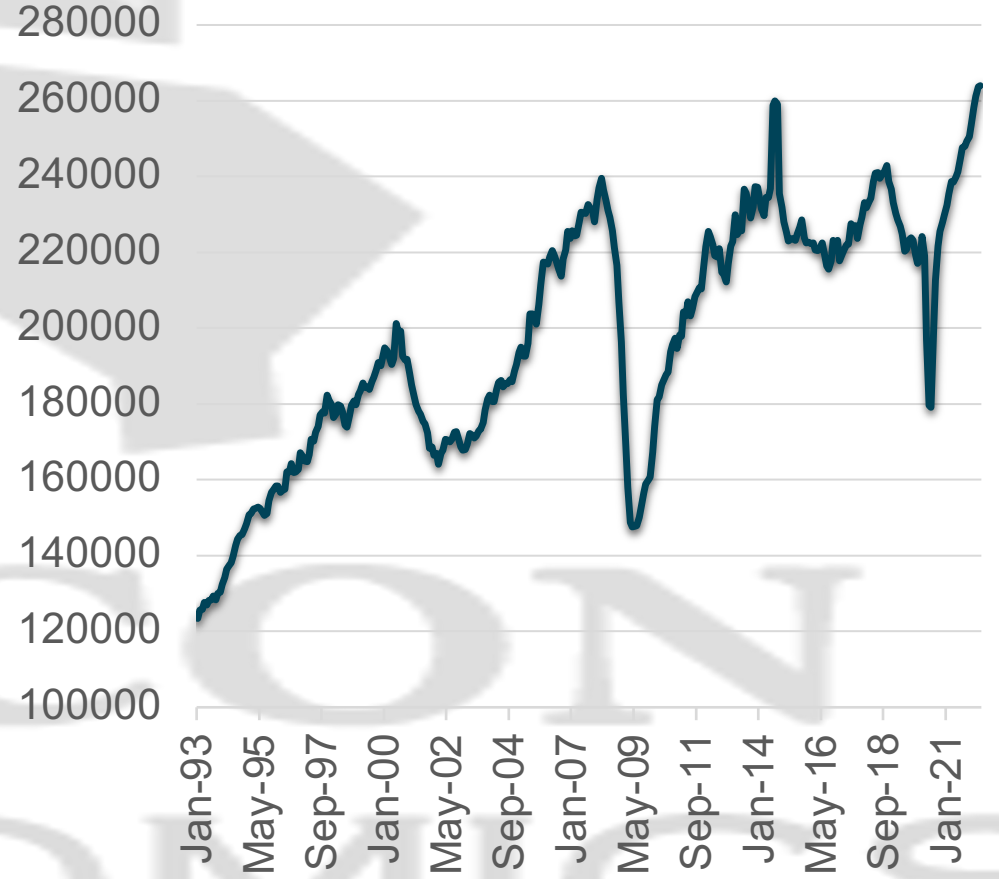
US Manufacturing



Production and Capacity



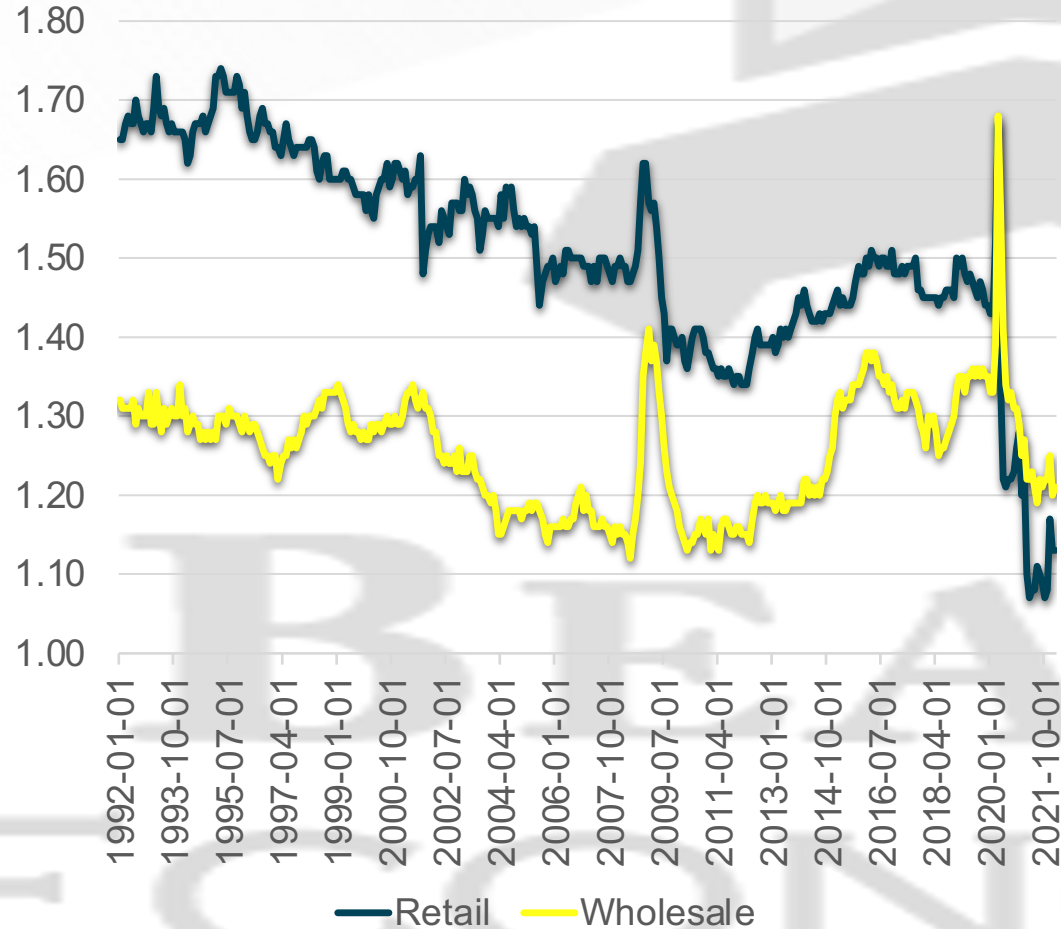
US Durable Goods Orders



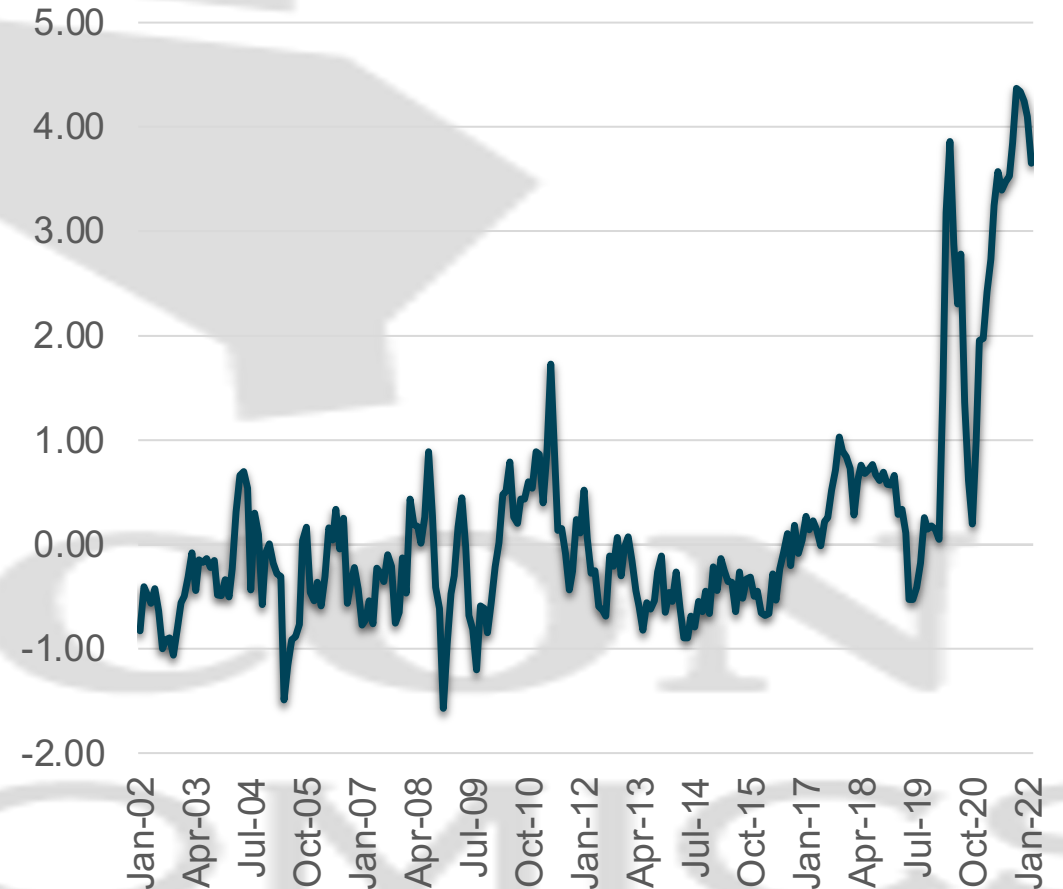
Supply Chain Problems



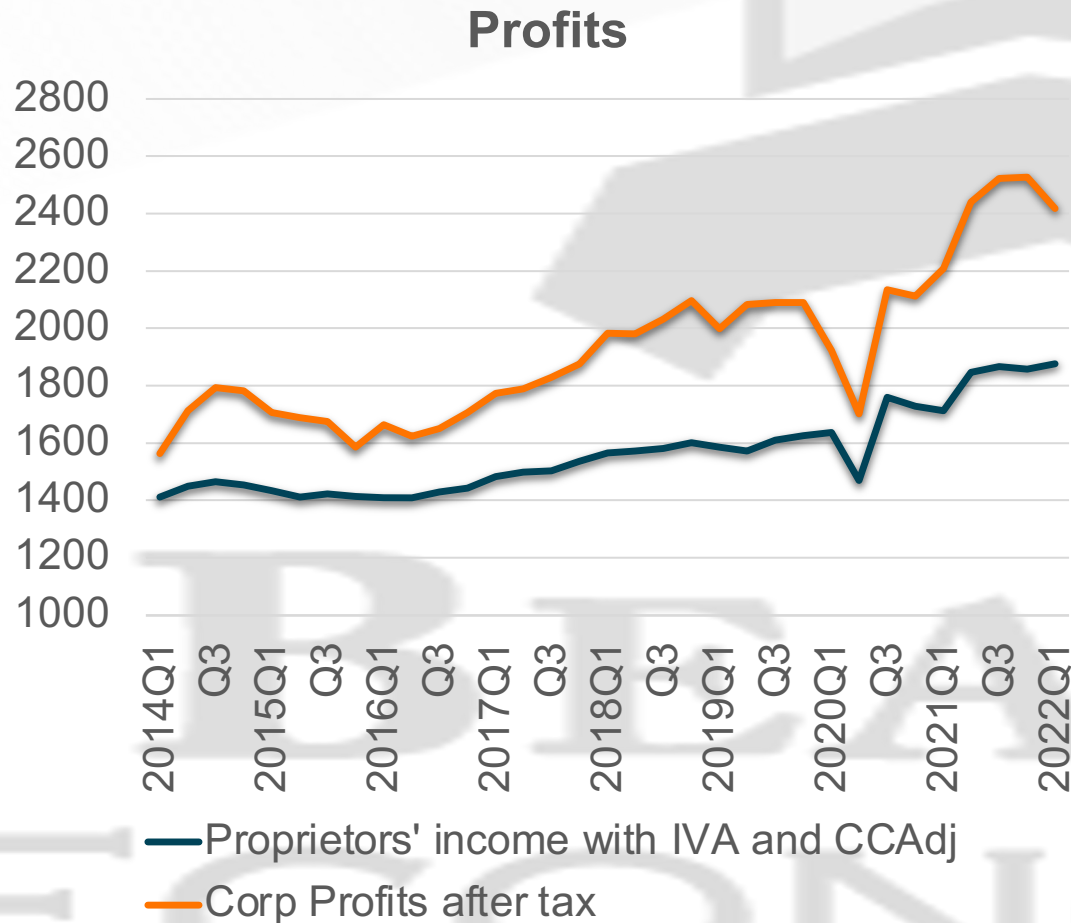
Inventory to Sales Ratios



Global Supply Chain Pressure Index (New York Fed)



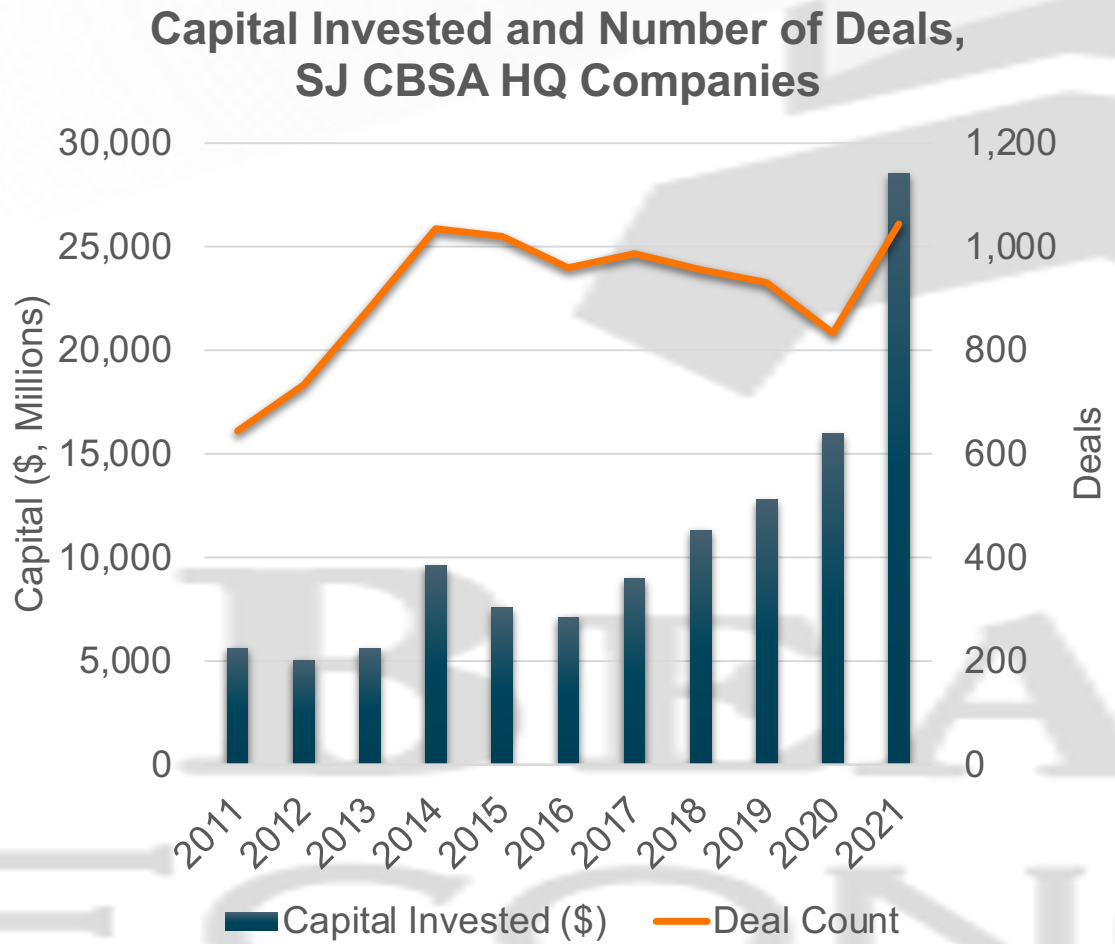
Earnings and Investments



Real Investment

	2019Q4	2021Q4	
Private fixed investment	3781.4	4254	12.5%
Structures	685.3	594.8	-13.2%
Power and communication	148.1	118.6	-19.9%
Mining exploration, shafts	115.3	94.9	-17.7%
Manufacturing	77.1	73.7	-4.4%
Commercial and health	212.2	205.9	-3.0%
Equipment	1210.3	1300.6	7.5%
Information processing eq	390.2	488.5	25.2%
Industrial equipment	247.8	310.8	25.4%
Transportation equipment	307.4	203.6	-33.8%
Intellectual property products	1057	1250.2	18.3%
Software	439.1	526.9	20.0%
Research and development	524.3	621.1	18.5%
Entertainment	93.6	102.2	9.2%
Residential	828.8	1108.5	33.7%

Venture Capital – South Bay

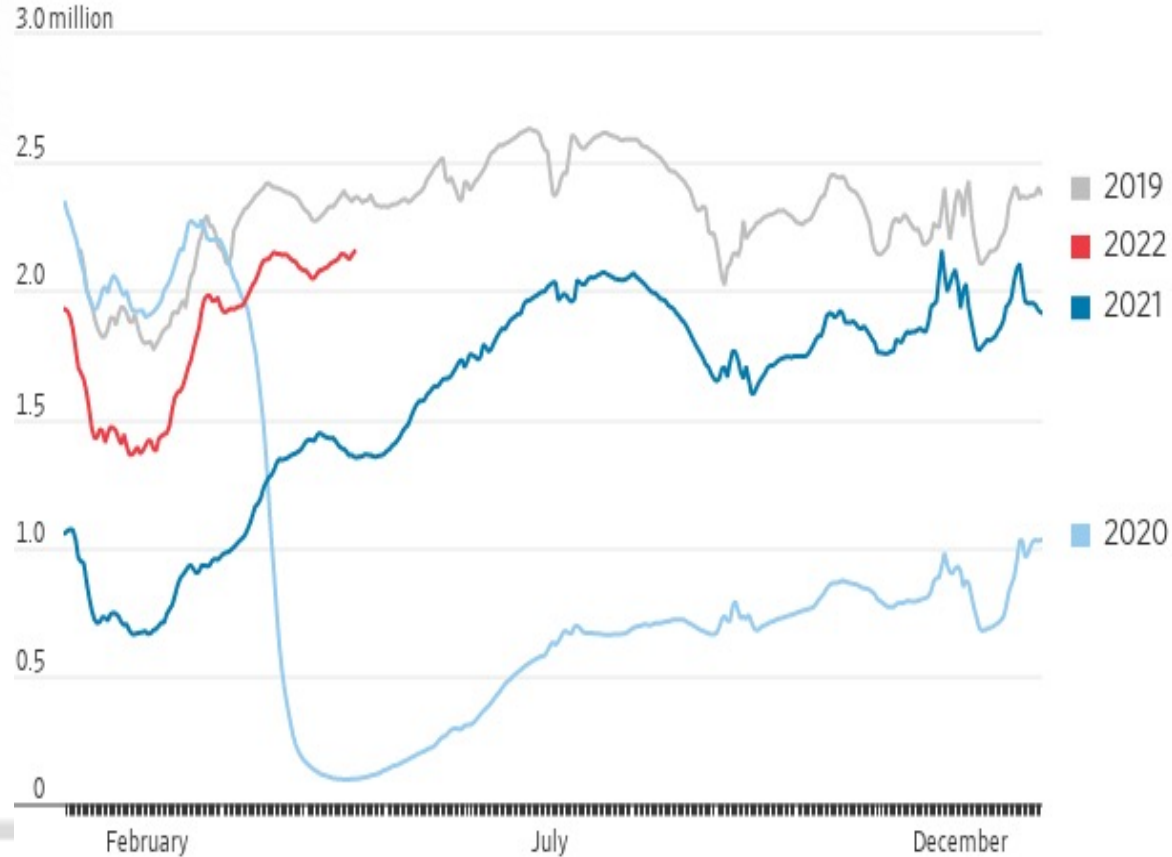


Company (SJ CBSA HQ)	Deal Size (\$, Mil.)	Vertical / Industry
Waymo	3,000	AI
Waymo	2,500	AI
Lacework	1,300	Cybersecurity
Nuro	940	AI
Cloudera	740	AI
SambaNova Systems	678	AI
Theranos	633	Life Sciences
Aurora (NAS: AUR)	600	AI
Metricom	600	Manufacturing
Nuro	600	AI

Tourism

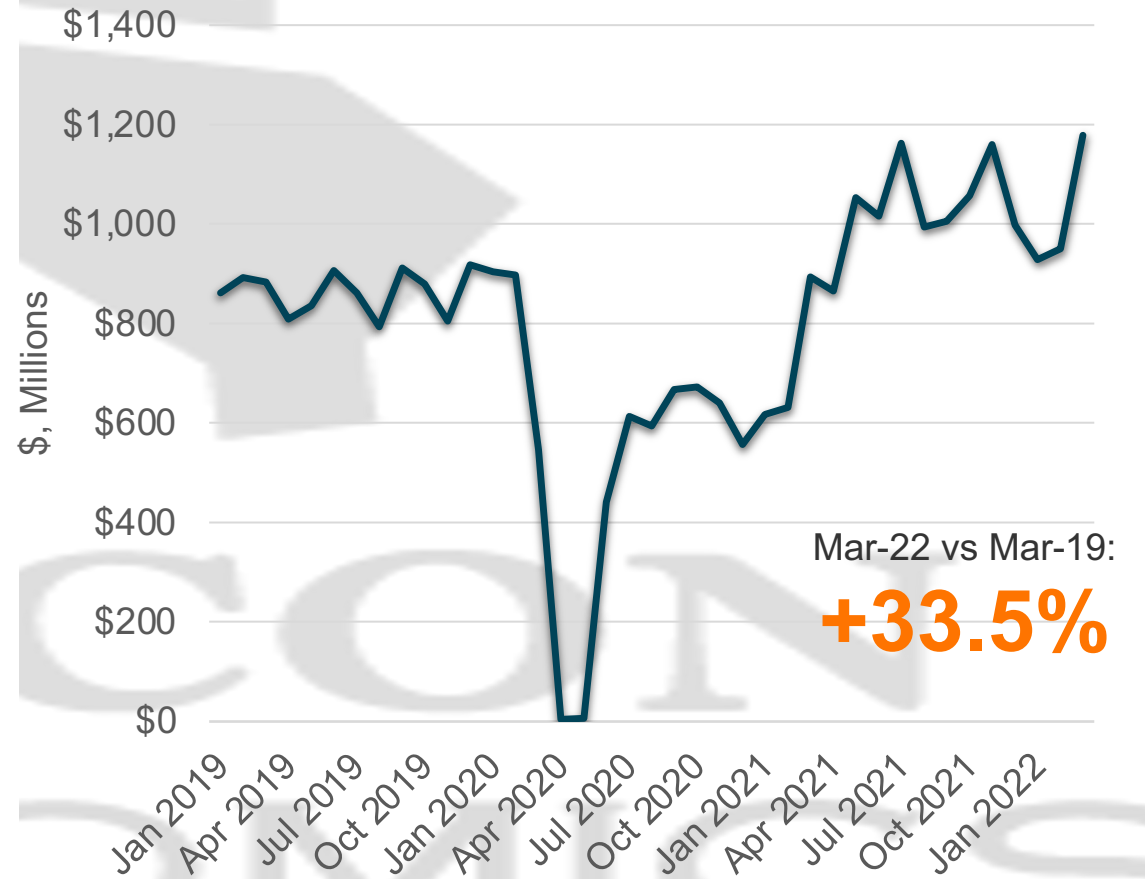


TSA checkpoint travel numbers



Note: Seven-day moving average
Source: Transportation Security Administration

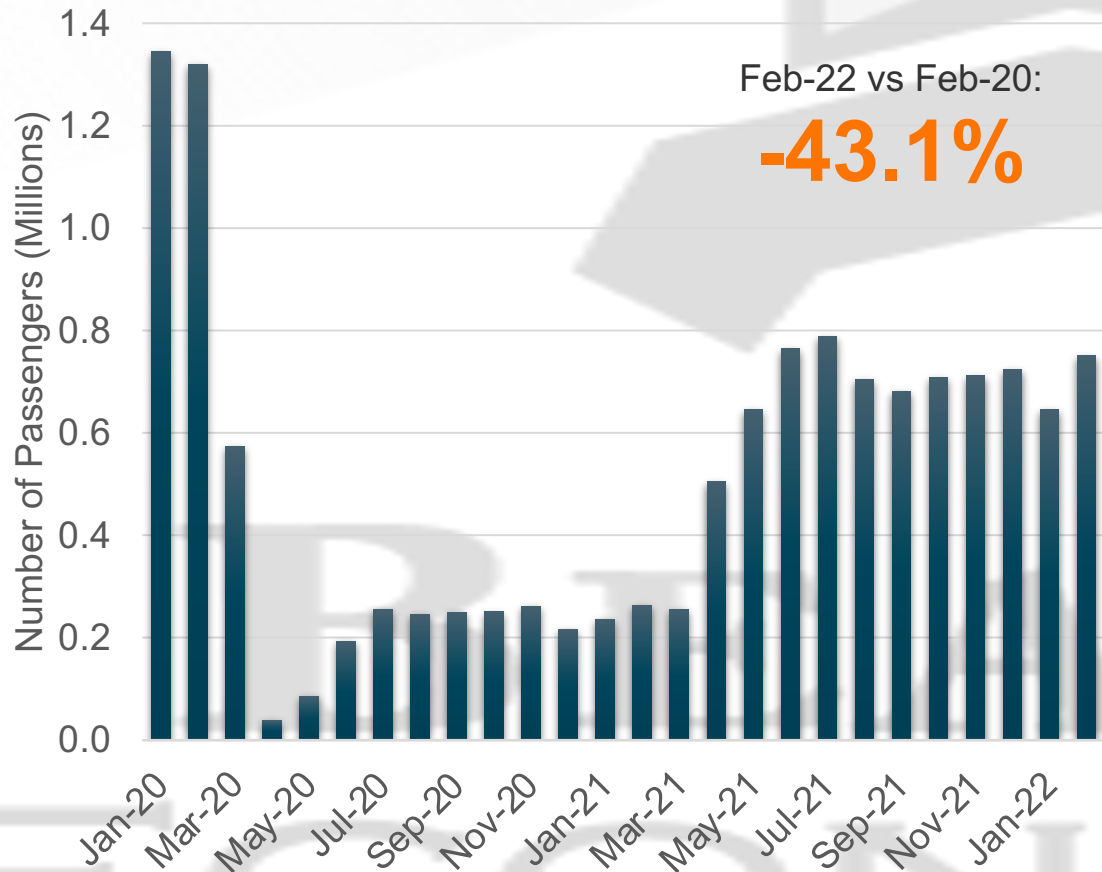
Clark County Gaming Revenue



Tourism



Total Airport Traffic—San Jose Int'l Airport



City	Hotel Occ. Rates		Hotel ADR	
	Mar-22	PP Chg Mar-21	Mar-22	% Chg Mar-21
Bay Area	61.6	16.0	171.0	45.2
Central Coast	67.5	7.7	210.8	26.7
Los Angeles	73.6	16.5	193.0	52.4
North Coast	57.5	-5.1	160.8	35.0

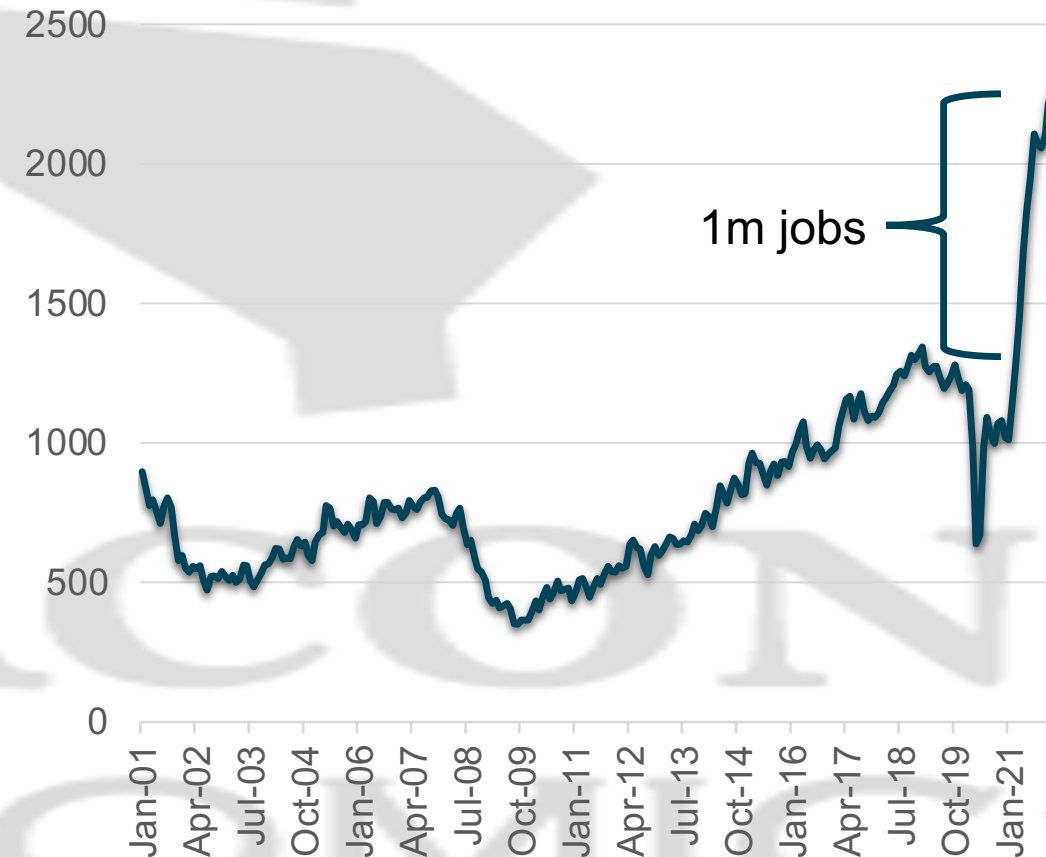
As For The Service Sector...



Real Consumer Spending Services
Growth Q4 19 to Q1 22

Services	0.3%
Financial services	6.4%
Housing and utilities	2.7%
Food accommodations	1.5%
Health care	-0.1%
Other services	-1.5%
Transportation services	-9.7%
Recreation services	-11.7%

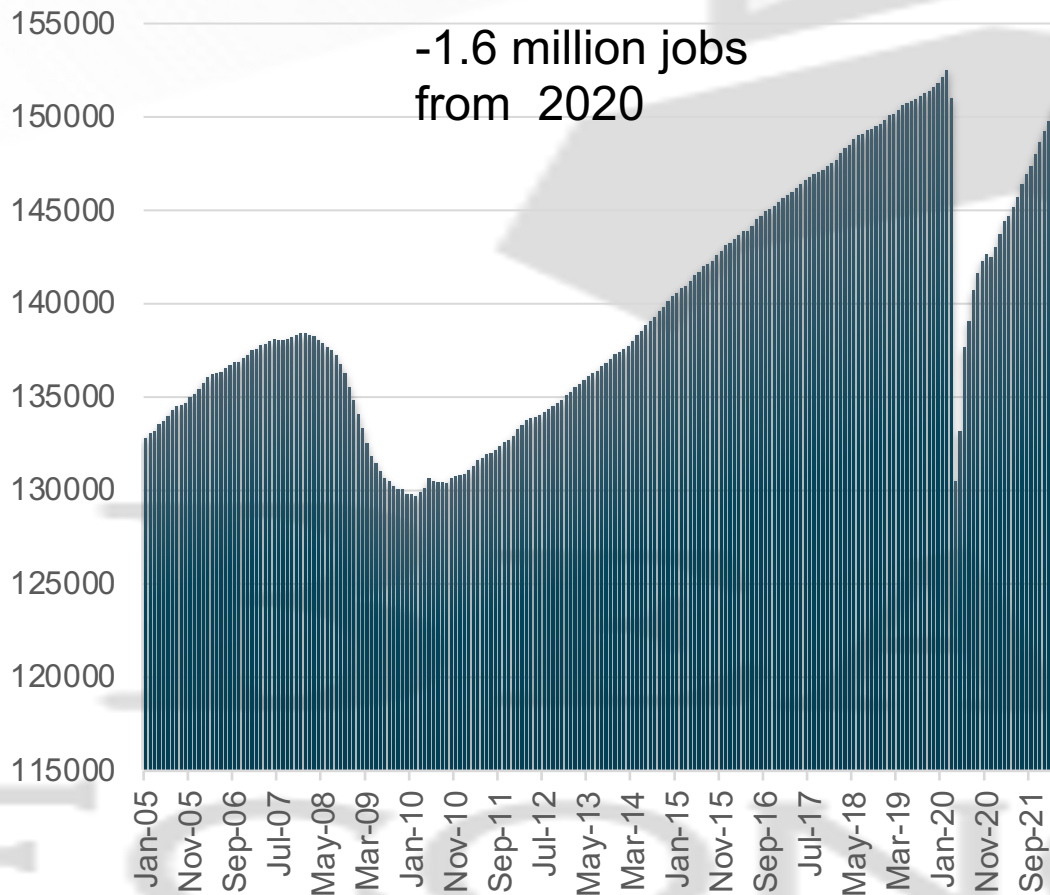
Job Openings Leisure, Hospitality and
Other Services



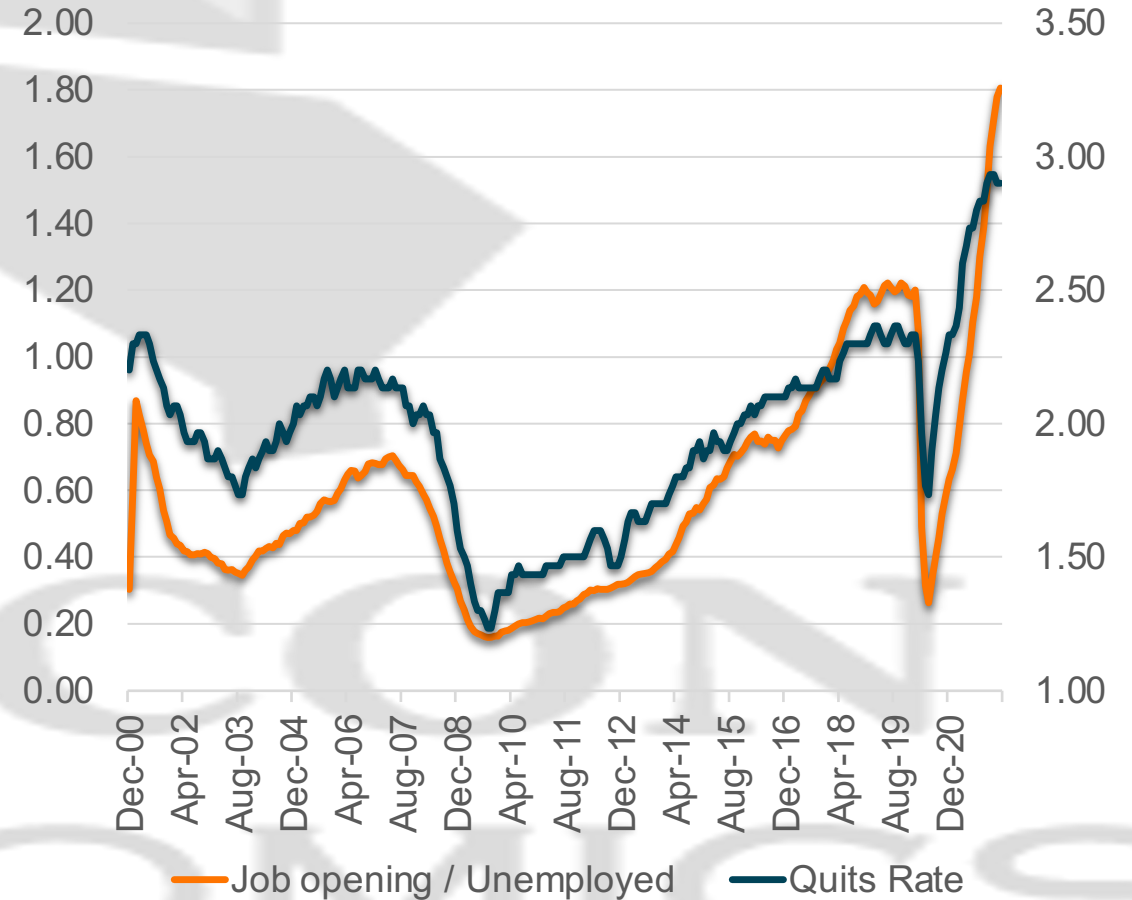
A Labor Market Paradox?



US Payroll Jobs



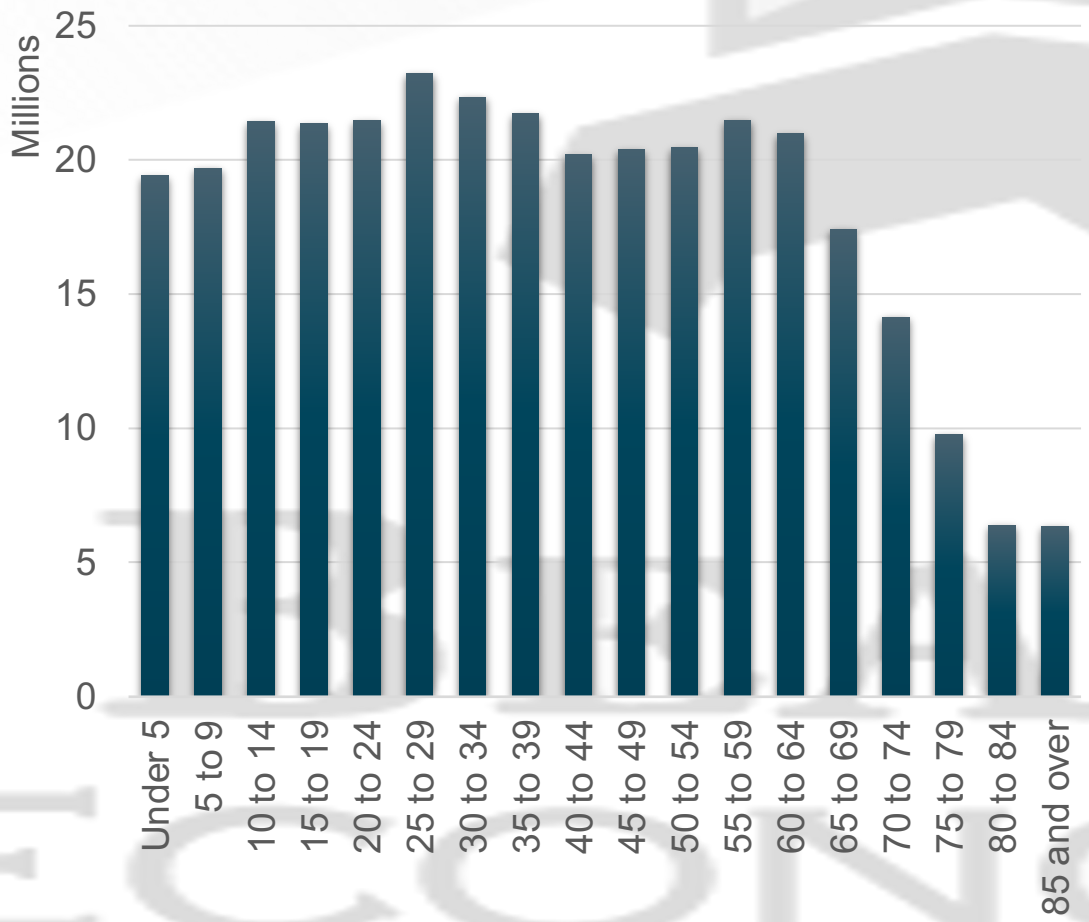
Labor Demand / Supply Metrics



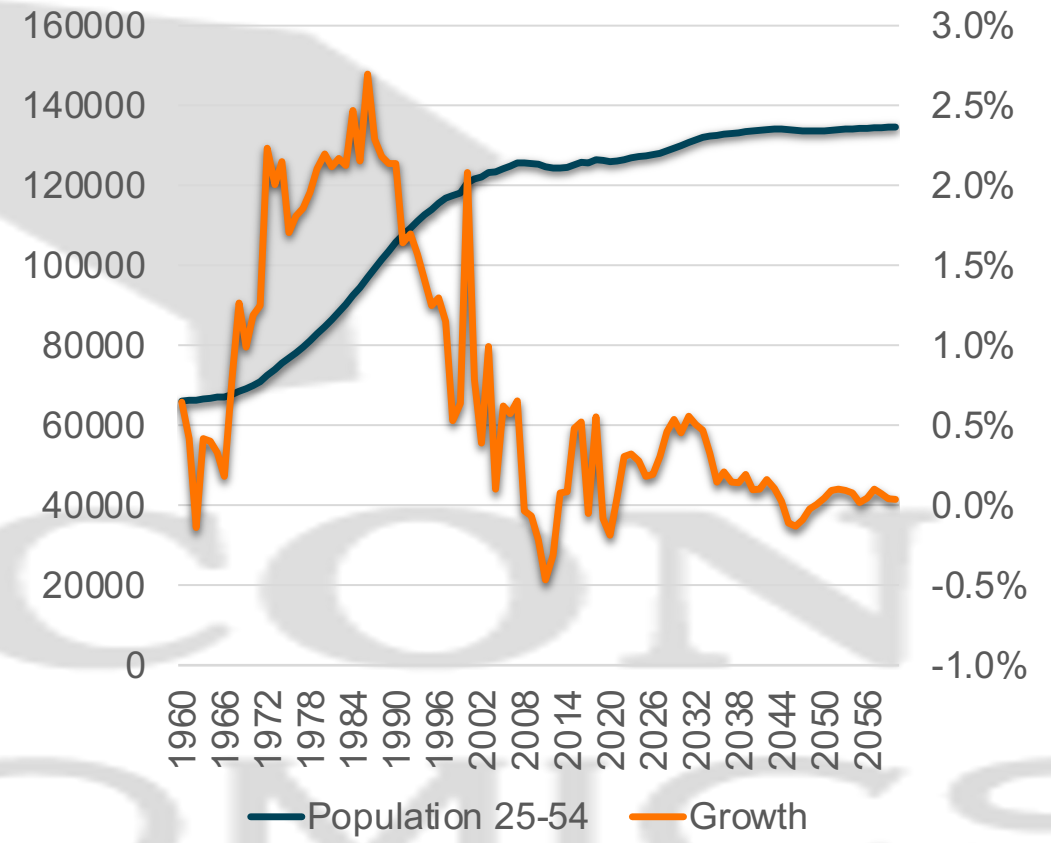
The Long Run Labor Force Issue



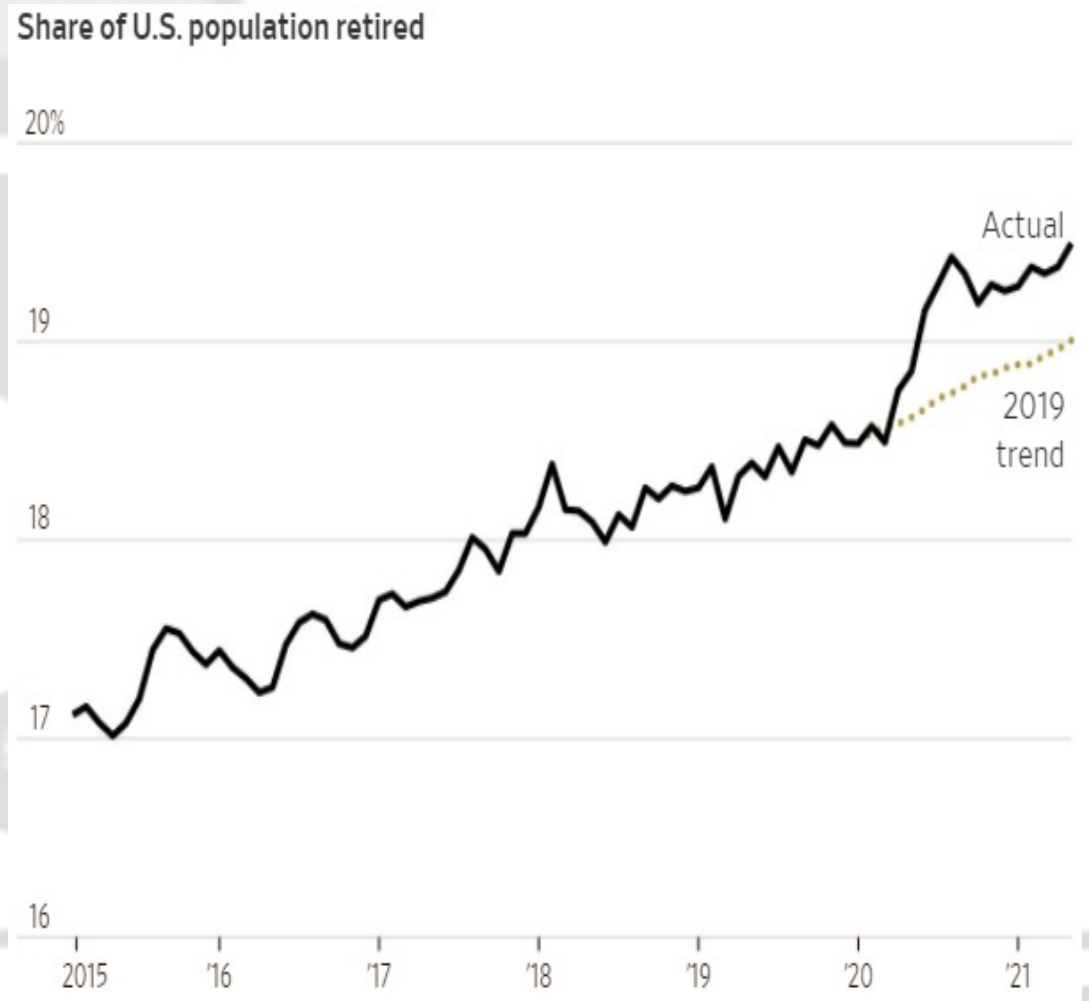
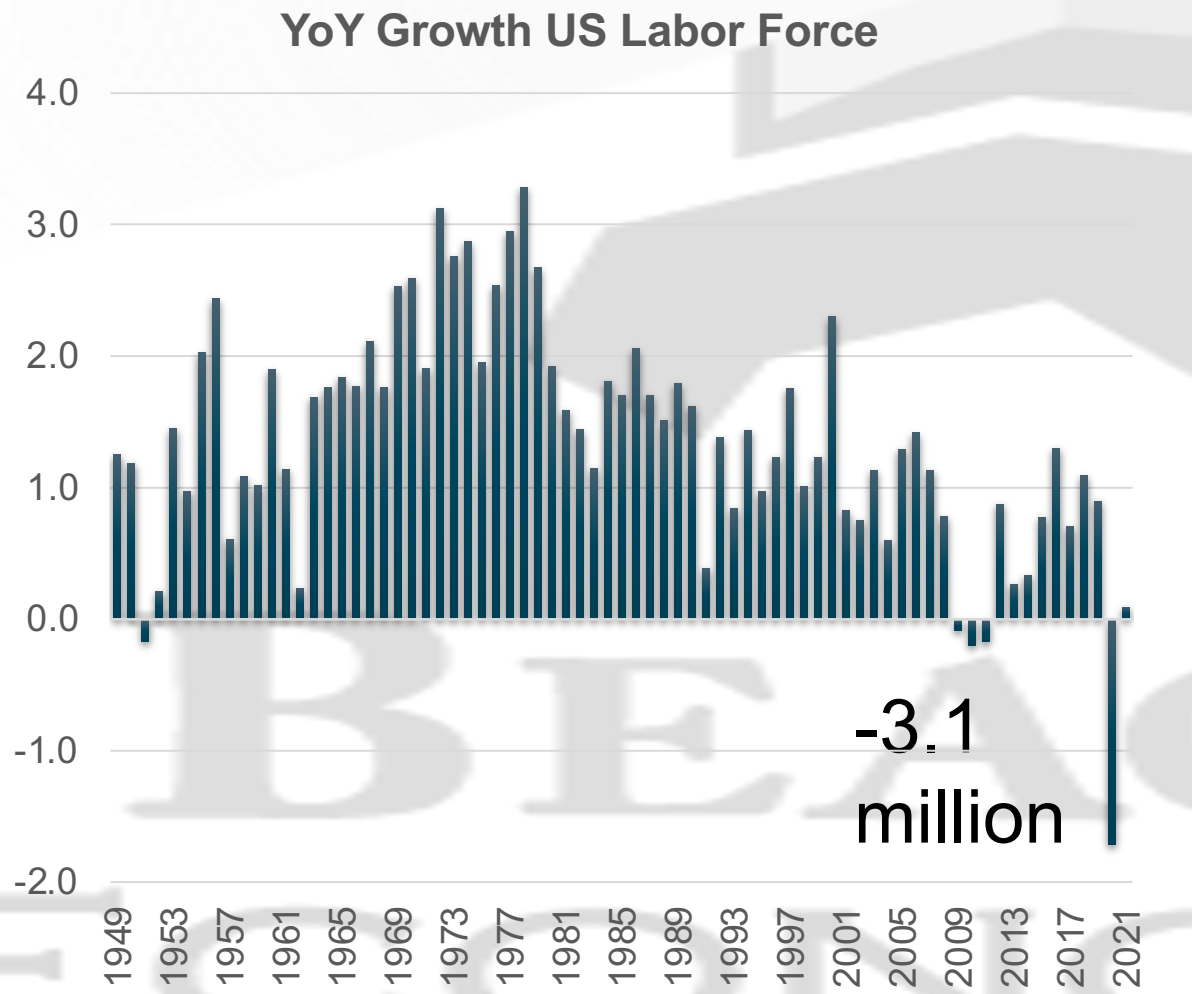
US Population by Age



Prime Working Years Population Growth (Census)



The Big Retirement

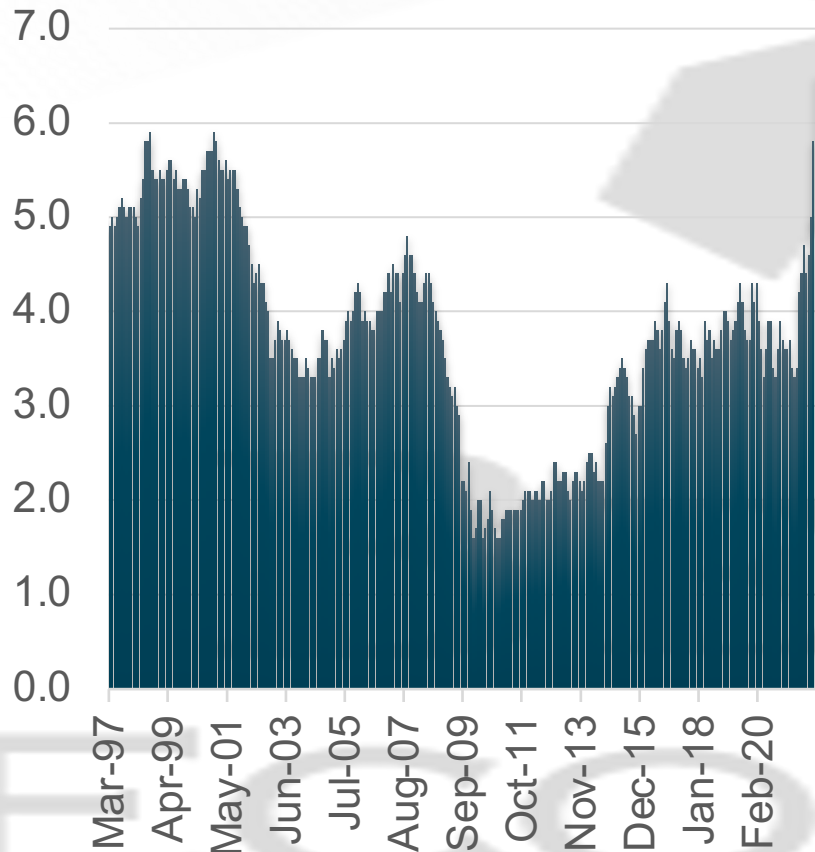


Source: IPUMS-CPS, University of Minnesota via Federal Reserve Bank of Dallas

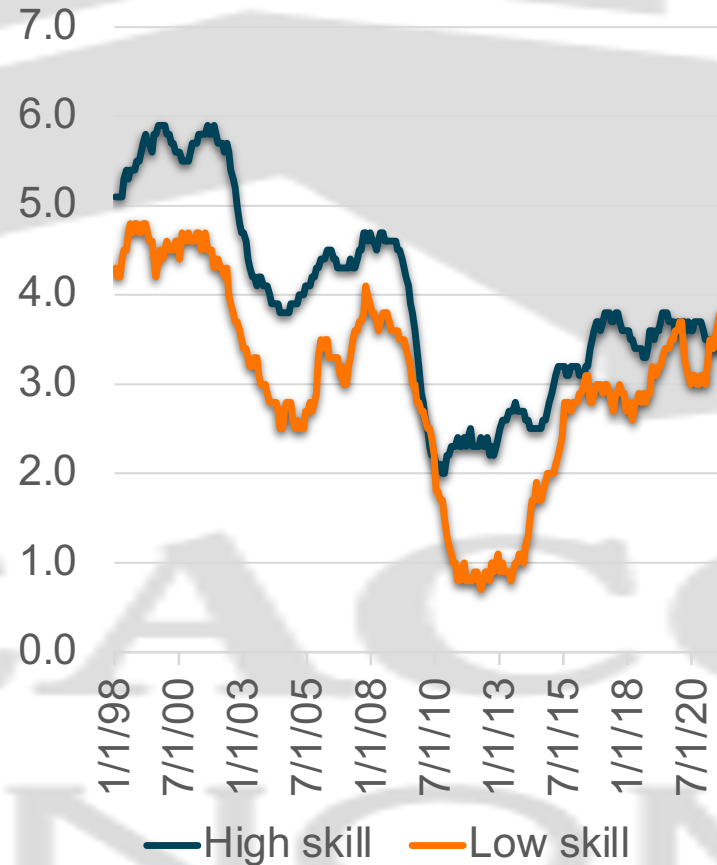
A Sellers' Market In Labor



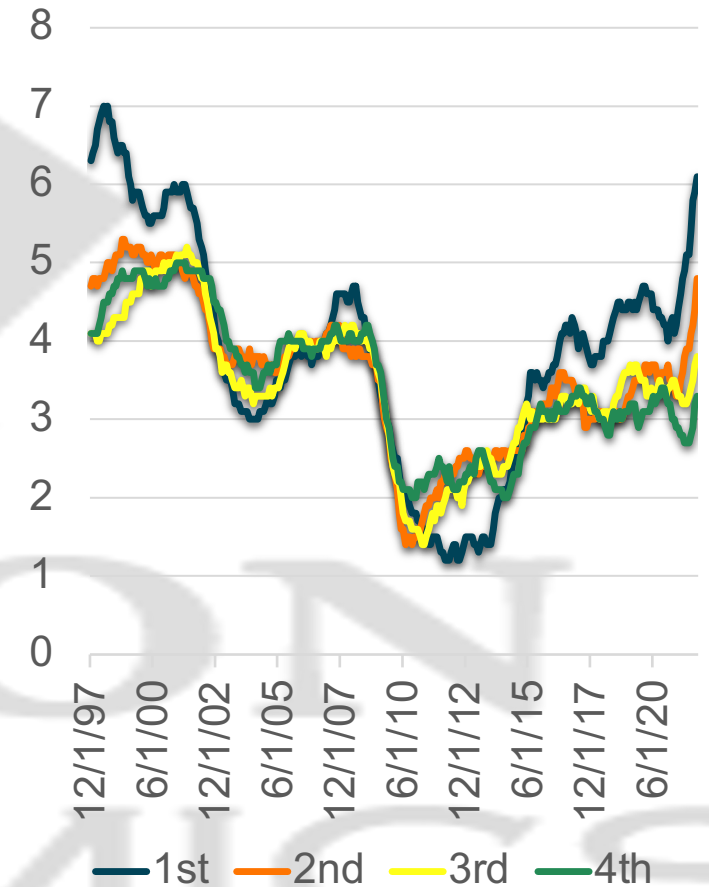
Atlanta Fed: Average Earnings Growth YoY



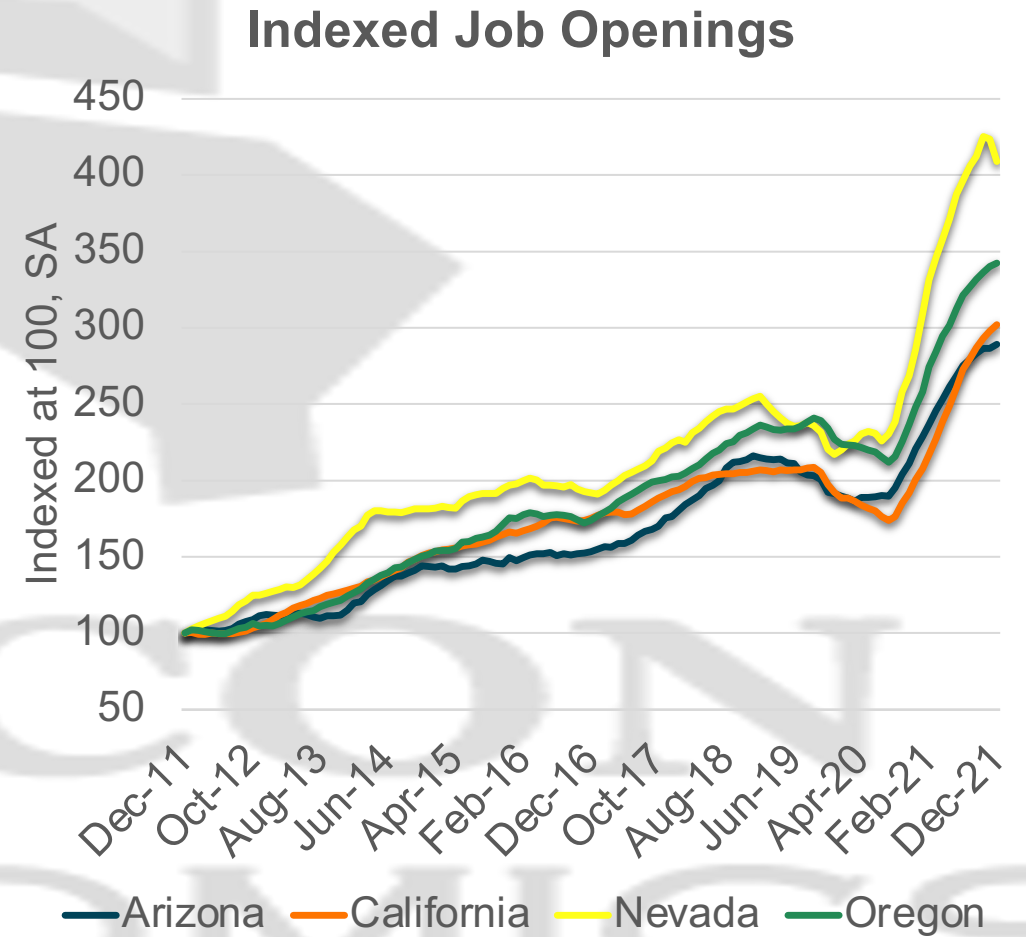
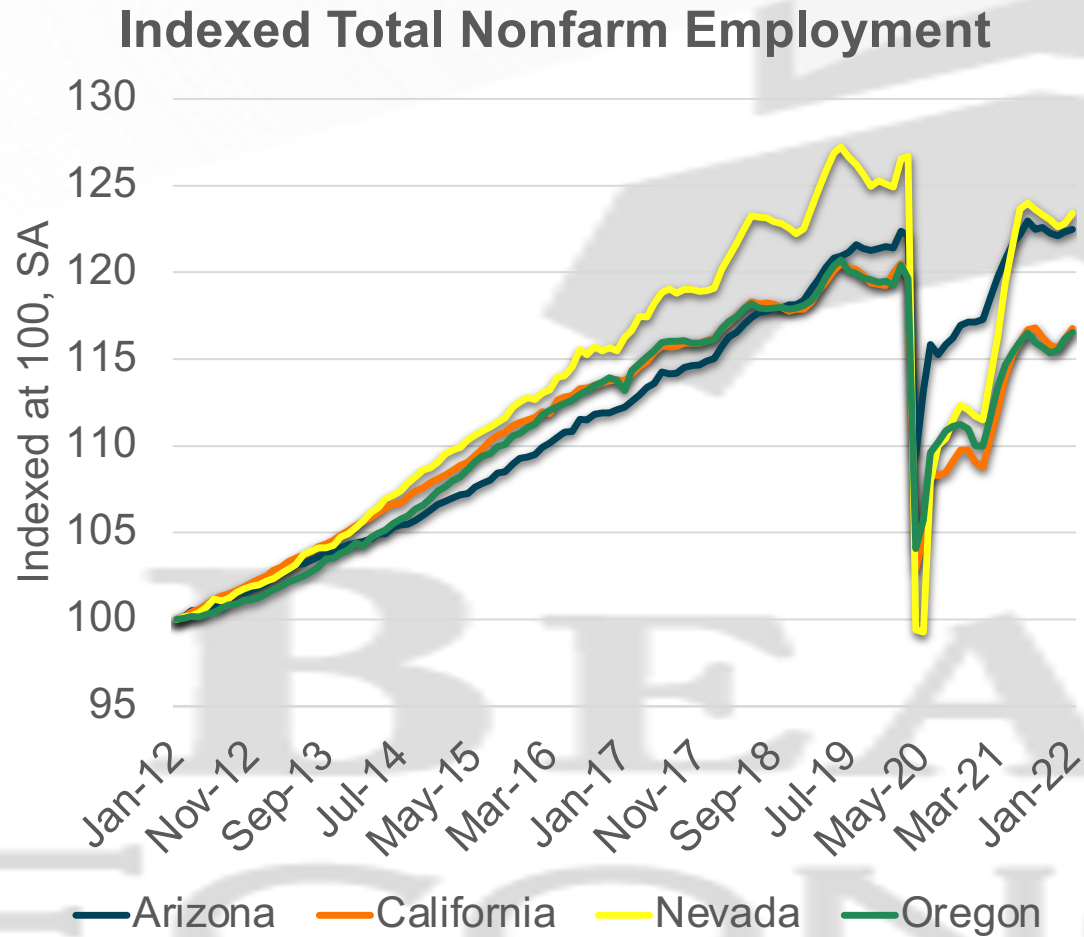
By Occupational Skill



By Earnings Quartile



Regional Labor Markets



Labor Shortage Solutions

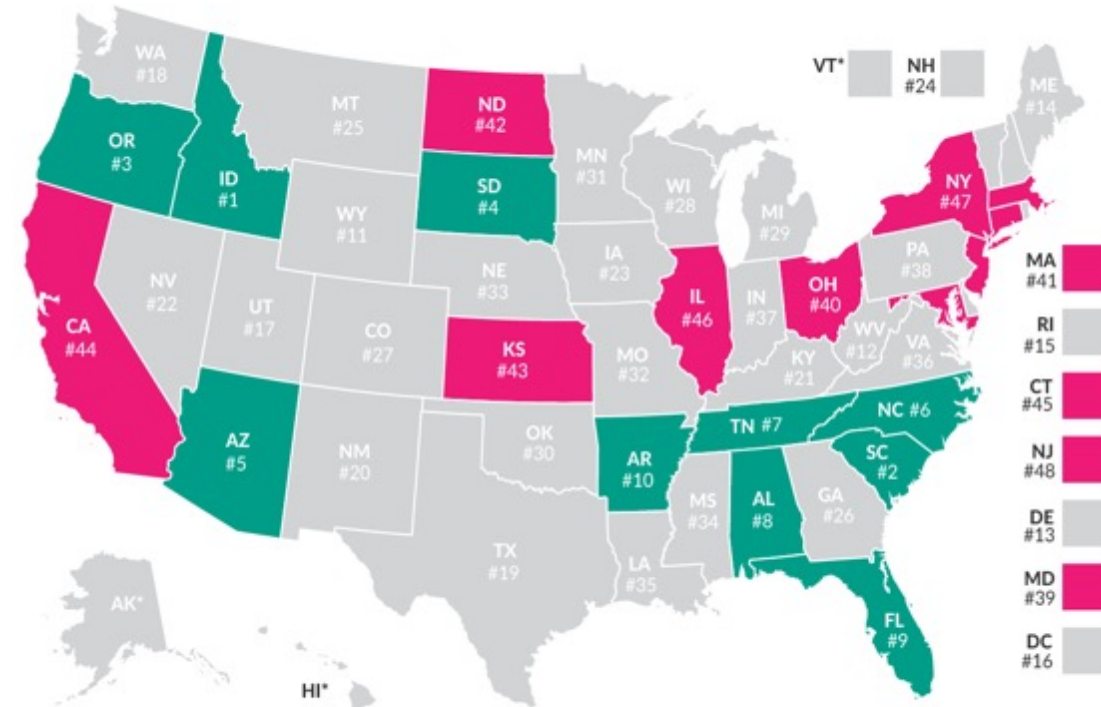


■ Solutions

- Extensive: Increasing labor force through immigration (SR) or birthrates (LR)
- Intensive: Raising participation rates among the existing population
- Productivity enhancements: capital investments / skill training

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.

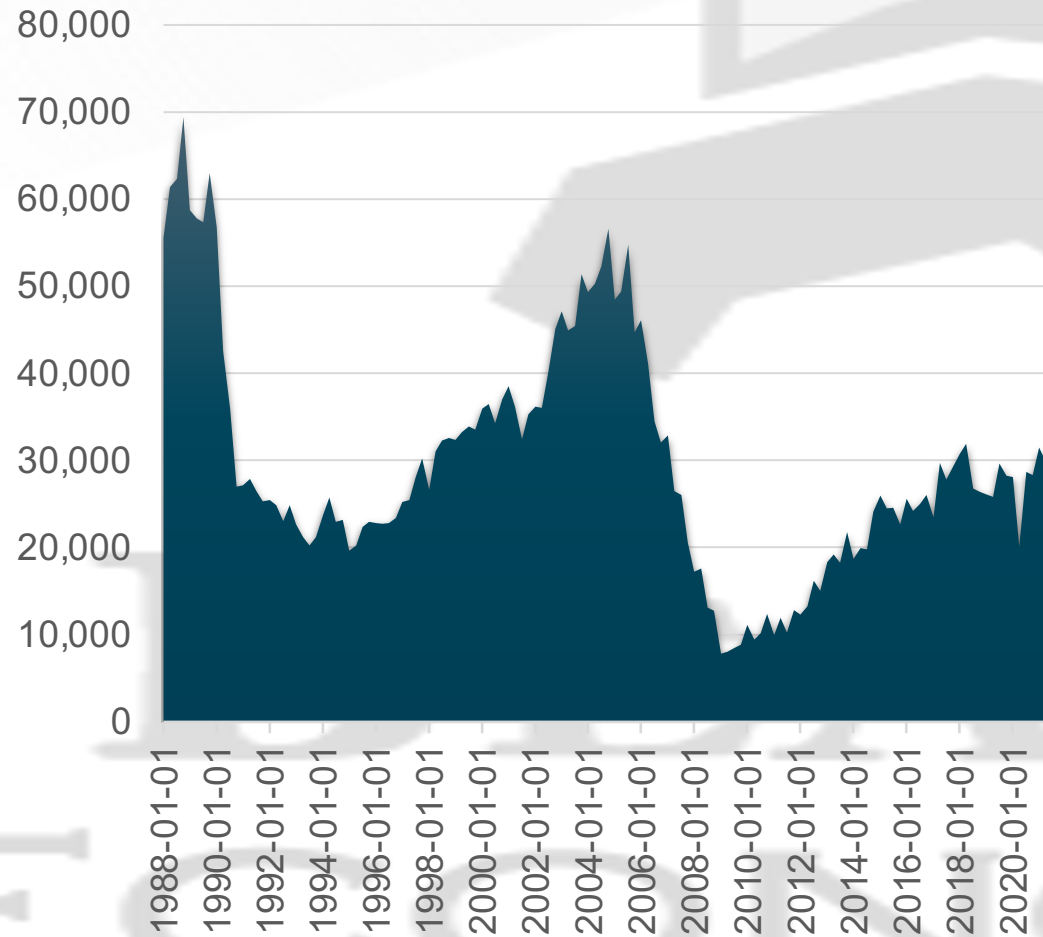
Source: United Van Lines, 2020 National Movers Study.

■ Top 10 States for Inbound Migration
■ Top 10 States for Outbound Migration

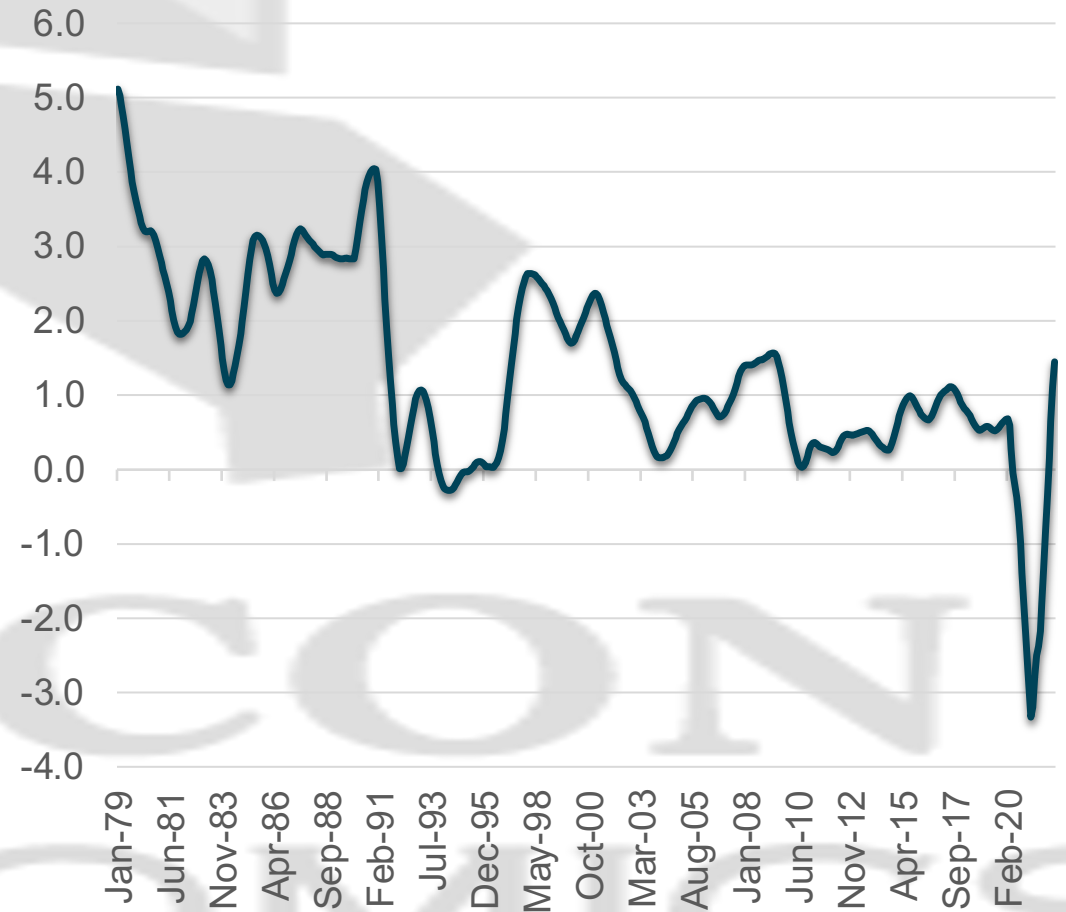
The Real California Story



California Residential Unit Permits



CA Labor Force Growth



The State Employment Situation



	Payrolls		Labor Force		Unemployment Rate	
Ch Feb 20 – Mar 22	Mar-22		Mar-22		Mar-22	
Stockton	261.6	3.1%	338.2	1.6%	5.3	-0.8
Inland Empire	1636.4	2.7%	2177.9	3.4%	4.3	0.2
Sacramento	1045.8	0.9%	1124.4	1.6%	3.5	-0.2
Fresno	373.2	0.4%	454.9	-0.2%	6	-1.4
San Diego	1504.1	-1.2%	1589.4	0.2%	3.3	0.0
Bakersfield	276.6	-1.3%	389.7	-0.6%	6.6	-1.7
California	17396.4	-1.7%	19131.3	-2.1%	4.9	0.8
San Jose	1144.1	-2.4%	1076.9	-1.0%	2.4	-0.3
Los Angeles (MD)	4487.3	-3.0%	5022.7	-3.8%	5.8	1.4
Oakland (MD)	1164.4	-3.1%	1382.8	-1.7%	3.3	0.2
Orange County (MD)	1634	-3.1%	1589.4	-1.7%	3.1	0.2
Ventura	304.9	-3.8%	412.3	-2.6%	3.4	-0.3
San Francisco (MD)	1155.8	-4.1%	1018.1	-2.9%	2.4	0.1
Santa Rosa	201.9	-4.4%	249.3	-3.3%	2.7	-0.1

Labor Market Shifts

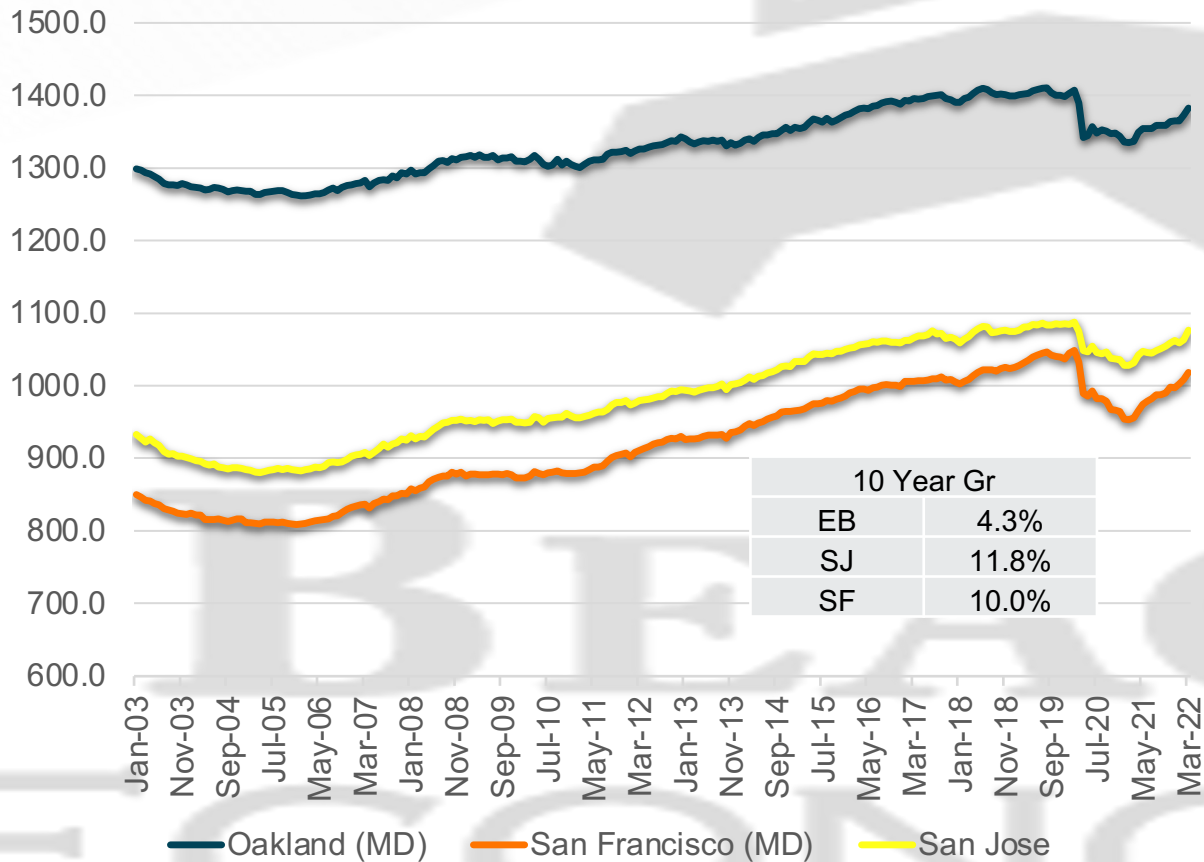


Industry Employment for California			Industry Employment for San Jose MSA		
Industry	Feb-22		Industry	Feb-22	
Total Nonfarm	17338.9	-2.0%	Total Nonfarm	1139.8	-2.8%
Logistics	840.9	14.9%	Logistics	17.4	4.8%
Prof Sci Tech	1385.7	1.7%	Prof Sci Tech	172.6	2.6%
Health Care	2503.2	0.8%	Health Care	138.8	2.5%
Admin Support	1164.2	0.6%	Information	109.7	2.2%
Information	588.4	-0.5%	Manufacturing	173.5	0.6%
Retail Trade	1637.8	-0.6%	Admin Support	63.4	-0.8%
NR/Construction	926.9	-0.6%	NR/Construction	54.4	-1.1%
Education	380.7	-2.4%	Financial Activities	37.7	-4.8%
Financial Activities	830.2	-2.5%	Government	93.7	-6.6%
Manufacturing	1294.5	-2.6%	Retail Trade	75.5	-7.5%
Government	2510	-4.2%	Education	44.4	-8.1%
Wholesale Trade	648.4	-5.5%	Management	14.2	-9.6%
Management	238.4	-5.6%	Wholesale Trade	27.9	-10.0%
Other Services	538.7	-9.2%	Leisure and Hospitality	93.1	-14.0%
Leisure and Hospitality	1847.3	-10.4%	Other Services	23.5	-18.4%

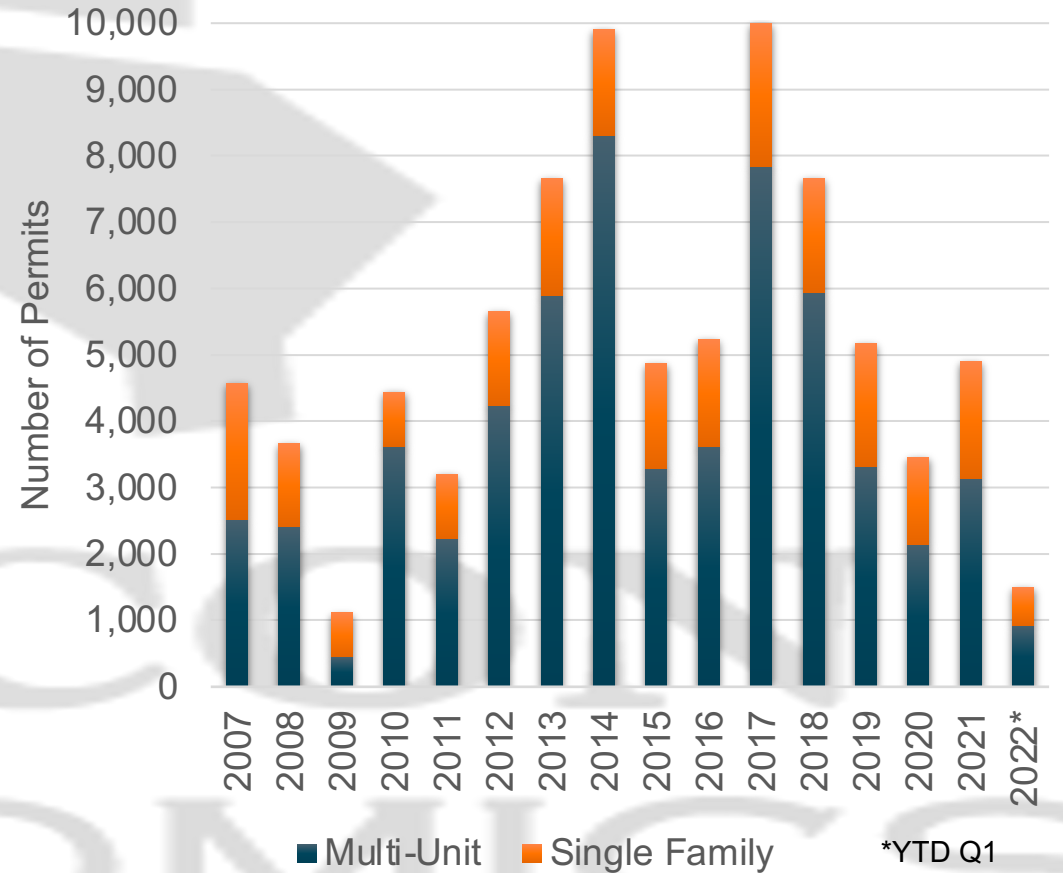
Employment



Bay Area Labor Force



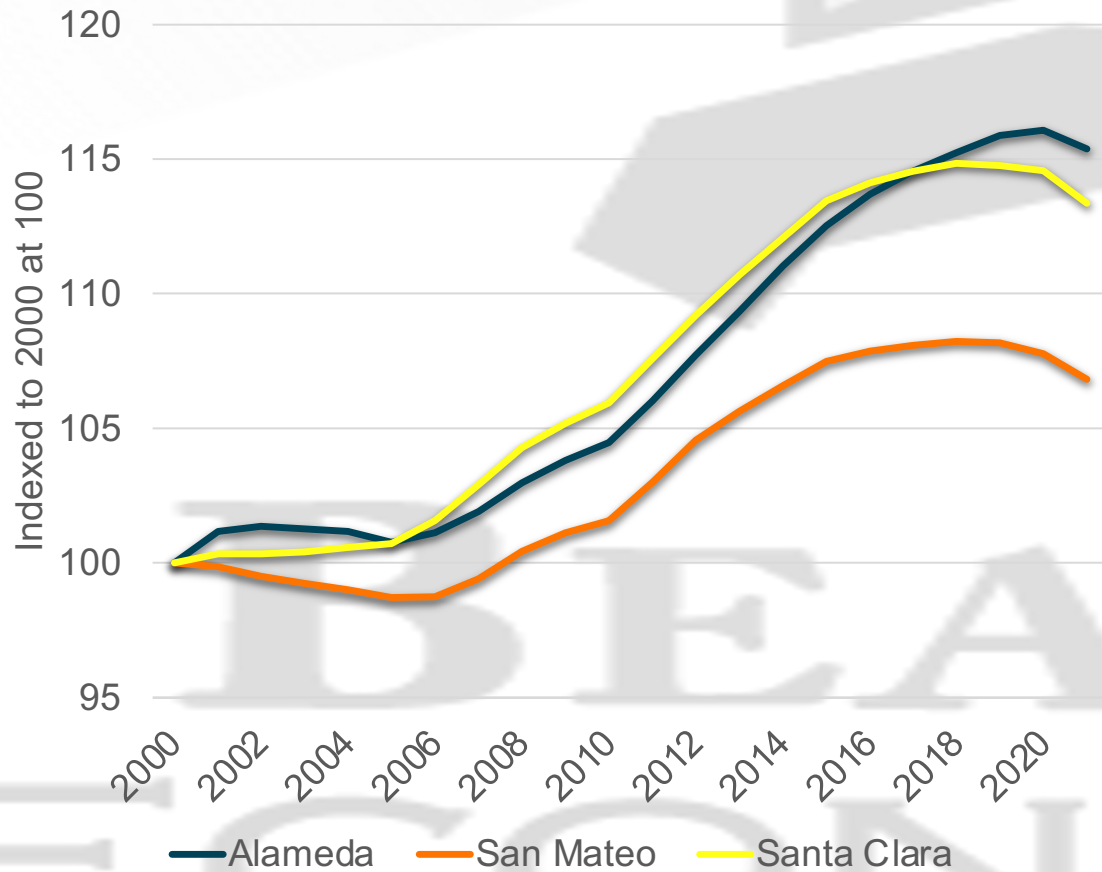
Residential Permits – Santa Clara



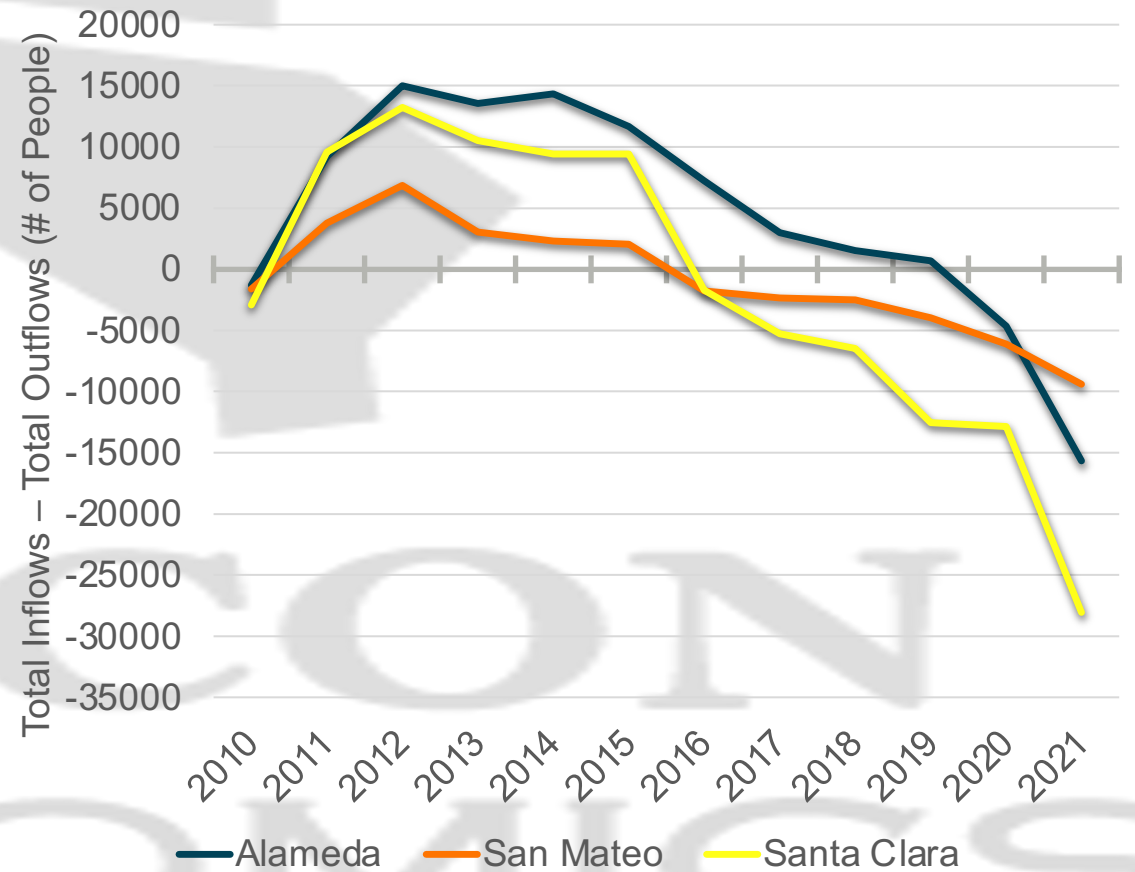
County Demographics



Population Growth Index



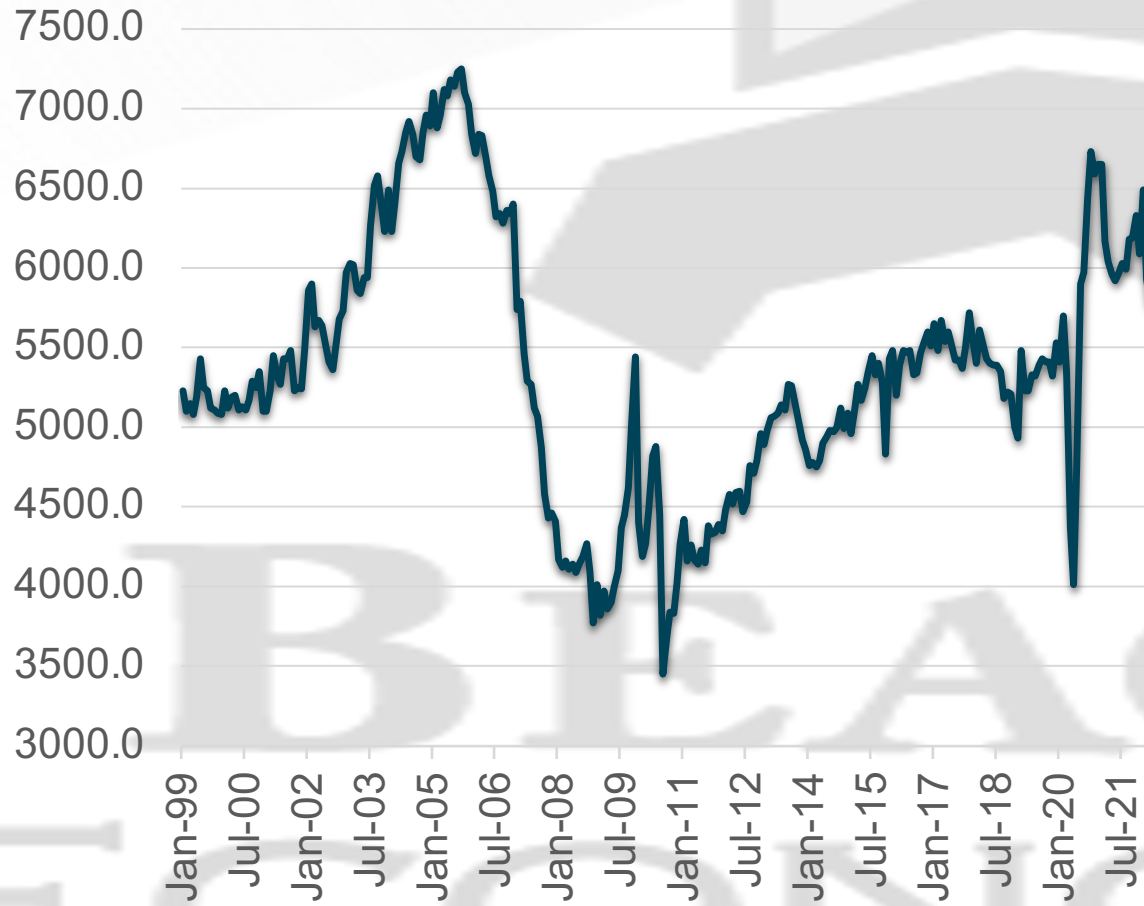
Net Migration



Residential Markets



US Existing Home Sales

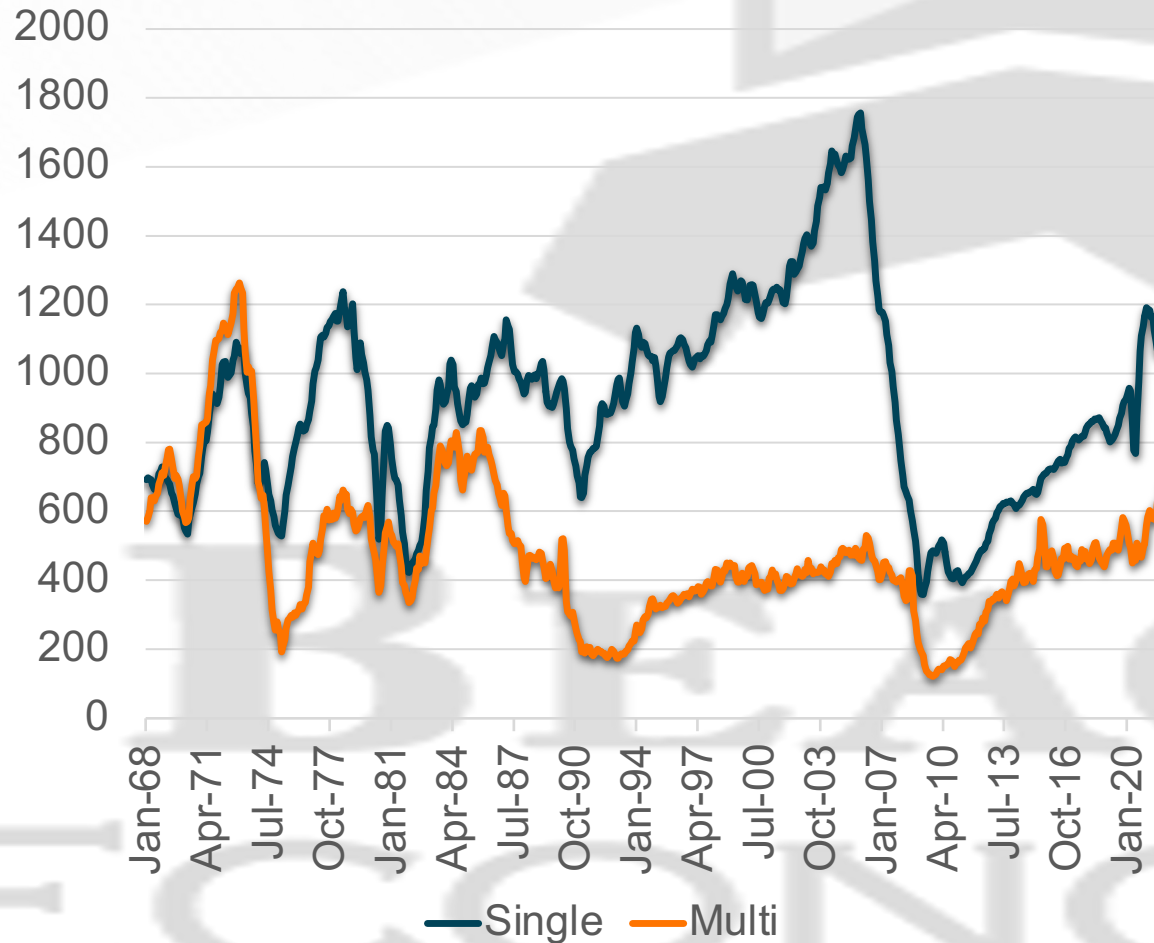


	19-20	20-21	21-22
U.S. National	0.5%	12.2%	19.8%
Phoenix	0.8%	17.4%	32.9%
Tampa	0.7%	12.8%	32.6%
Miami	0.7%	11.1%	29.7%
San Diego	-0.2%	17.1%	29.1%
Dallas	0.2%	10.9%	28.8%
Las Vegas	0.7%	9.3%	27.5%
Seattle	0.7%	15.8%	26.6%
Charlotte	0.4%	12.0%	25.5%
Atlanta	0.5%	10.0%	24.0%
San Francisco	0.7%	11.0%	22.8%
Denver	0.5%	11.4%	22.3%
Los Angeles	0.3%	12.0%	22.1%
Portland	0.6%	11.6%	19.0%
Detroit	0.4%	11.7%	14.6%
Boston	0.4%	13.7%	14.6%
Cleveland	0.7%	12.5%	13.6%
Chicago	0.4%	8.6%	13.1%
New York	0.5%	12.2%	12.9%
Minneapolis	1.3%	10.3%	12.0%
DC	0.4%	10.8%	11.9%

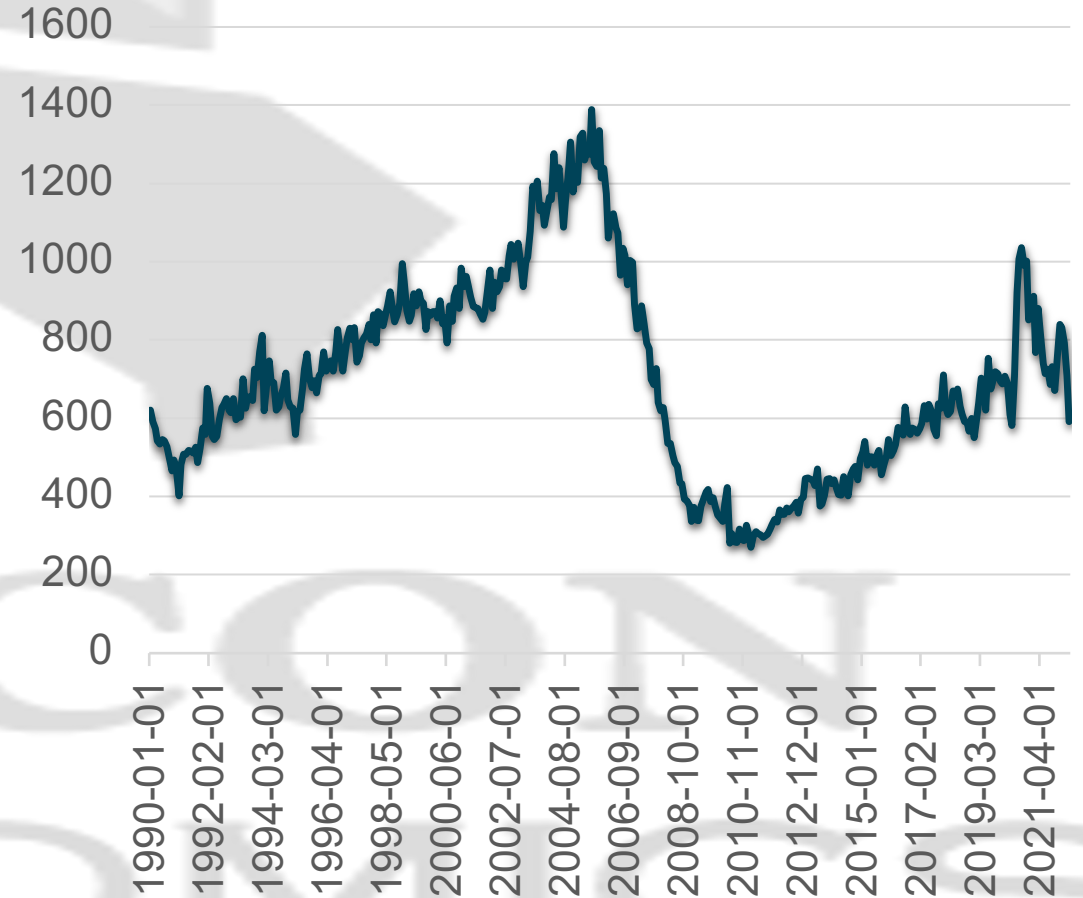
Residential Markets



US Housing Permit



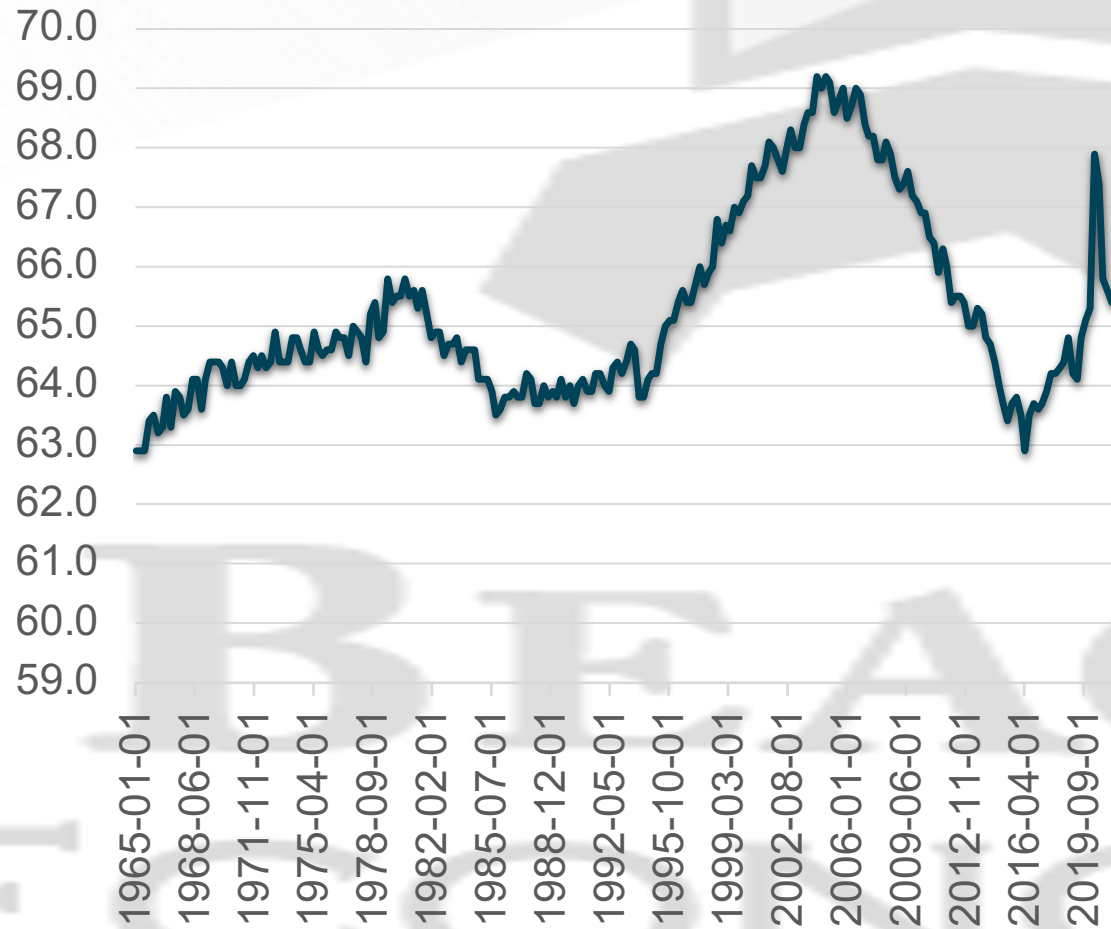
New Home Sales



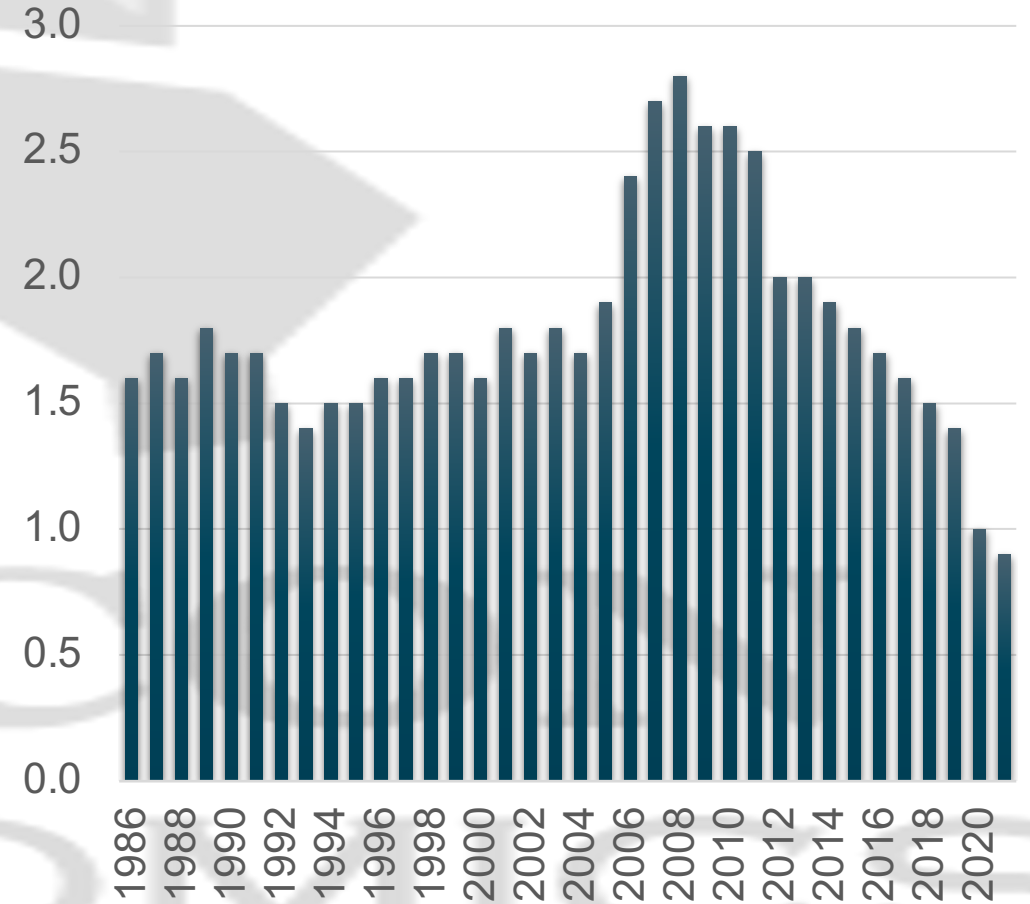
Long Run Market Dynamics



US Homeownership Rate



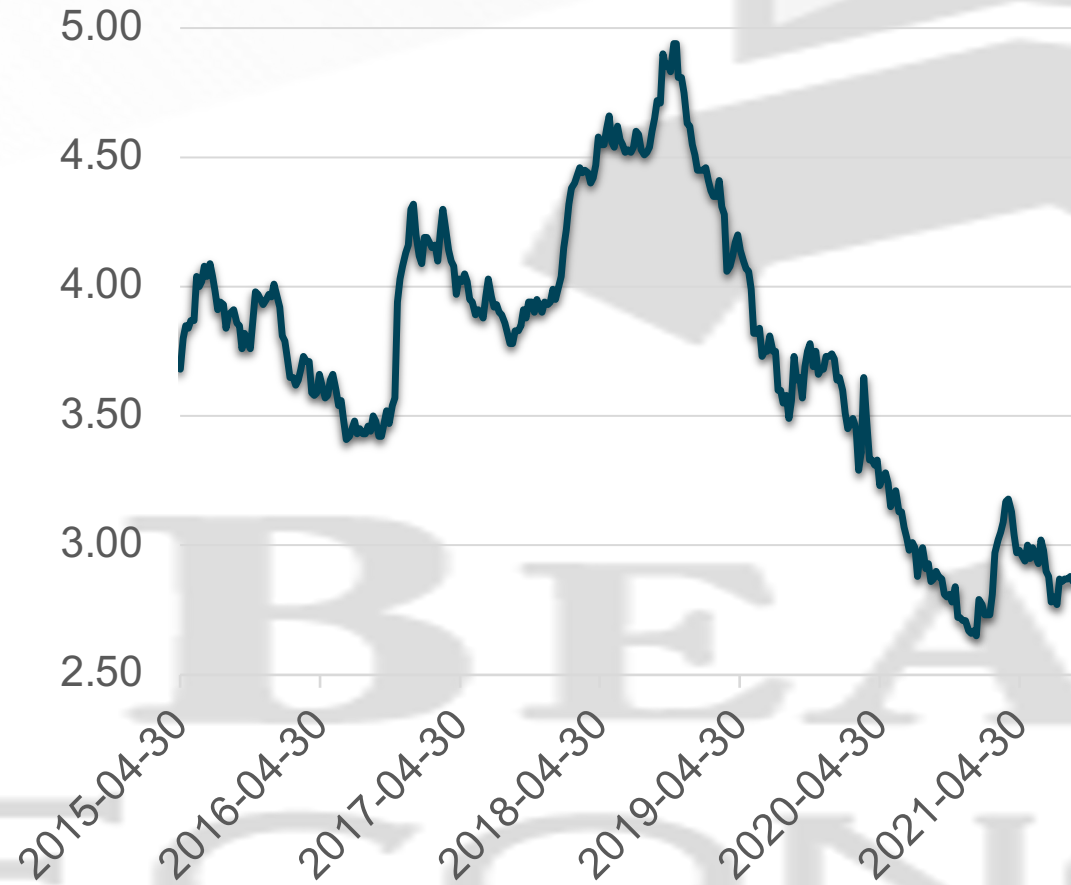
US Housing Vacancy Rate



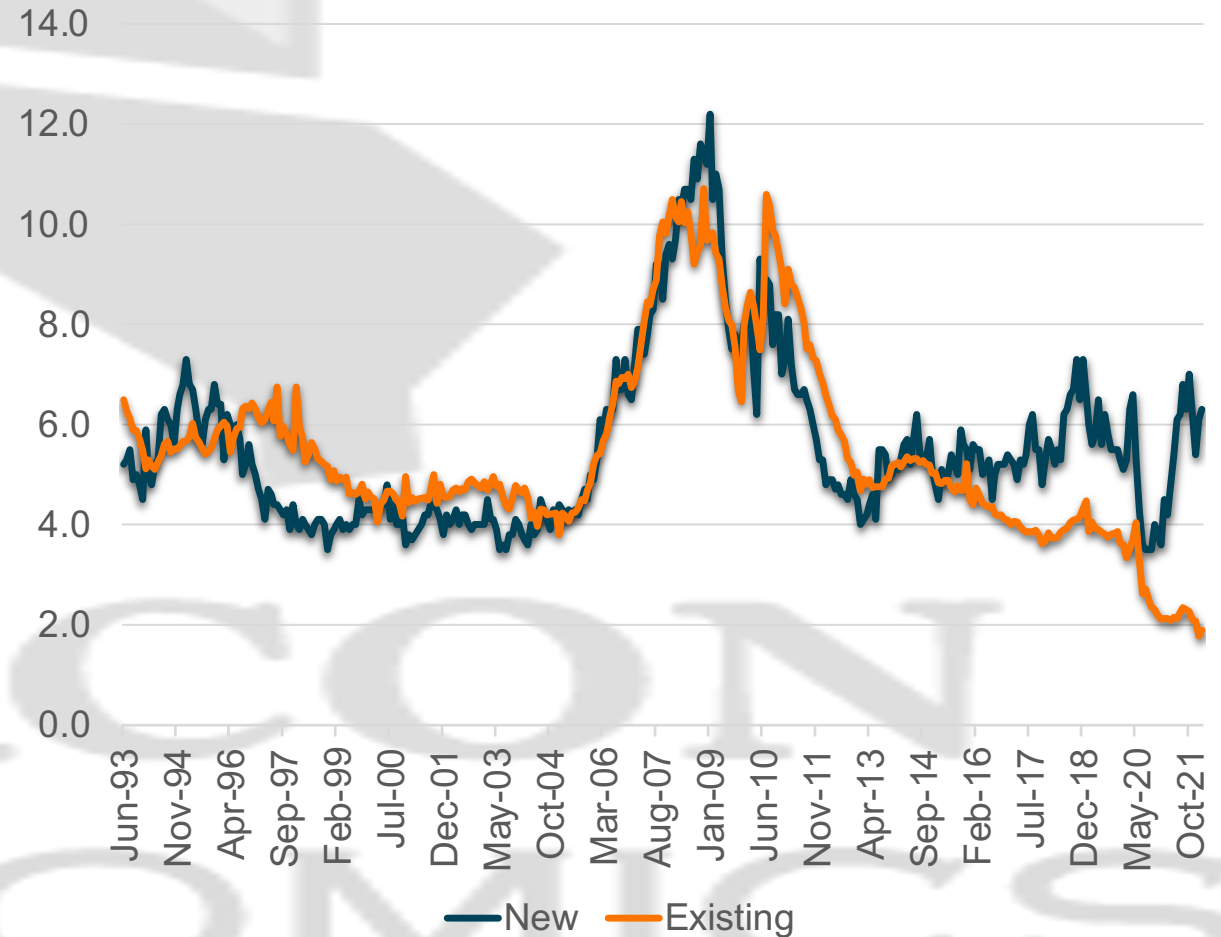
Drivers of the Boom



Mortgage Rates (30 Yr Fixed)



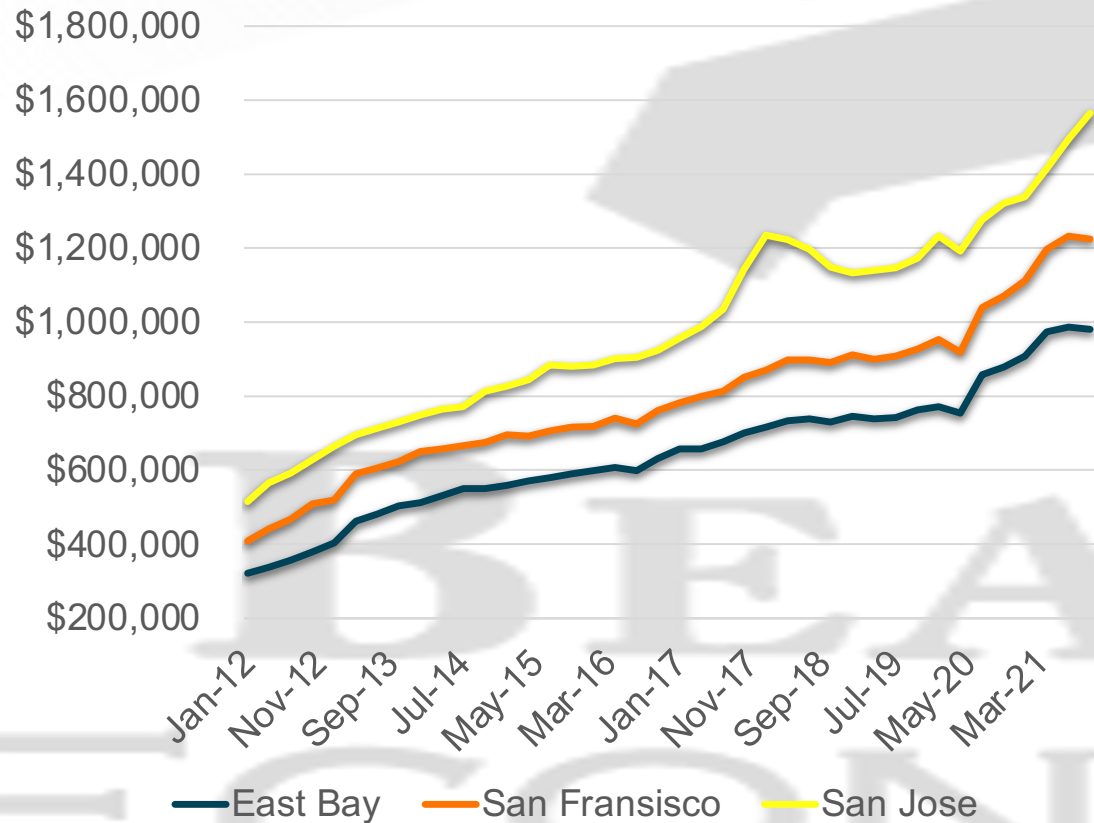
Months Supply of Homes for Sale



Housing Market

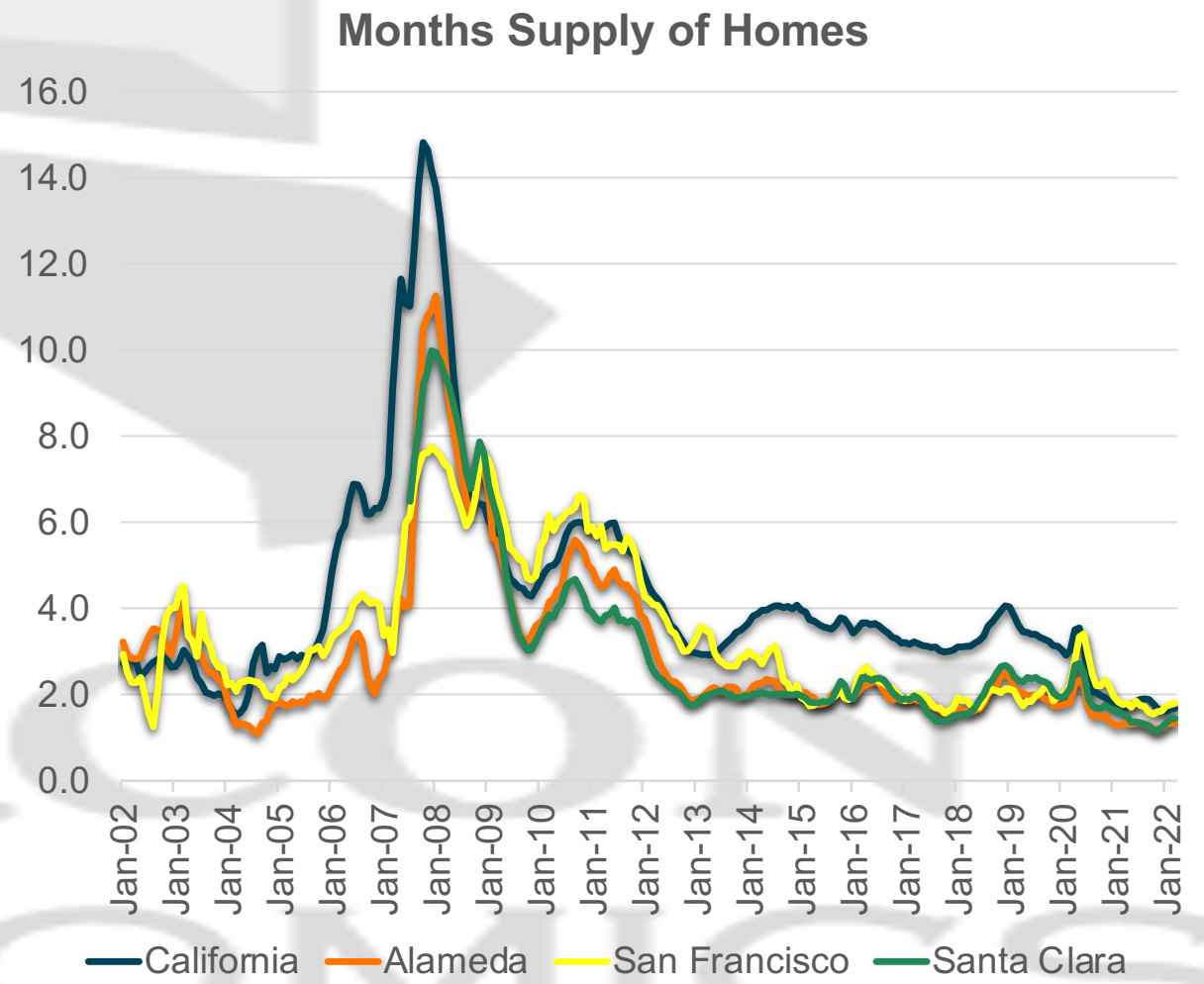
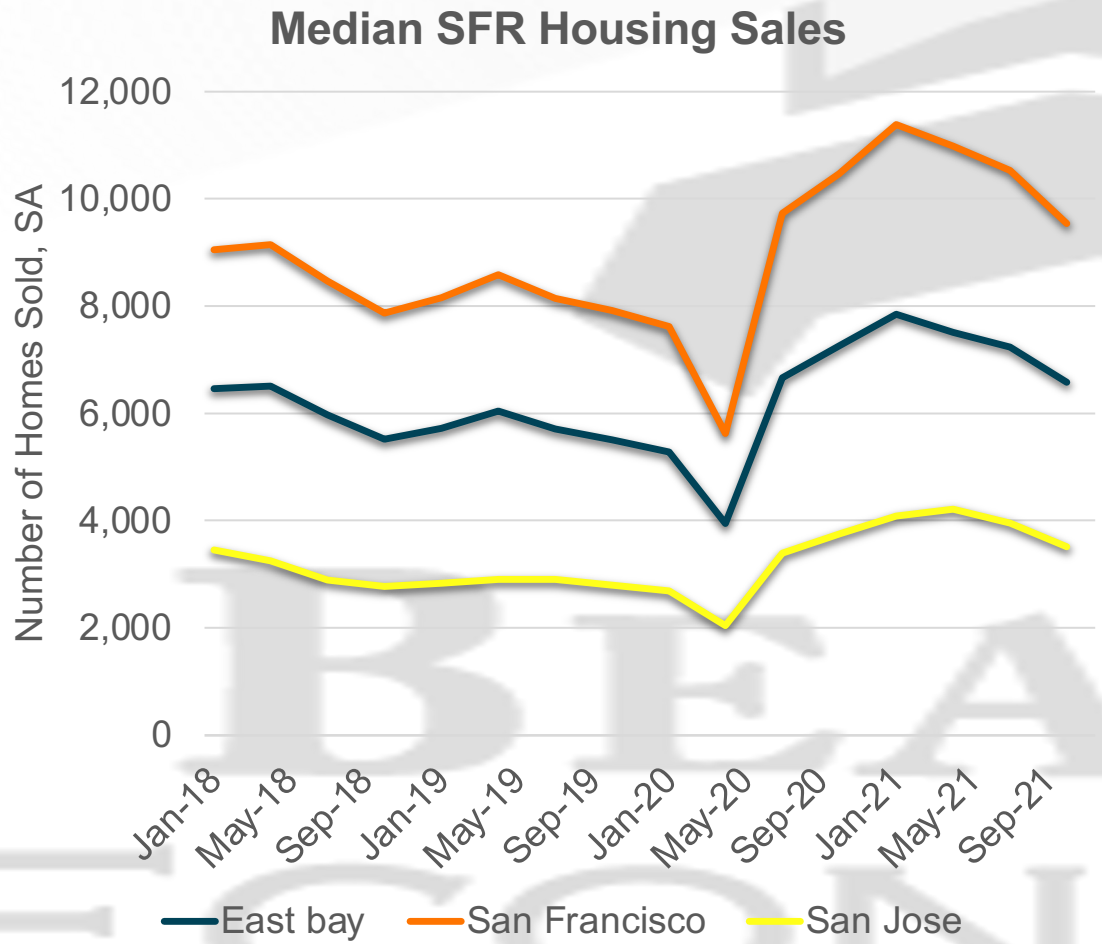


Median SFR Housing Prices—by MSA, Seasonally Adjusted



MSA	Median Single-Family Home Prices, Seasonally Adjusted		
	Q4-21(\$)	2-Yr Chg (\$)	2-Yr % Chg
San Jose	1,564,921	392,472	33.5
San Francisco	1,224,268	296,462	32.0
East Bay	981,214	217,514	28.5

Housing Market



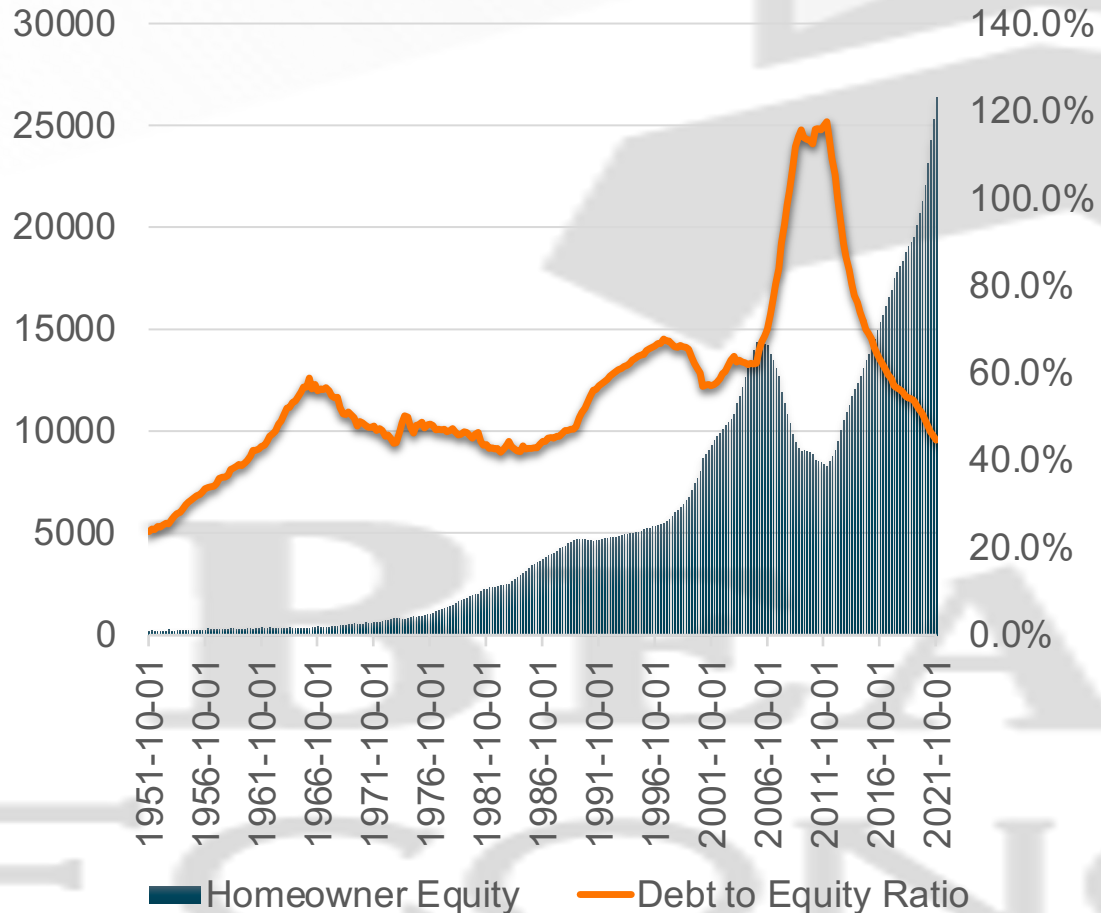
Bubble Alert? Not Yet...



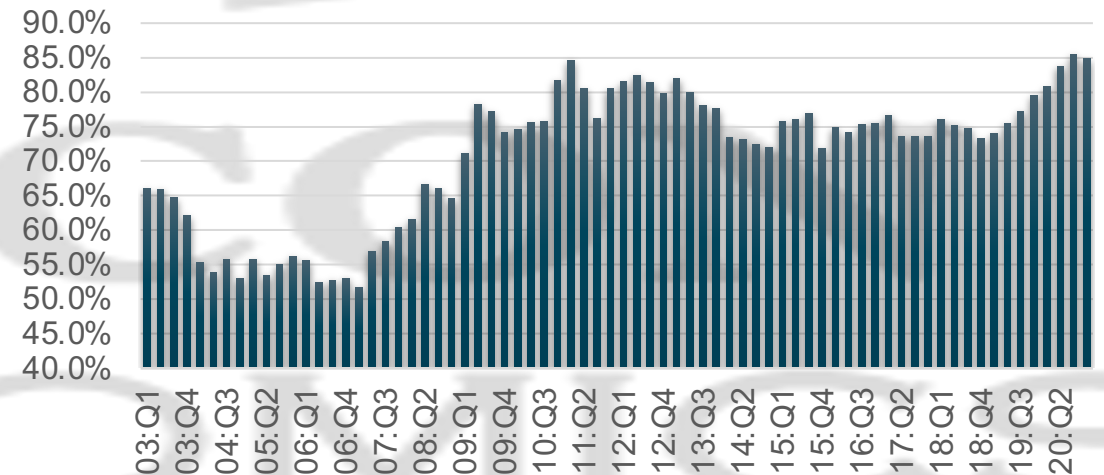
Share Owners Housing Cost Constrained

		2011	2019
		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%

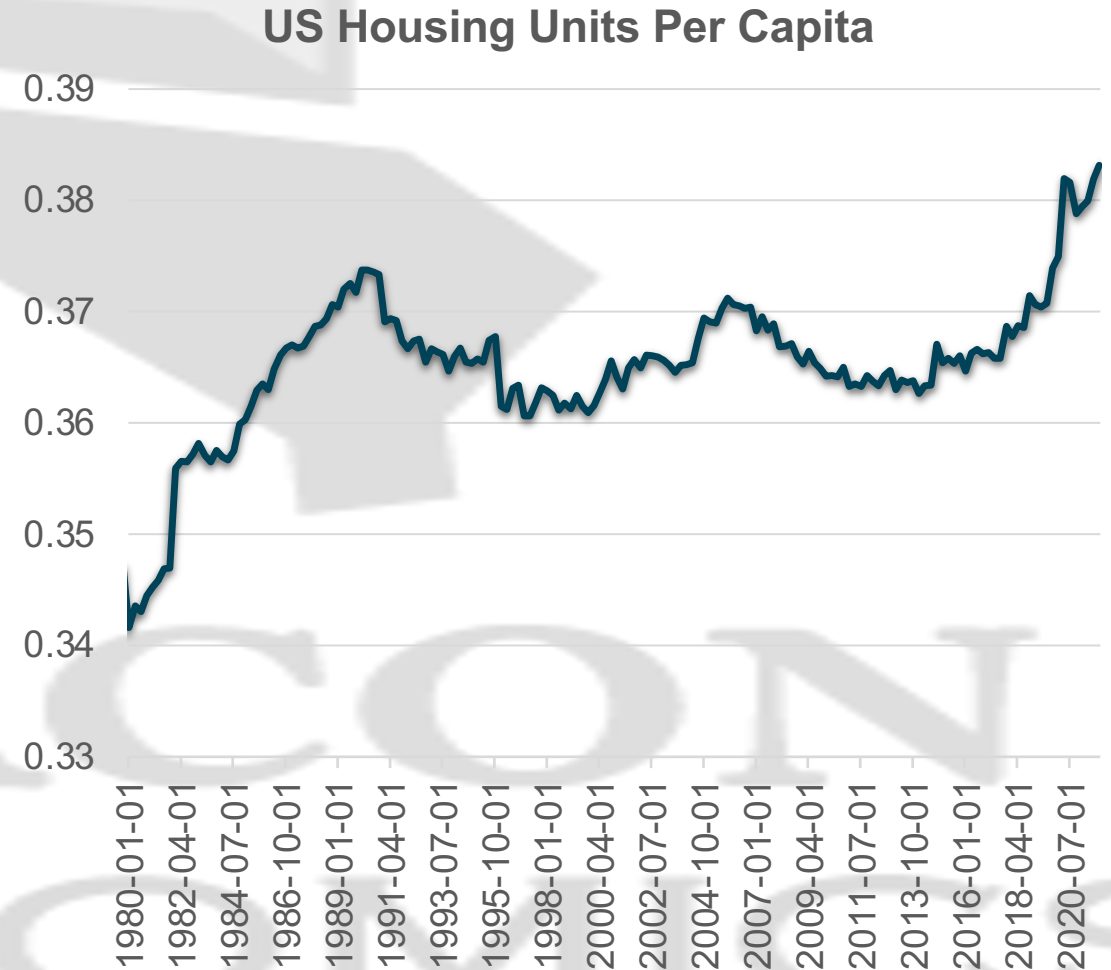
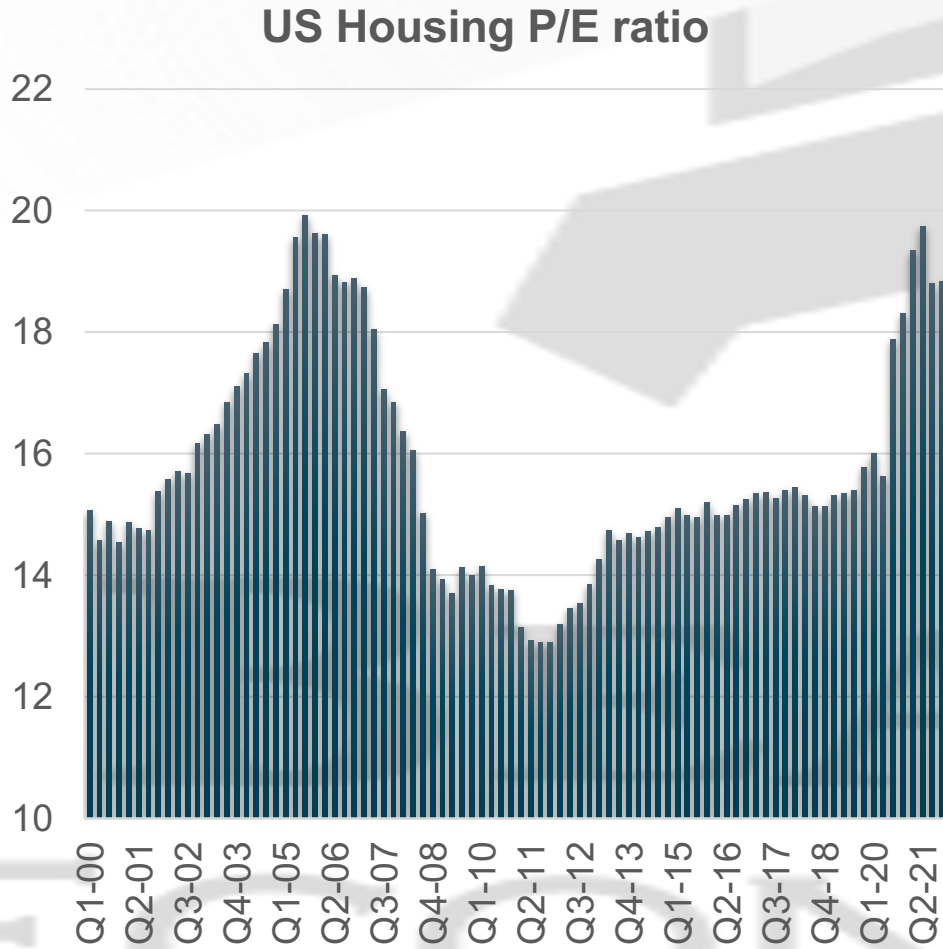
Housing Fundamentals



Share Mortgage Originations > 720 Fico



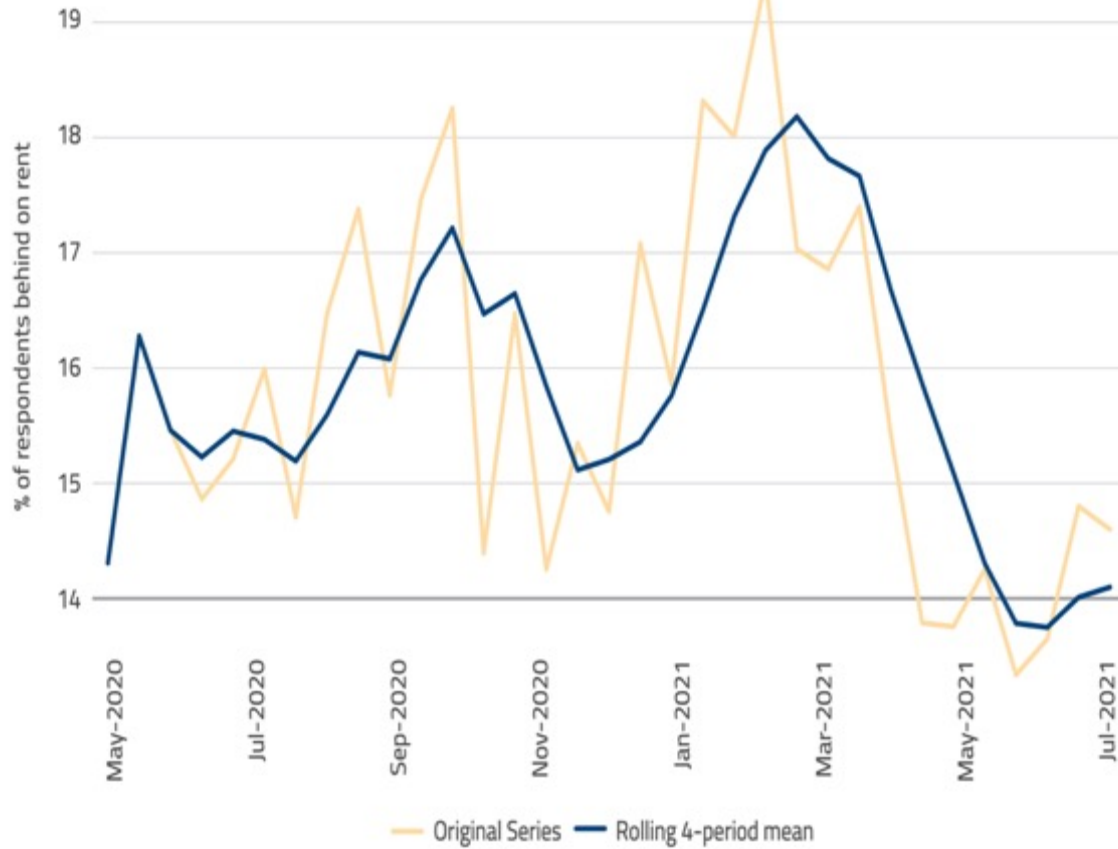
Any Signs of Froth?



Apartments

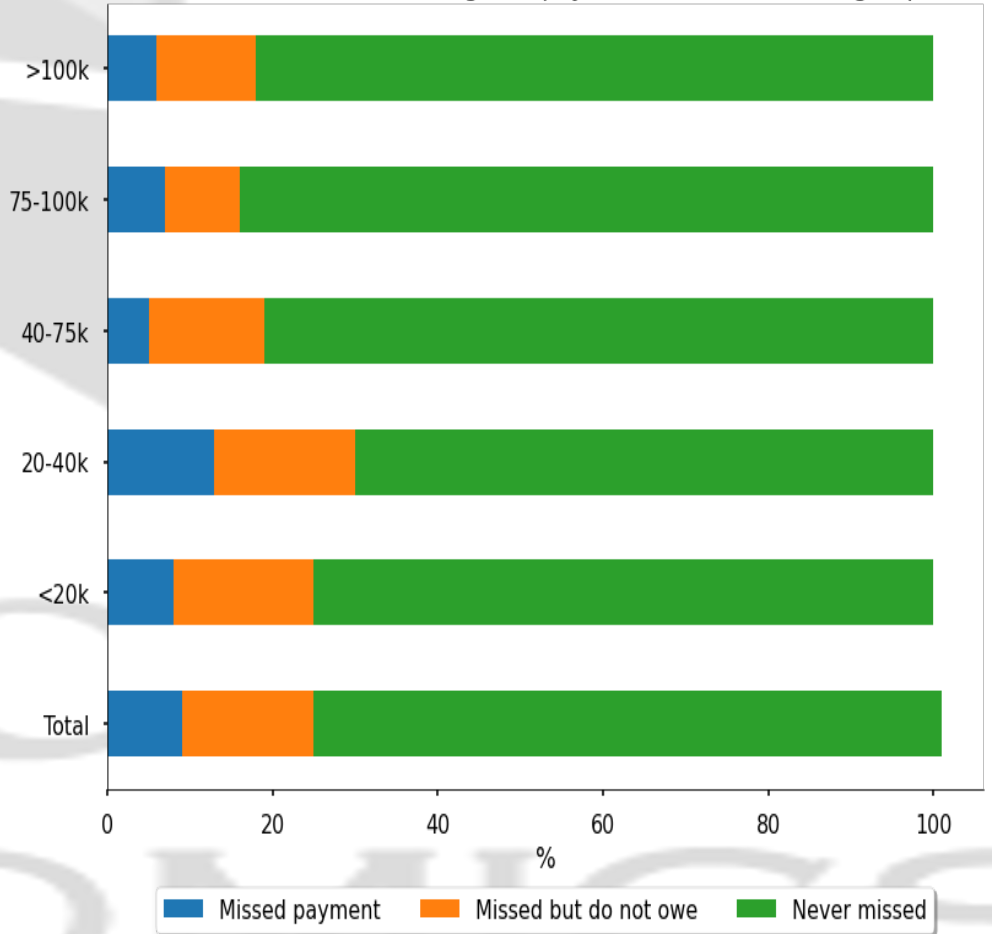


Figure 1: Households behind on rent have decreased since April 2020



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

Lowest earners not missing rent payment more than other groups

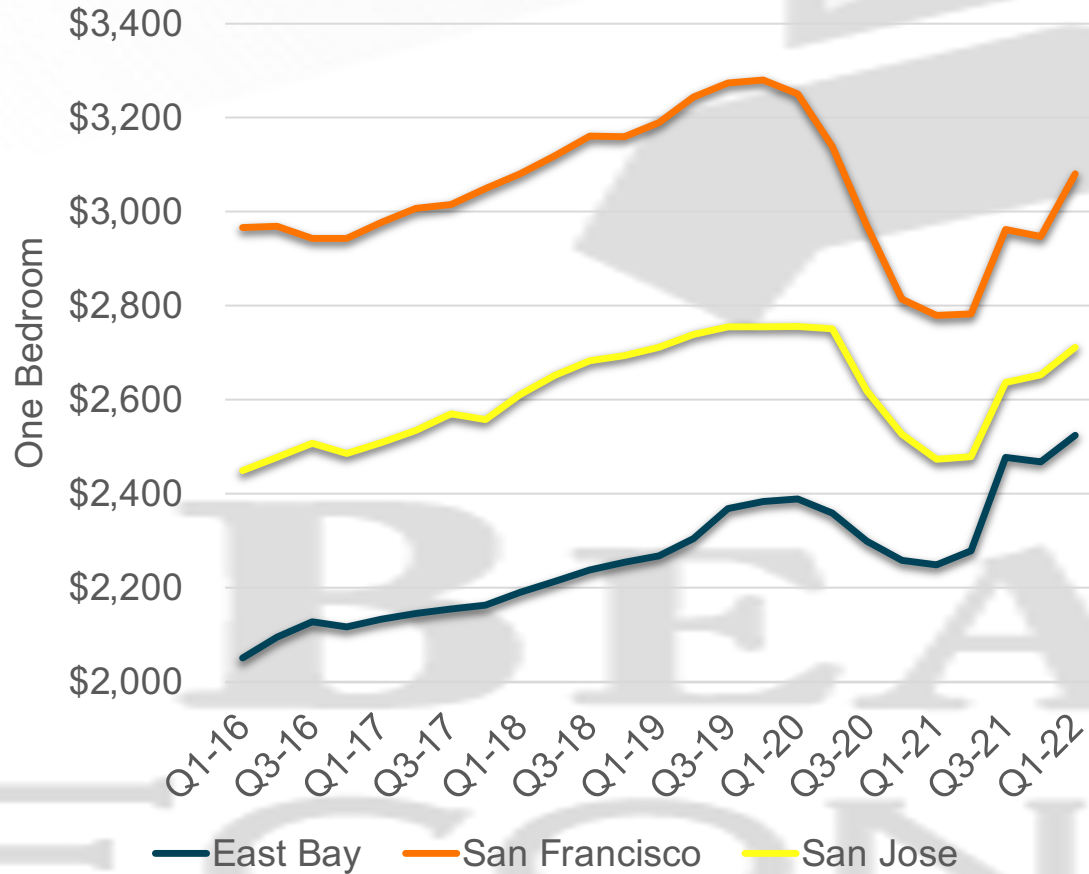


SRC: Federal Reserve Bank of Philadelphia

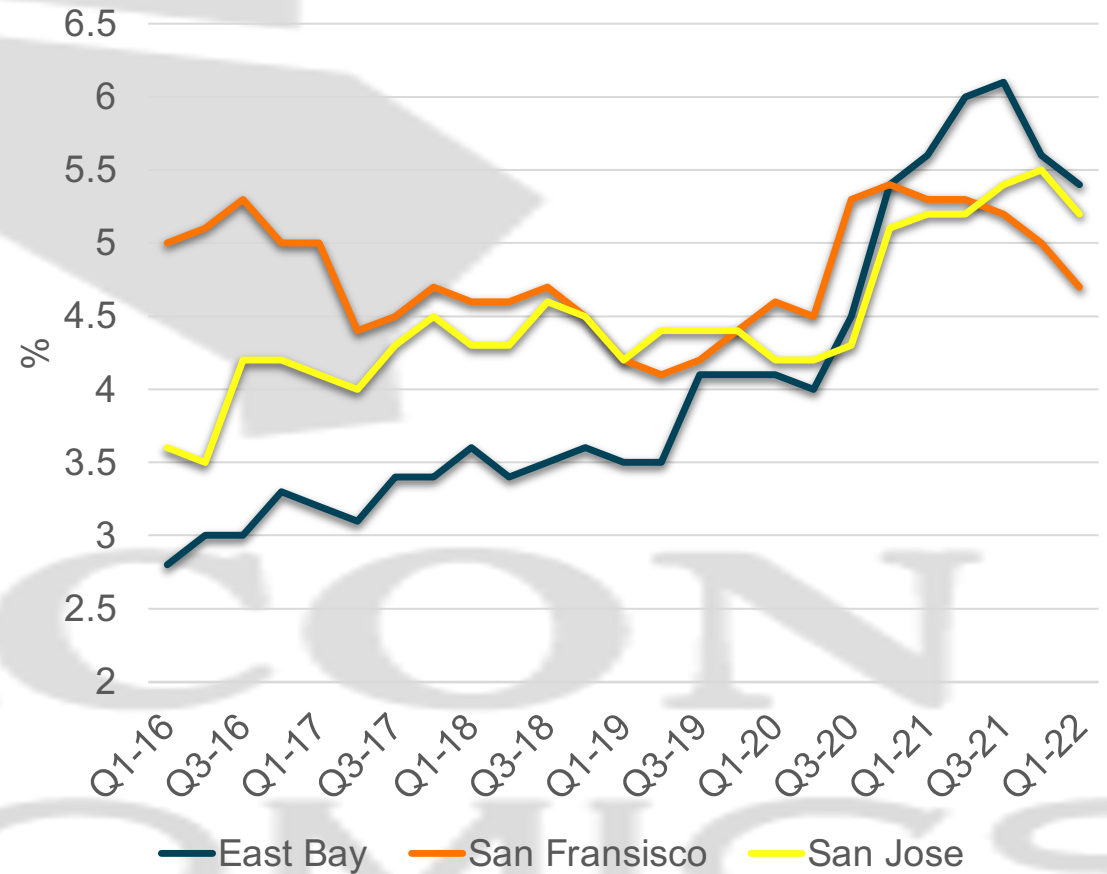
Apartments



Apartment Monthly Cost of Rent



Apartment Vacancy Rate



Rental Market Leap



Asking Rents and Vacancies

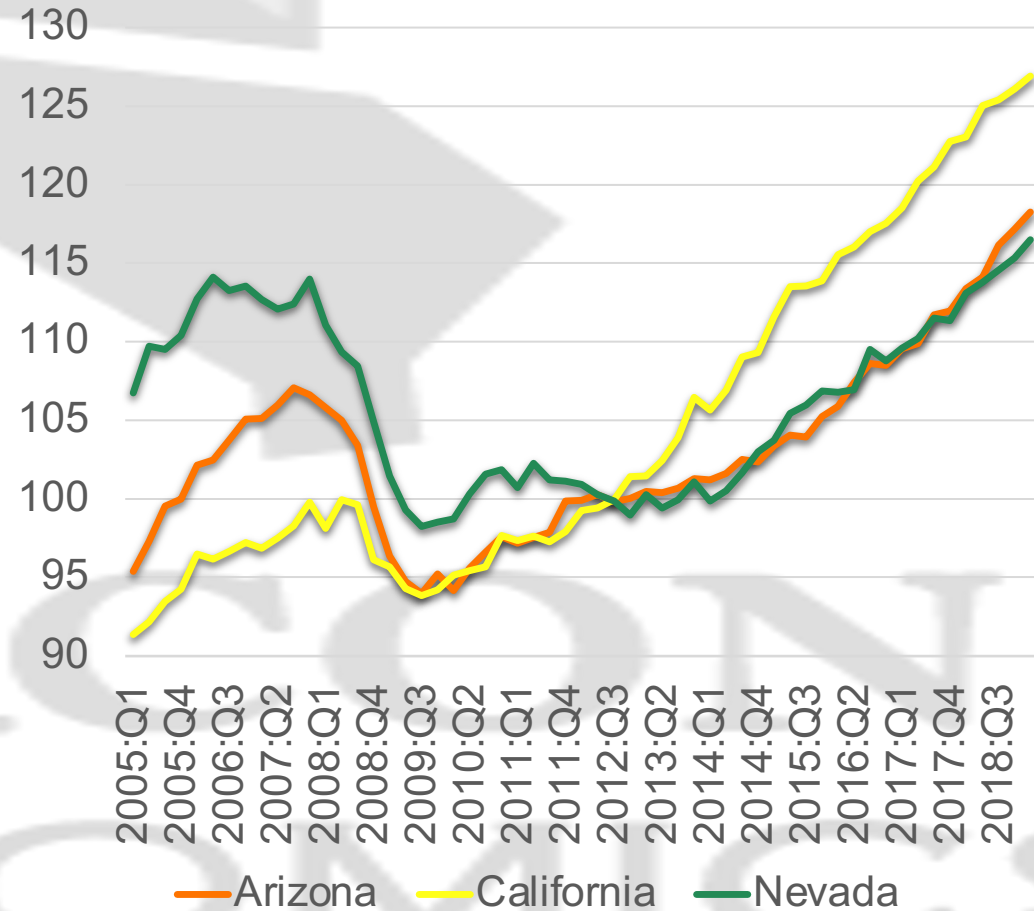
	Q1-22	1 Yr Ch	Q1-22	1 Yr Ch
United States	4.7	-0.7	1678.4	15.0%
Albuquerque	2.9	-0.5	1168.3	26.5%
Phoenix	4.4	-0.6	1490.5	25.7%
Tucson	3.8	0	1103.7	24.3%
Inland Empire	3.0	-0.4	1806.7	21.3%
Las Vegas	2.8	-1	1458.6	20.7%
Fresno	1.8	-0.3	1219.5	19.0%
Orange County (MD)	3.4	-0.3	2334.6	18.5%
San Diego	3.9	-0.5	2225.6	18.2%
Salt Lake City	4.2	-0.9	1274.3	16.3%
Seattle	6.5	0.5	2025.4	14.7%
Portland, OR	5.3	-1.1	1581.8	14.4%
Los Angeles (MD)	3.9	-0.7	2236	12.9%
Oakland (MD)	5.4	-0.2	2524.7	12.2%
Sacramento	2.8	-0.4	1578.9	12.1%
Reno	5.0	-0.6	1652.6	11.8%
Denver	5.6	-1.1	1620.7	11.7%
Tacoma	2.8	-0.4	1352	11.2%
San Francisco (MD)	4.7	-0.6	3080.8	10.8%
San Jose	5.2	0	2711.7	9.6%

California Skill Shifts

**Net Migration by Educational Attainment,
Population over 25 (Total from 2012-2017)**

Education	CA	NV	AZ
Net Migration	-285,240	117,472	262,788
Less Than HS	-58,169	15,202	6,605
HS Grad	-134,048	33,371	64,261
Some College	-181,809	40,466	94,125
BA	19,318	21,011	70,607
Grad	69,468	7,422	27,190

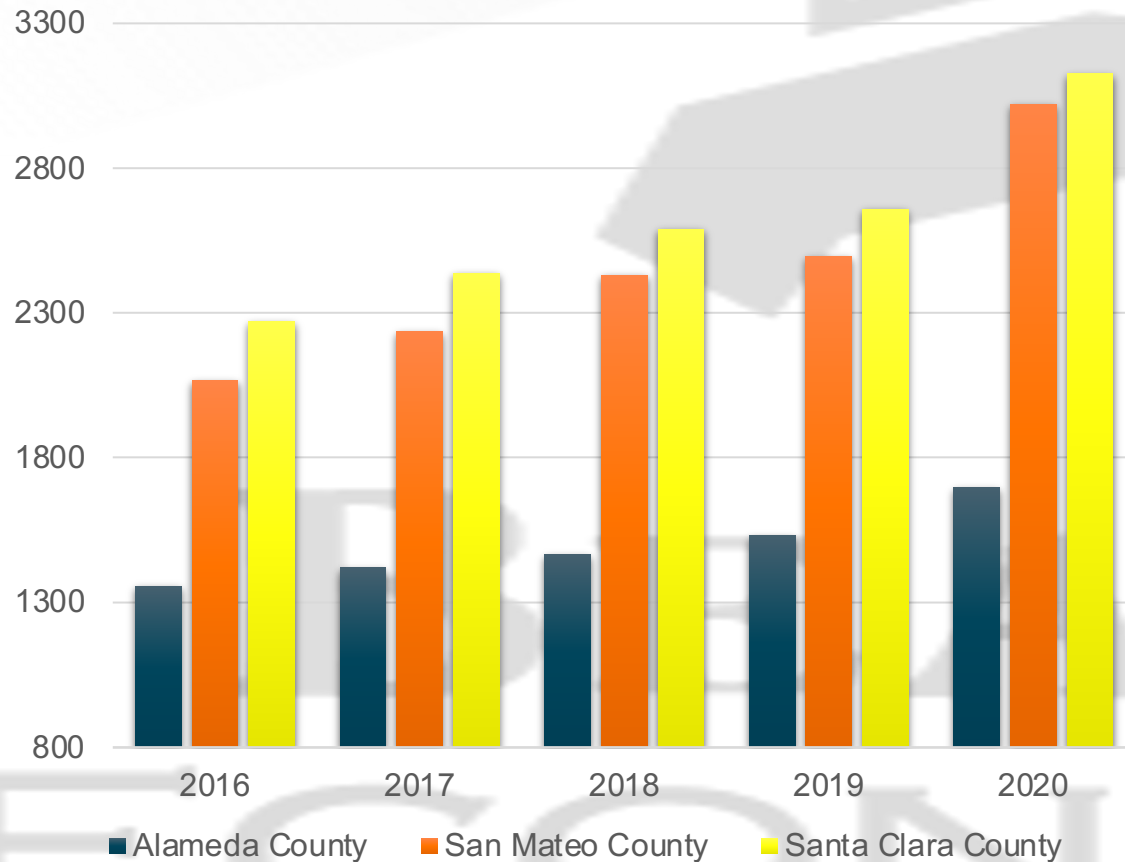
Real Output by State



Wages



Average Weekly Wage



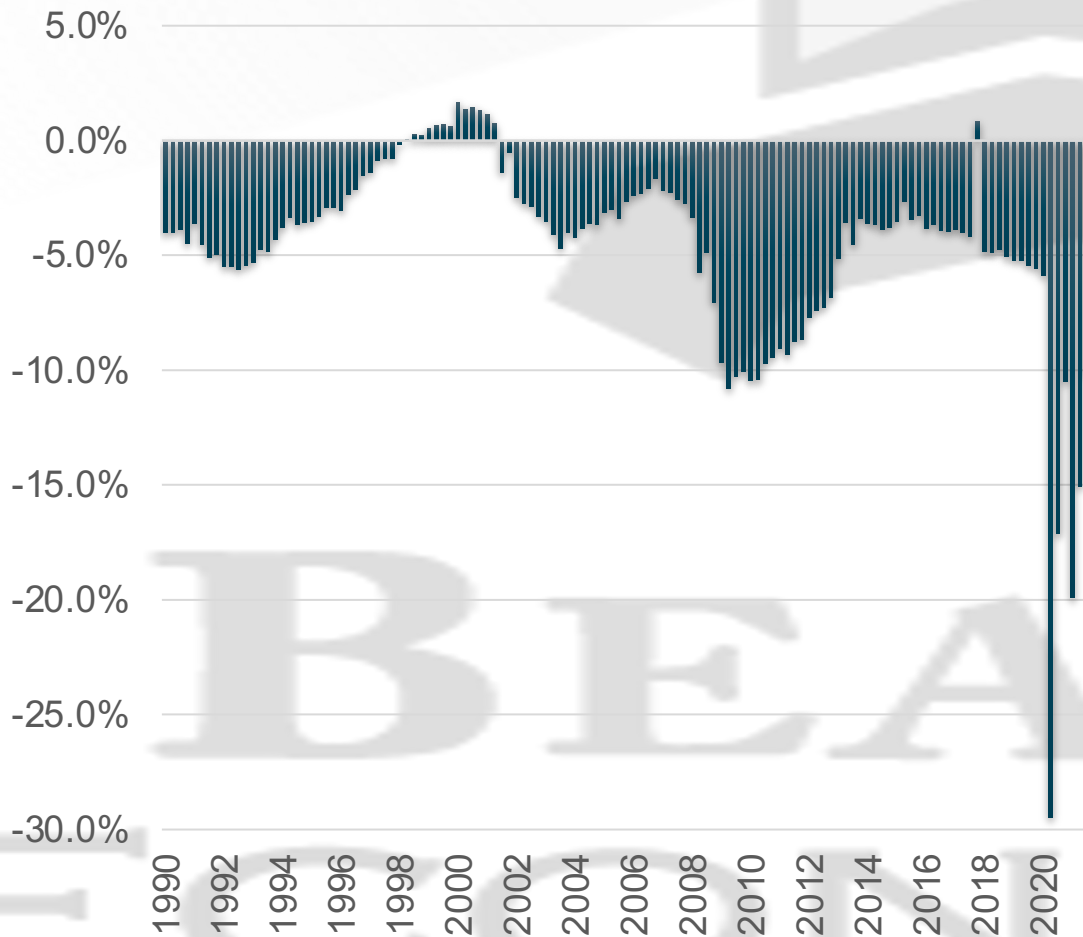
Share Renting Households > 30% Income

	Renter		Abs.
	2020	2016	Chg
Riverside	58.3%	57.5%	0.8%
Los Angeles	57.2%	55.4%	1.8%
San Bernardino	56.8%	55.4%	1.4%
San Diego	56.3%	54.8%	1.5%
Orange	55.9%	54.7%	1.2%
Fresno	55.8%	54.1%	1.7%
Sacramento	54.6%	52.1%	2.5%
Alameda	48.4%	47.2%	1.2%
Santa Clara	45.2%	46.2%	-1.0%
San Francisco	36.7%	36.8%	-0.1%

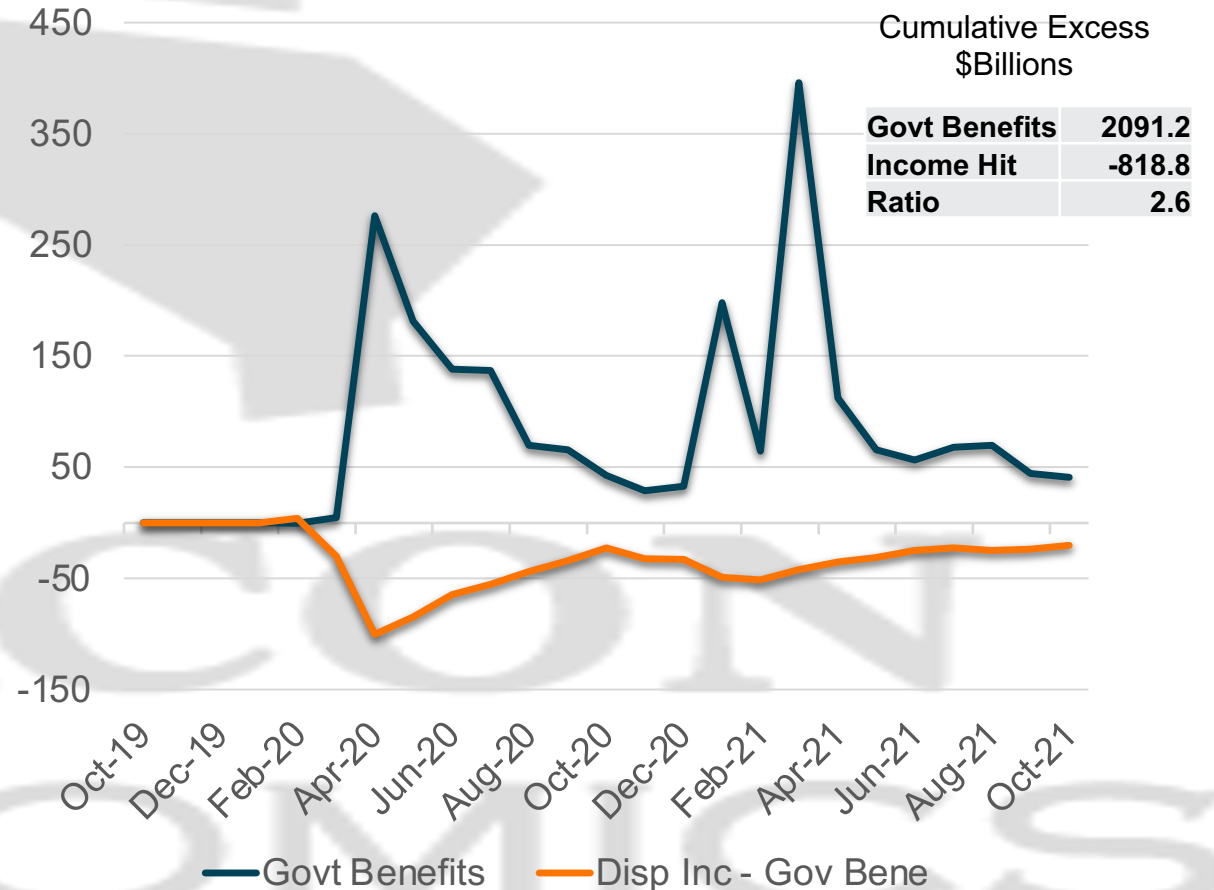
Federal Fiscal (Over)reaction



Net Federal Borrowing as % GDP



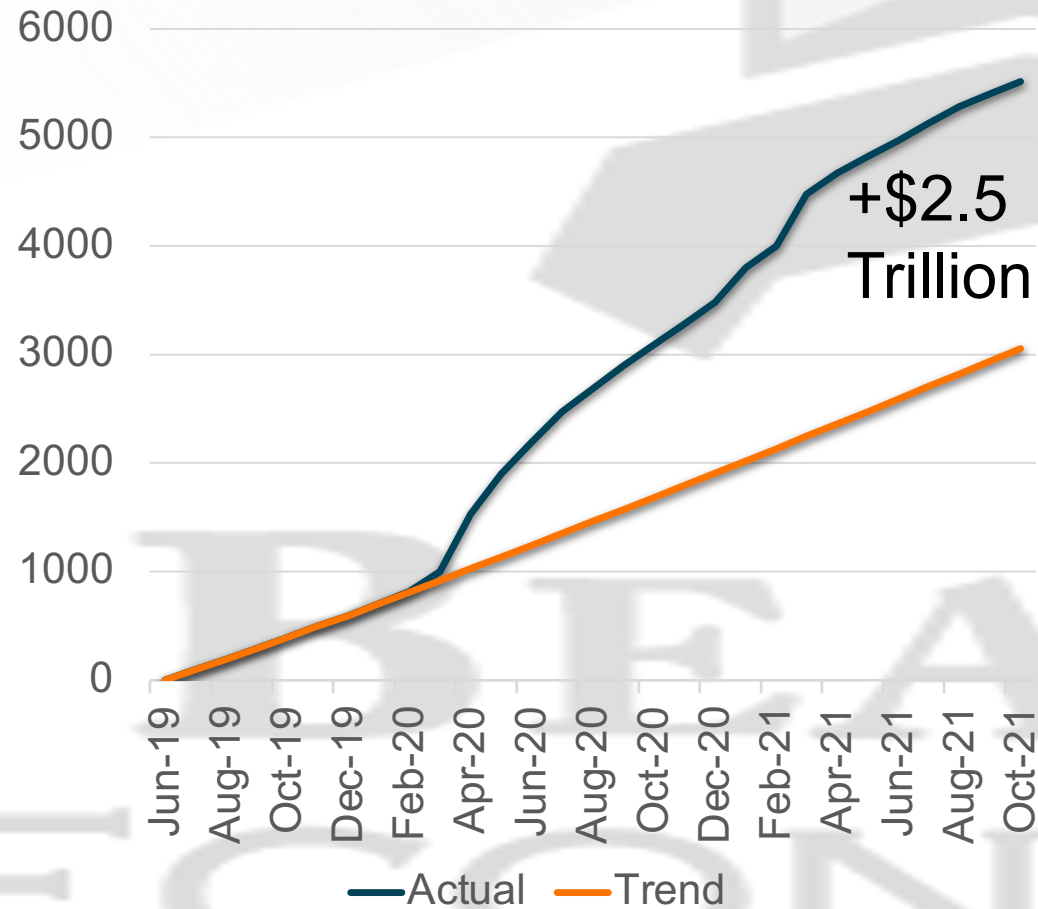
Levels of Personal Income Relative to Pre-Pandemic Trends



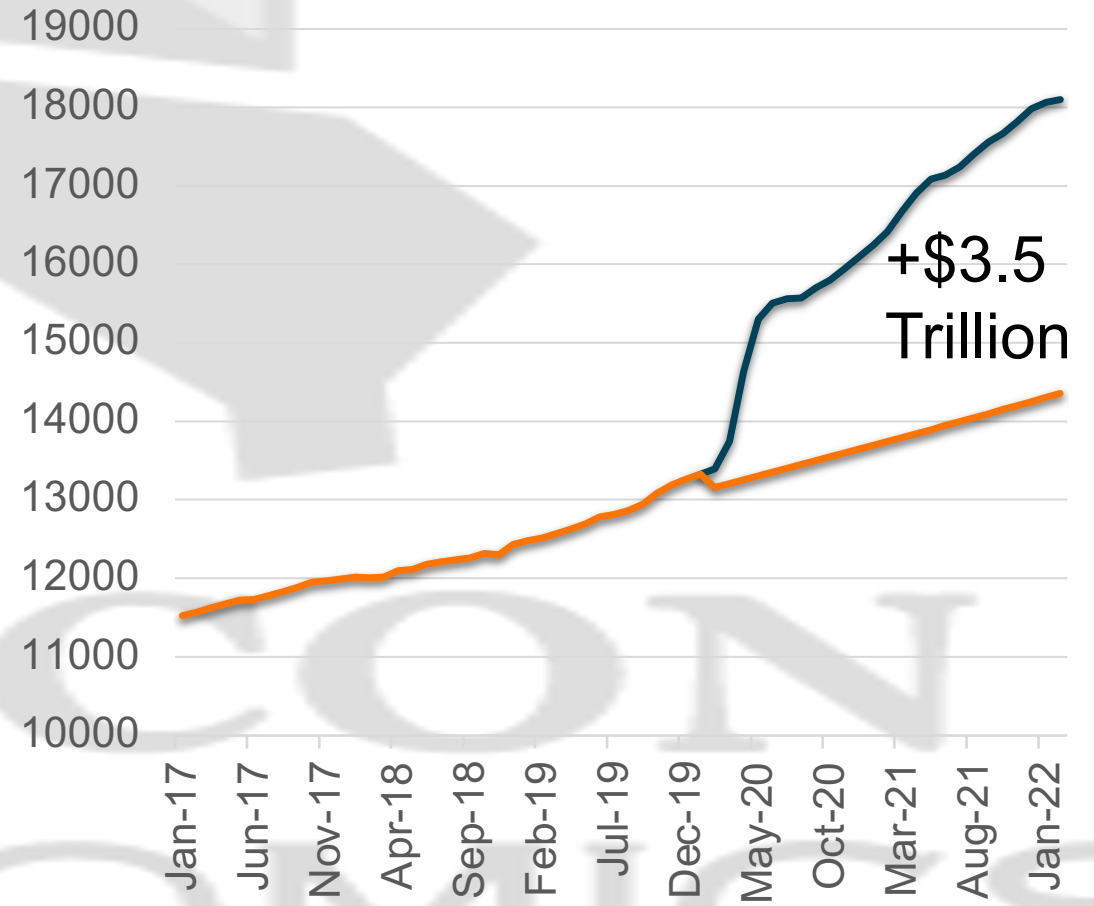
The Covid Boondoggle



Cumulative Personal Savings \$Bil



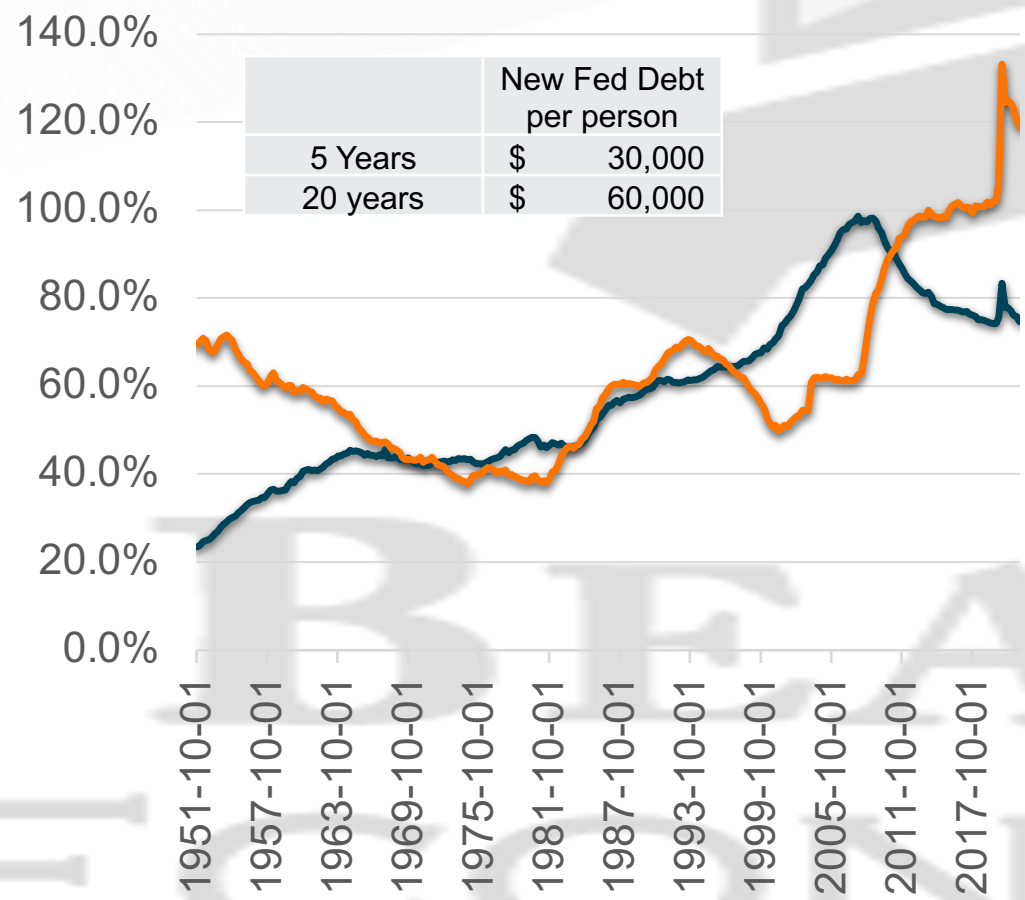
Commercial Bank Deposits \$Bil



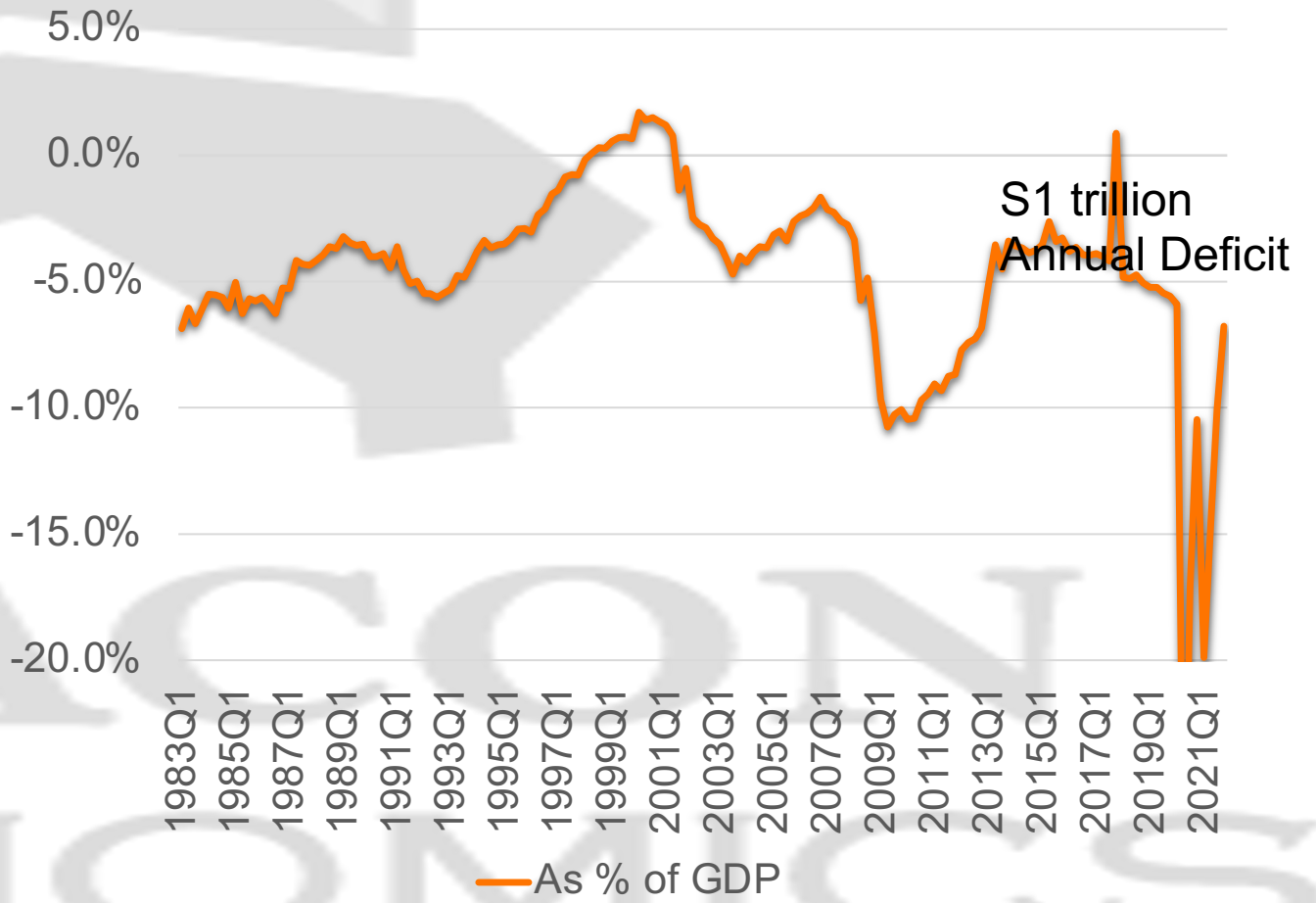
No Such Thing As a Free Lunch...



Debt to GDP Ratios



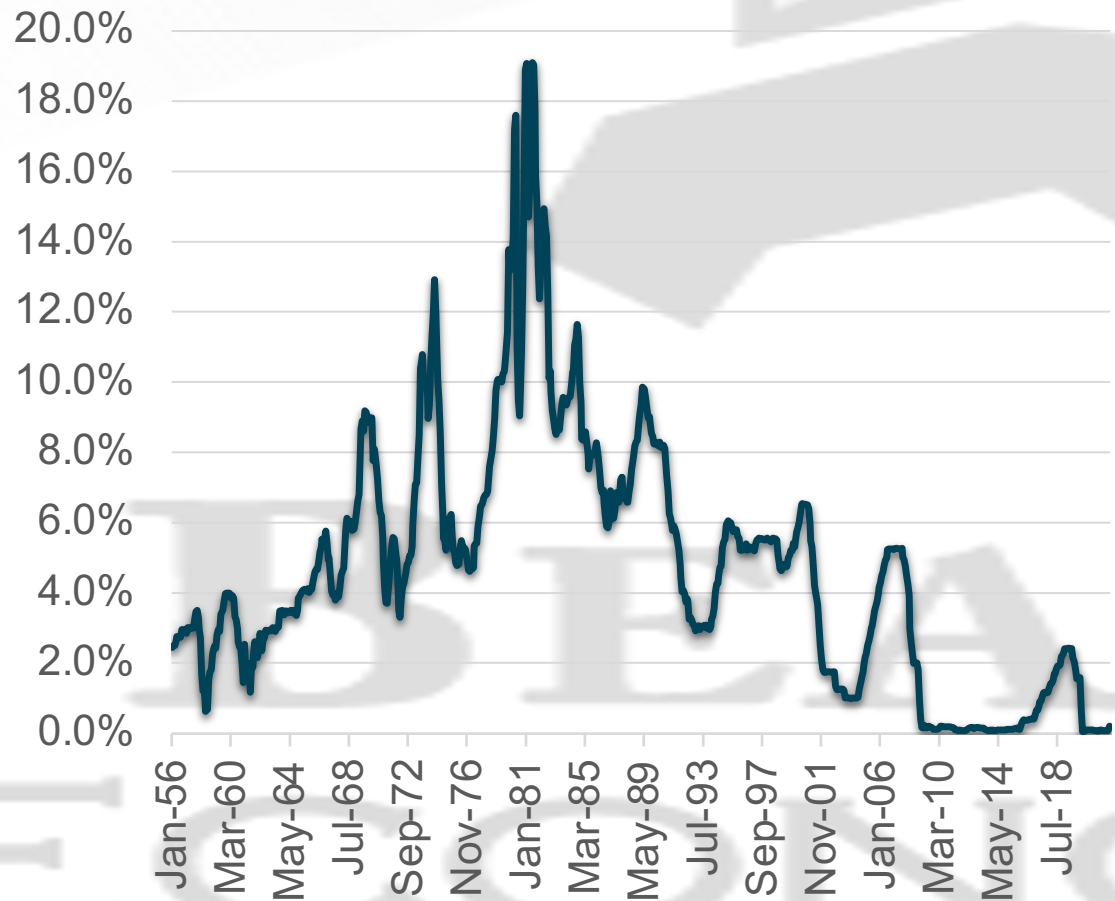
Federal Deficit



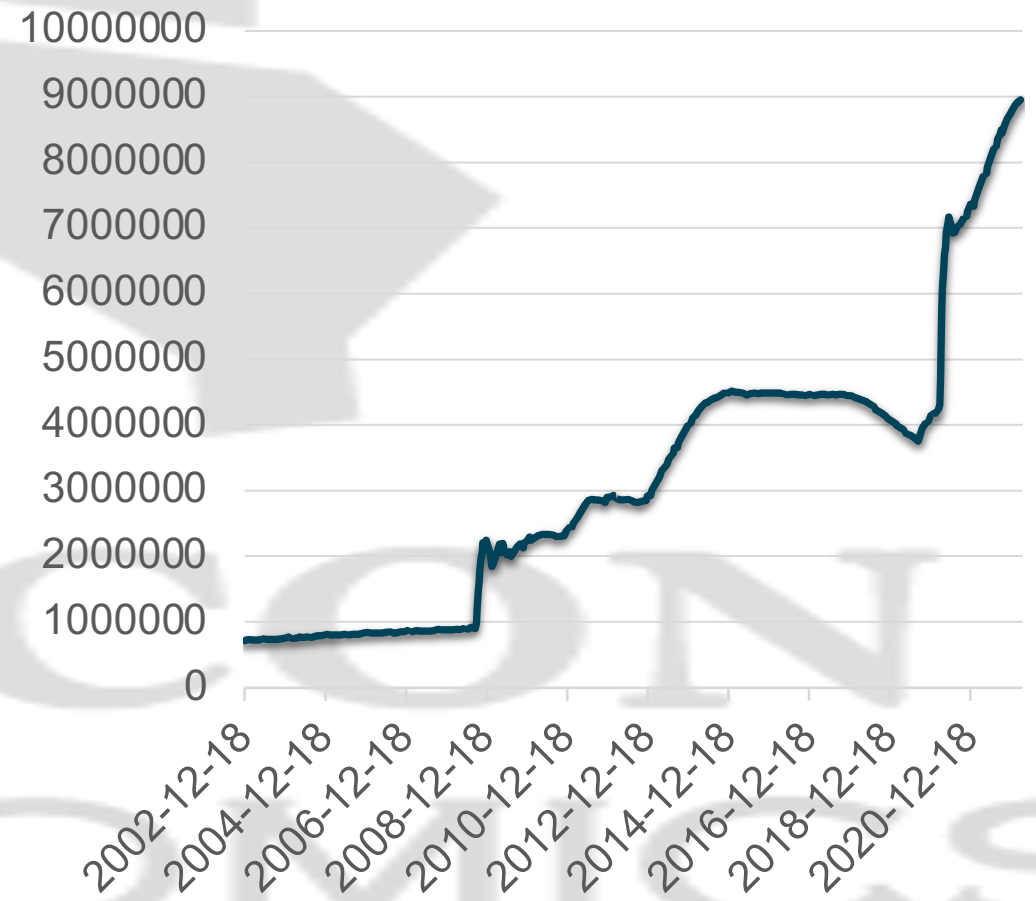
Mr. Powell's War



Federal Funds Rate



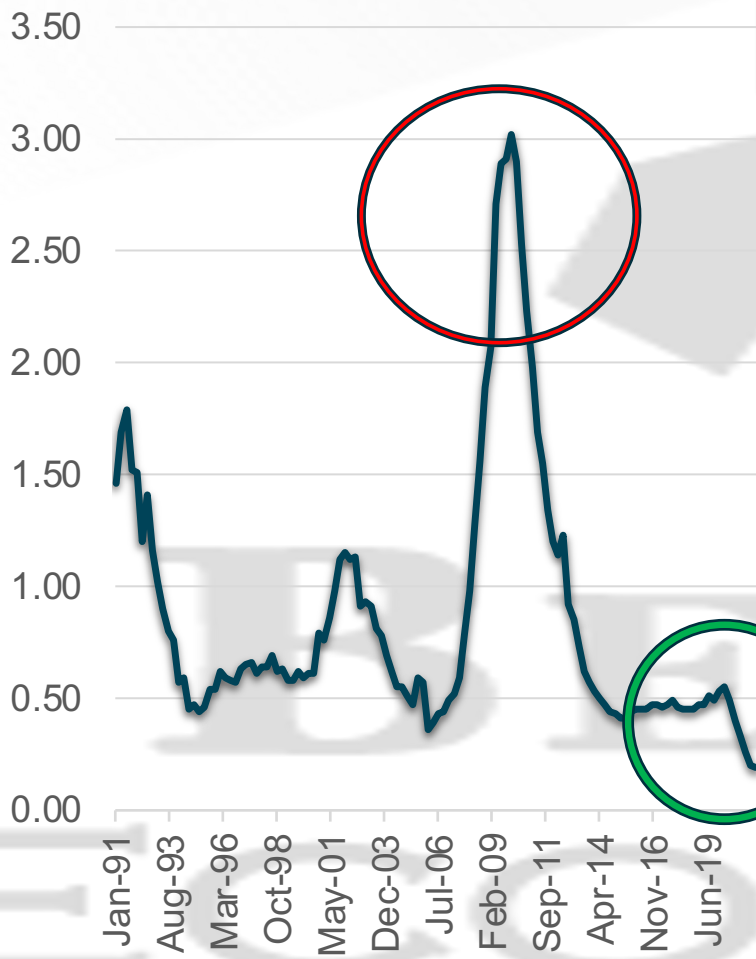
Federal Reserve Balance Sheet



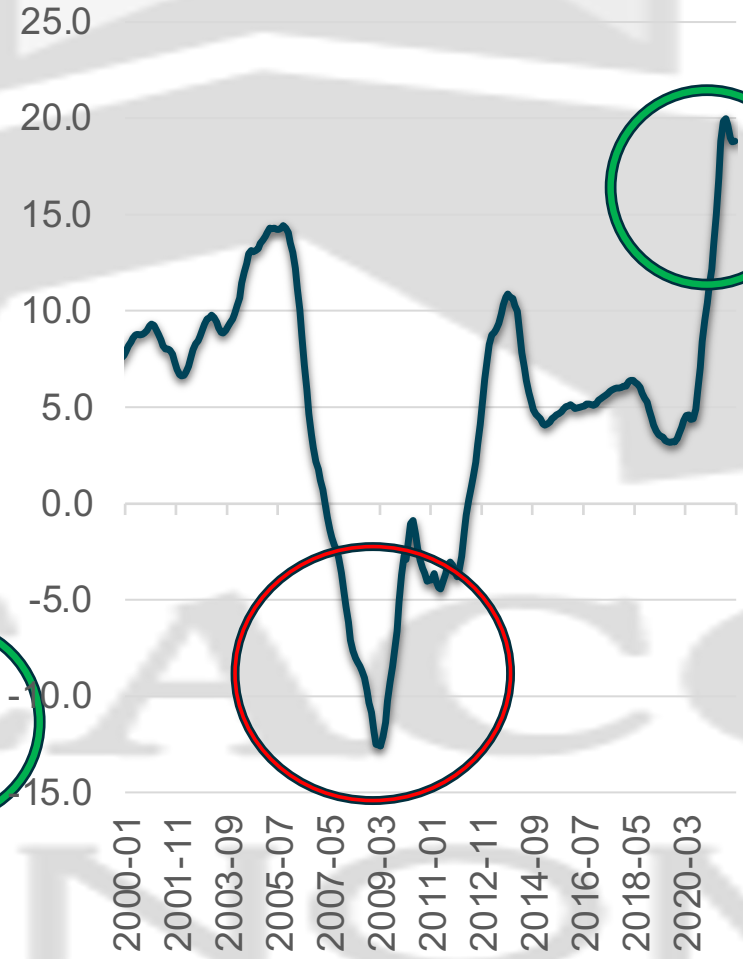
Mr. Powell's War



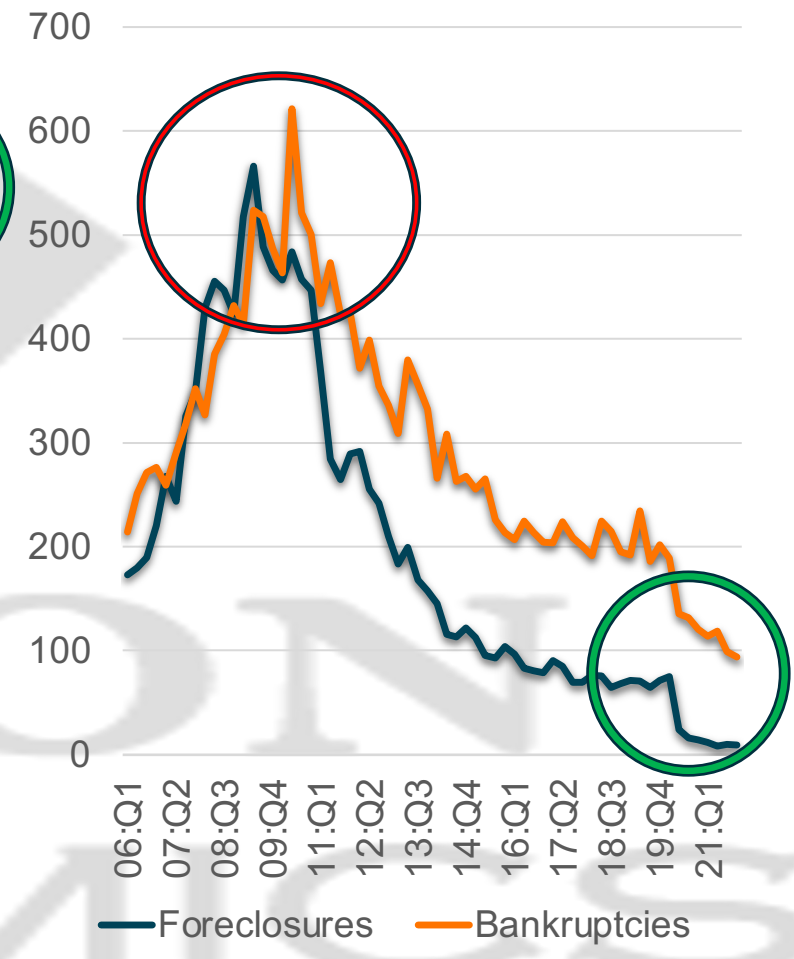
Bank Loan Charge-Off Rate



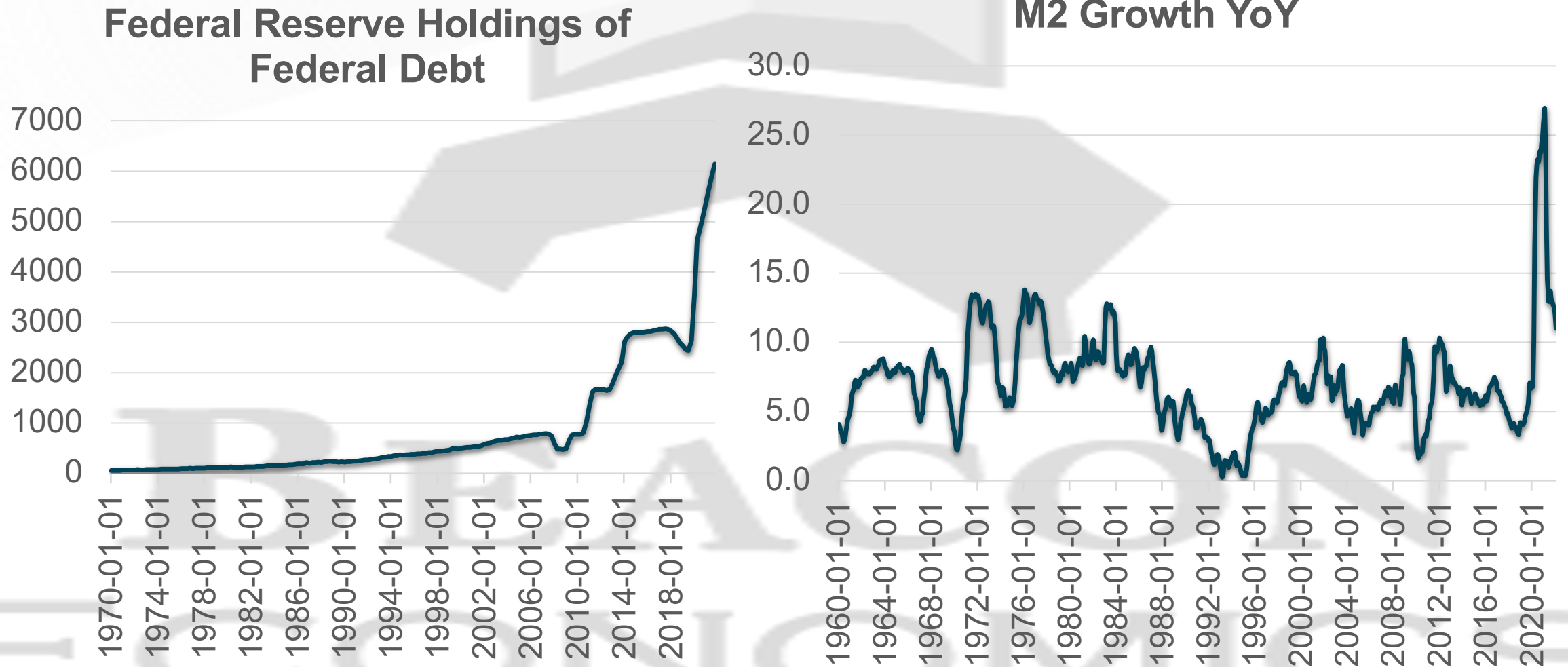
Case Shiller HPA YoY



Consumer Finances



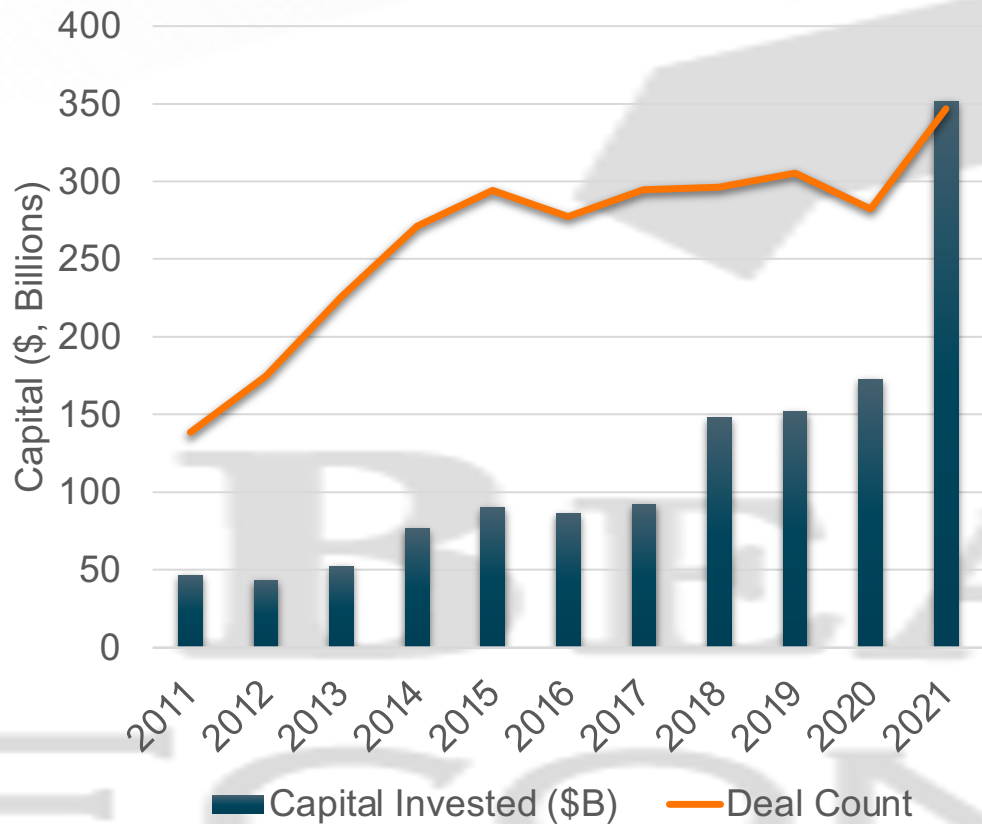
QE: Then and Now



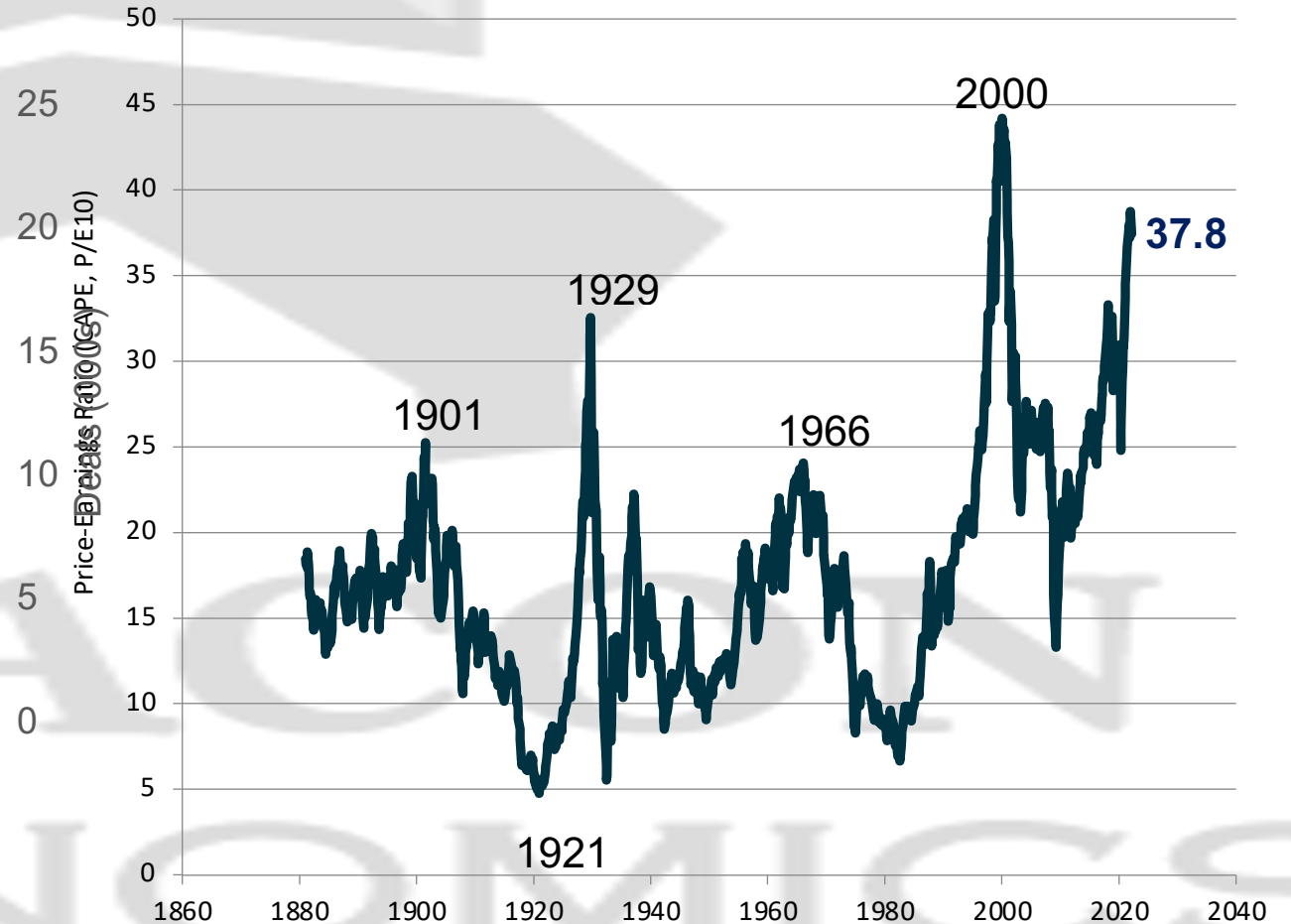
Speculation Planet



Capital Invested and Number of Deals, US HQ Companies



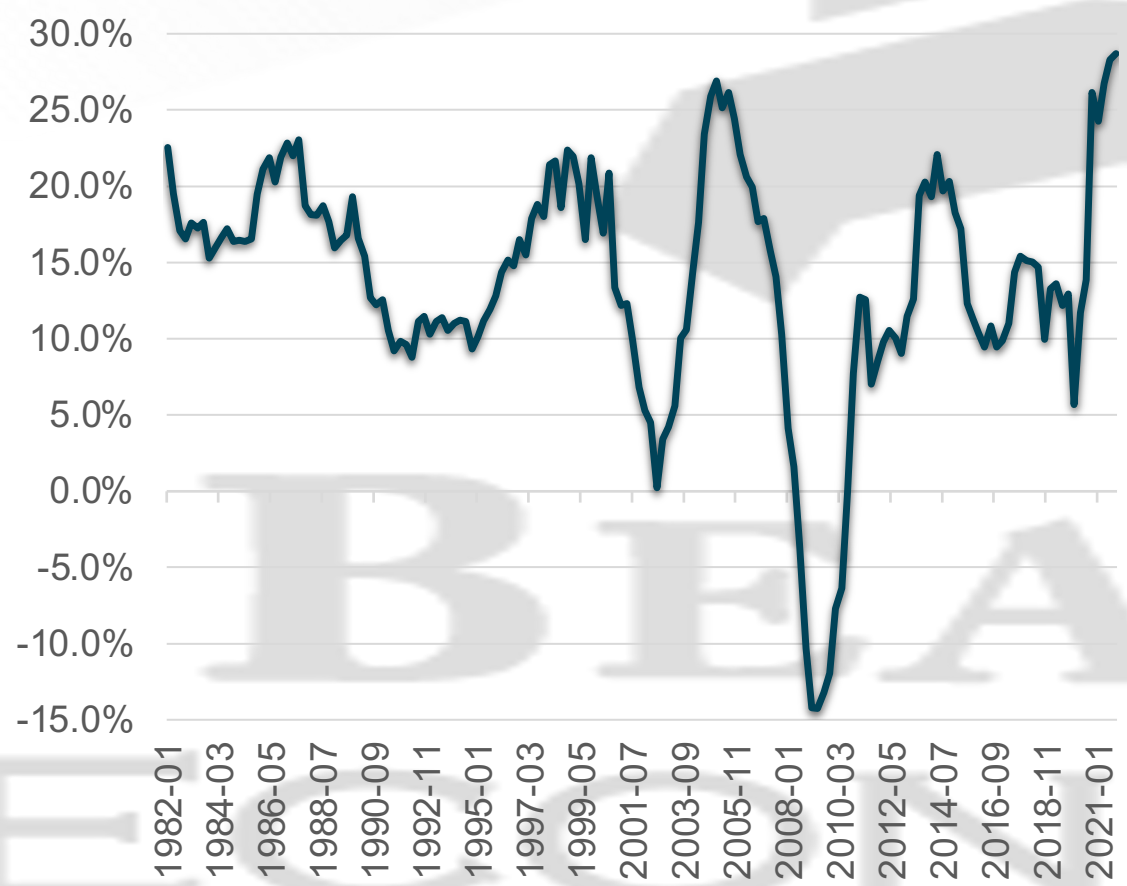
CAPE Price E10 Ratio



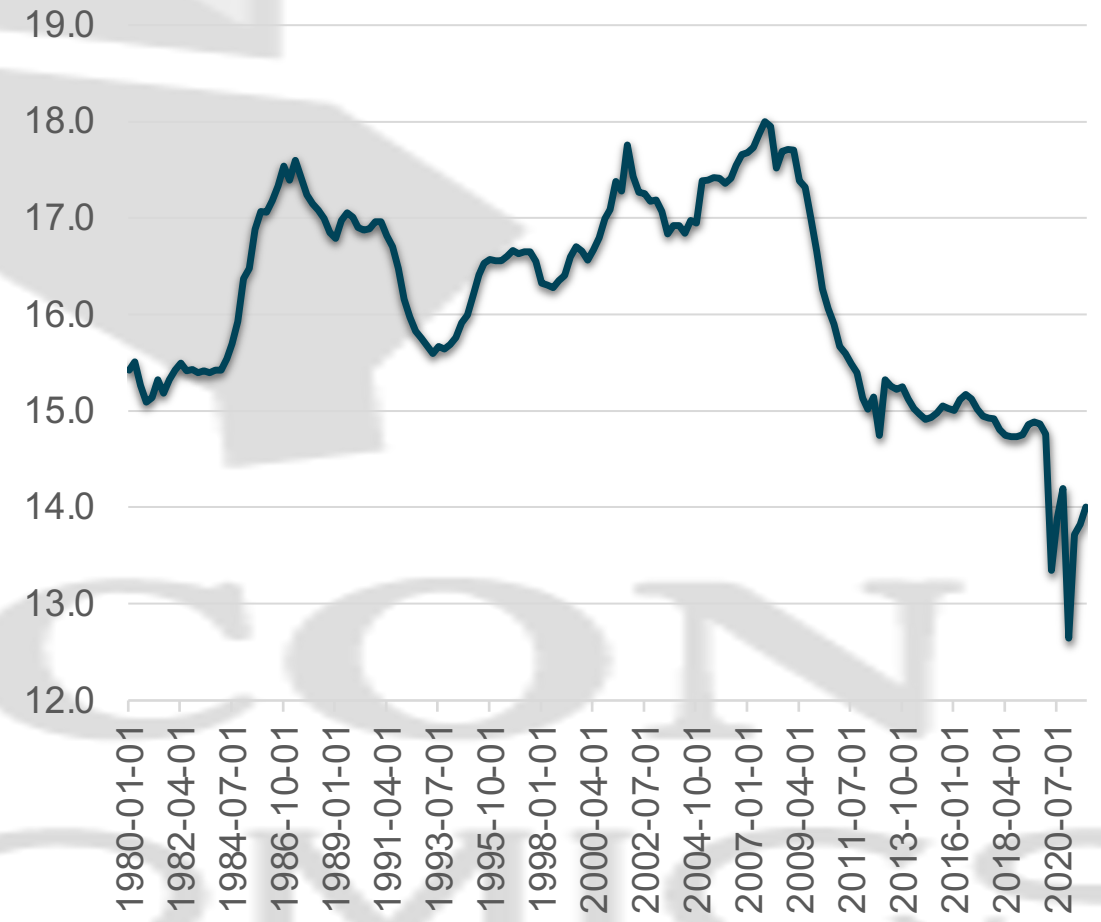
The Big Picture: Wealthiest Generation Ever?



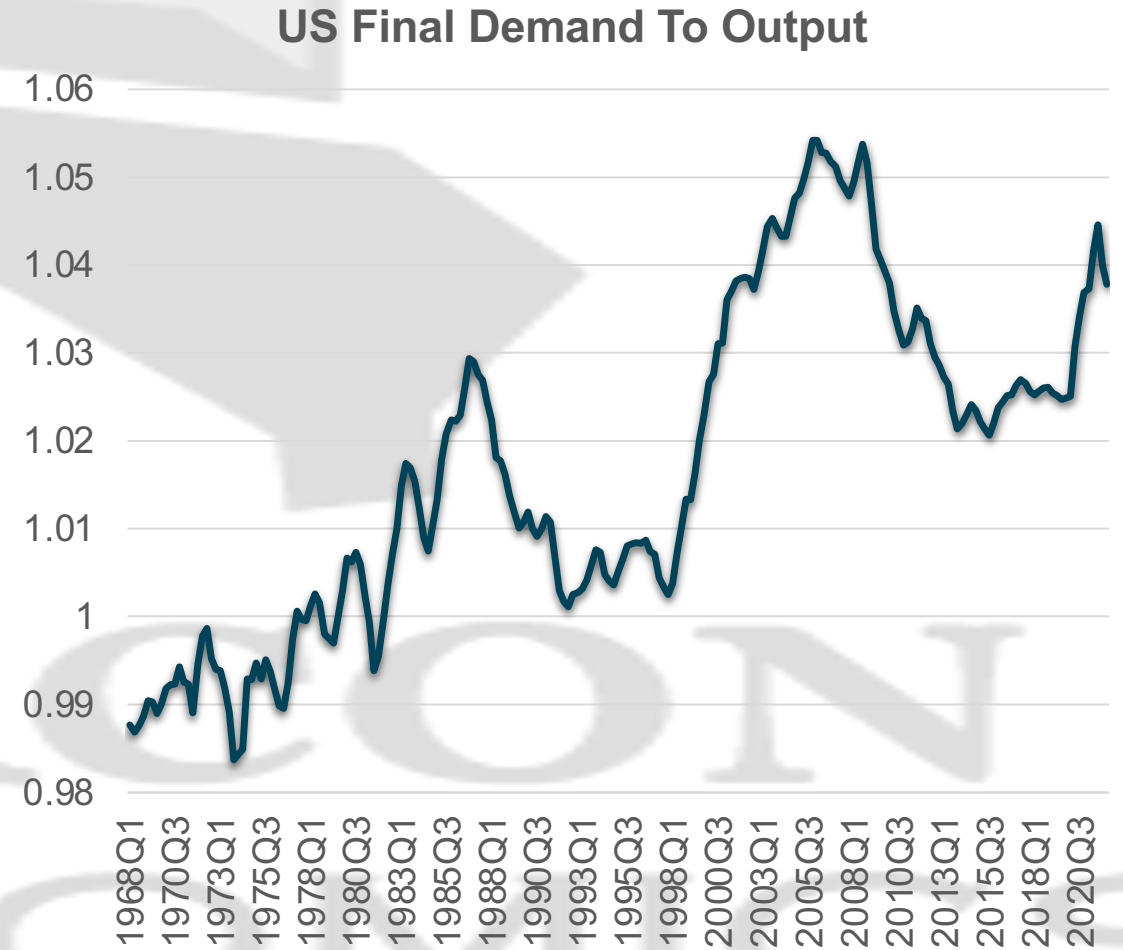
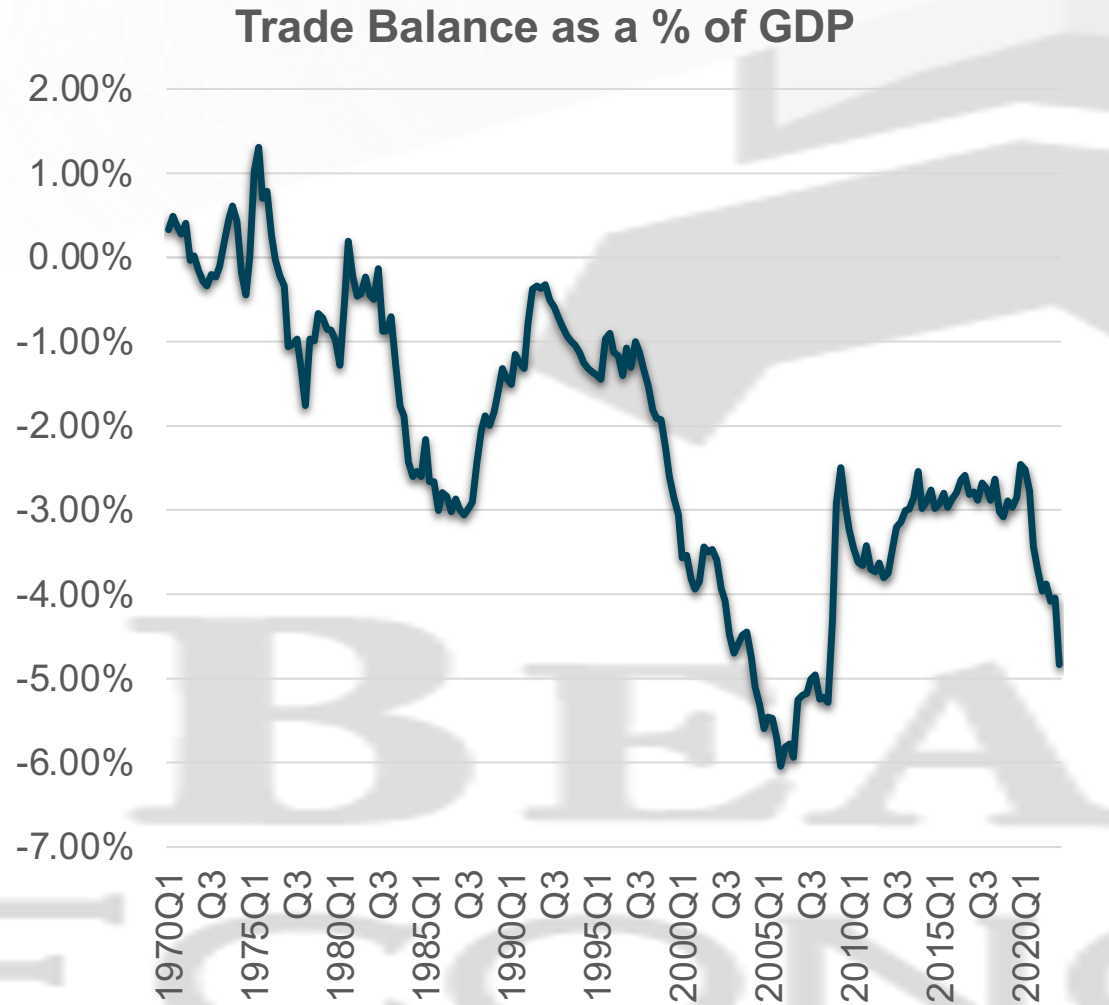
2 Year Growth Aggregate Household Net Worth



Financial Obligations Ratio



A Binging Economy...

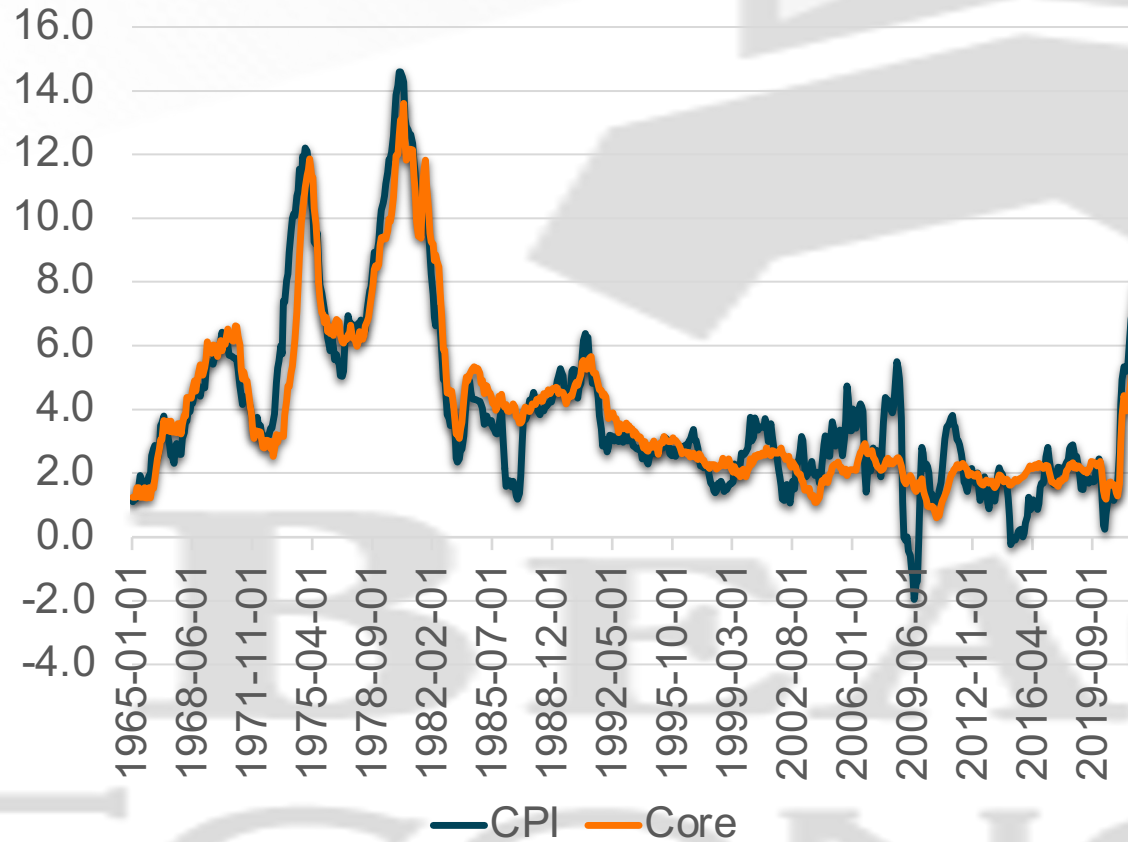


Inflation Nation...



GDP Deflator

Consumer Prices



	16-20	20-21	21-22
GDP	2.0%	2.1%	6.8%
Consumption	1.8%	1.8%	6.3%
Goods	0.1%	1.3%	9.6%
Services	2.6%	2.1%	4.6%
Fixed investment	1.6%	2.3%	7.5%
Structures	2.6%	1.2%	15.6%
Equipment	-0.1%	-0.4%	3.7%
Intellectual property	0.8%	1.7%	1.4%
Residential	4.2%	7.2%	14.9%
Exports	1.4%	4.7%	13.2%
Imports	0.8%	2.5%	9.7%
Government	2.4%	2.4%	7.2%
Federal	2.0%	2.4%	5.5%
State and local	2.7%	2.5%	8.3%

There Is No 'Soft Landing' ...

Problem of inflation

- Short run: Money illusion causes lower interest rates, asset bubbles forming, consumer spending binge
- Long run: slow stagnation, rising real interest rates, investments become difficult to cost out, uncertainty hurts markets

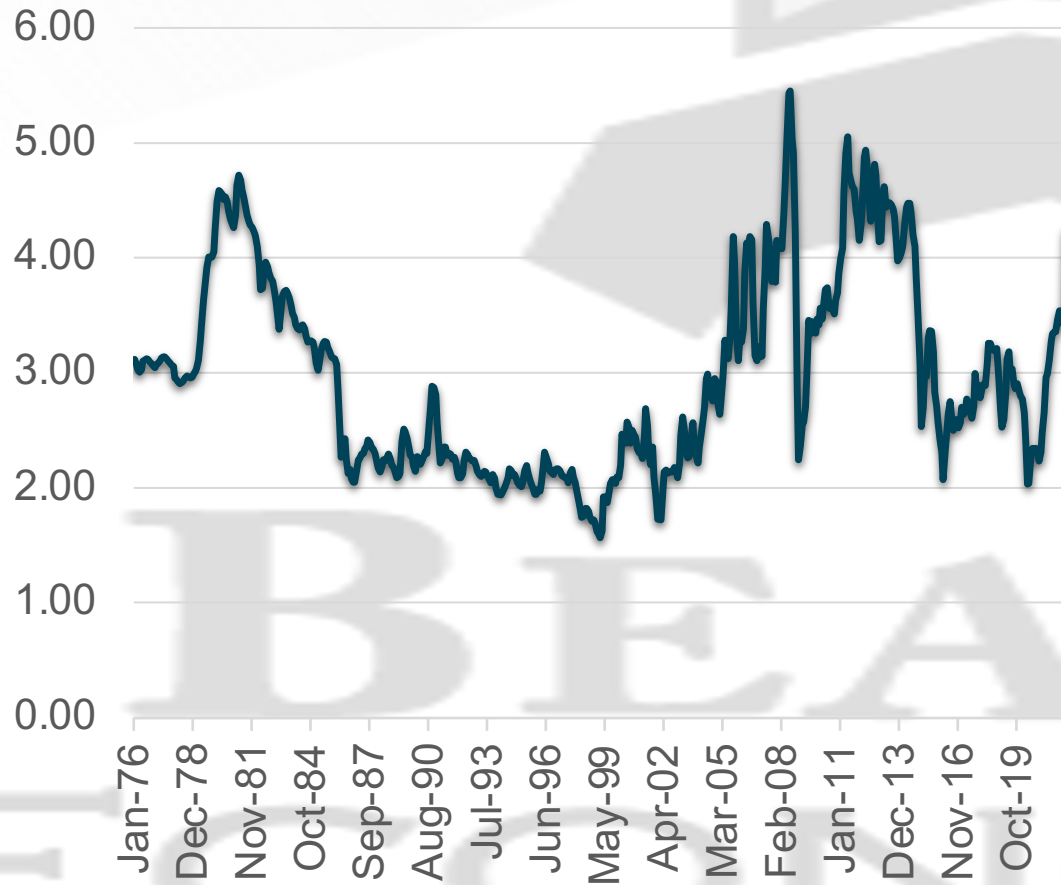
The Cure for inflation

- Quantitative tightening, sure to drive up LR rates very quickly in the short run
- The choice: pain now or worse pain later

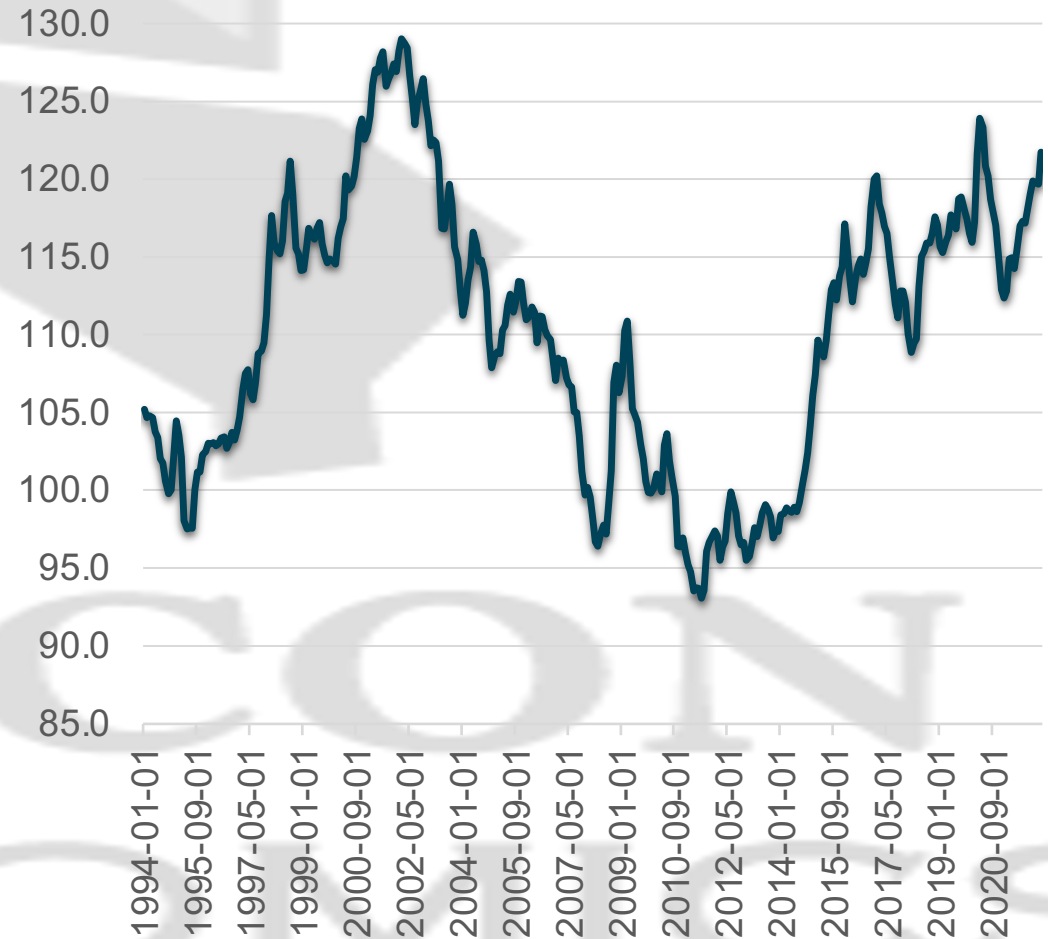
The Global View?



Real Price Gallon US Unleaded



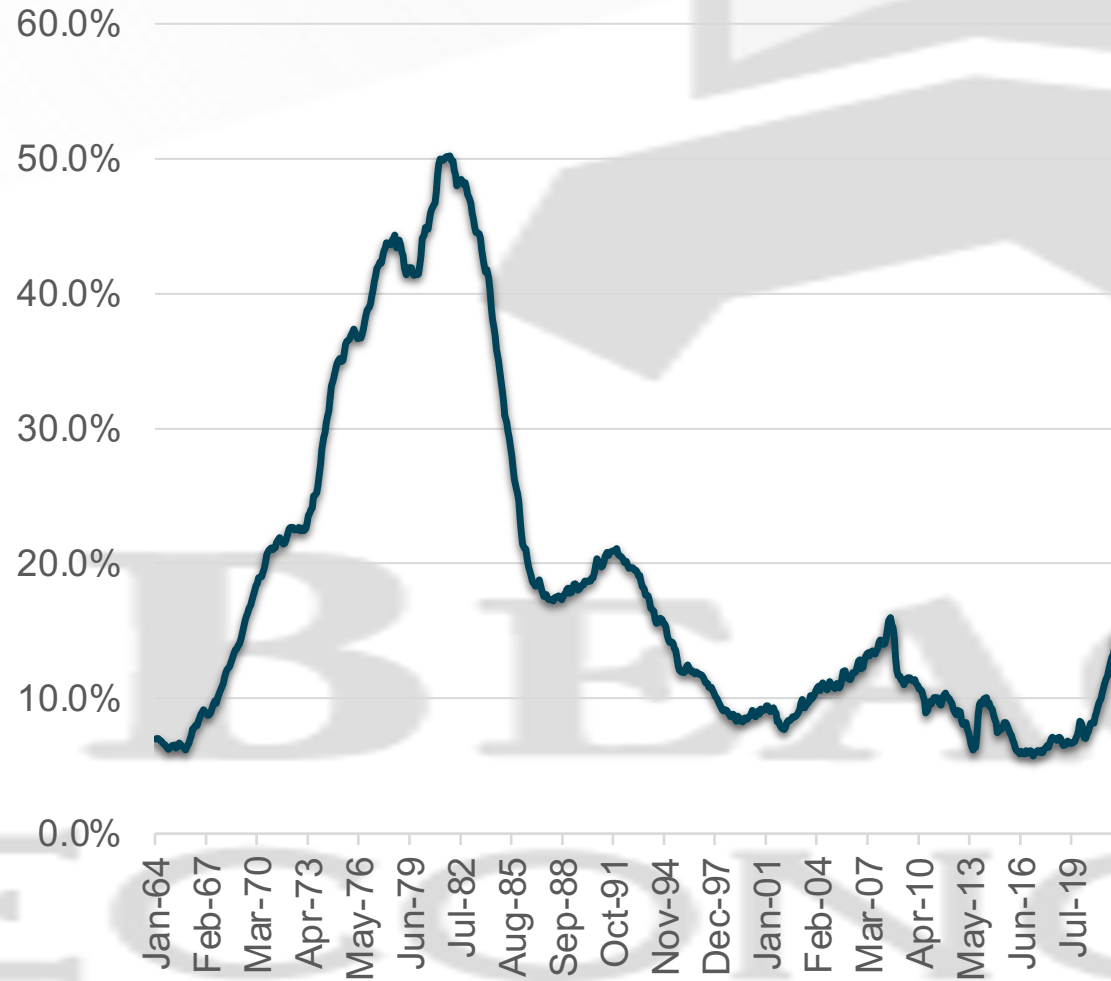
%US Real Broad Index



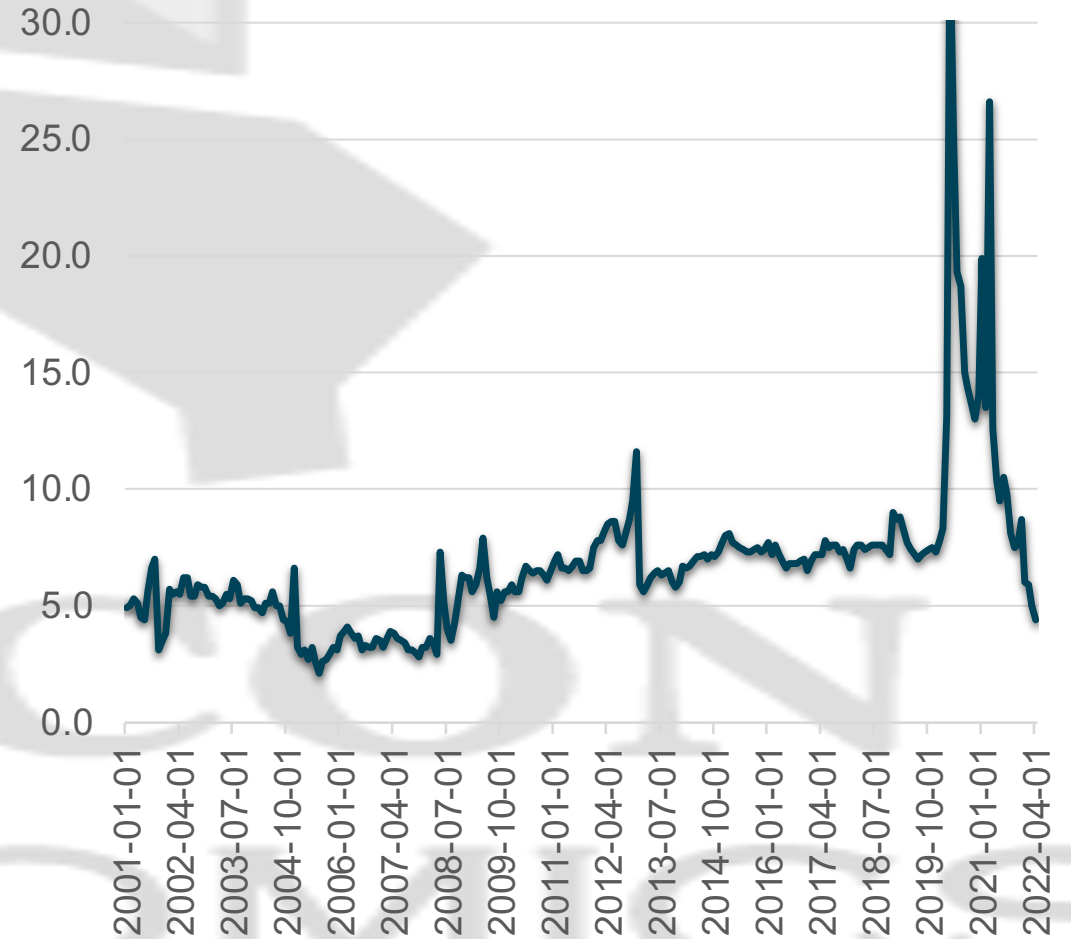
Context Please



5 Year Increase in Consumer Prices



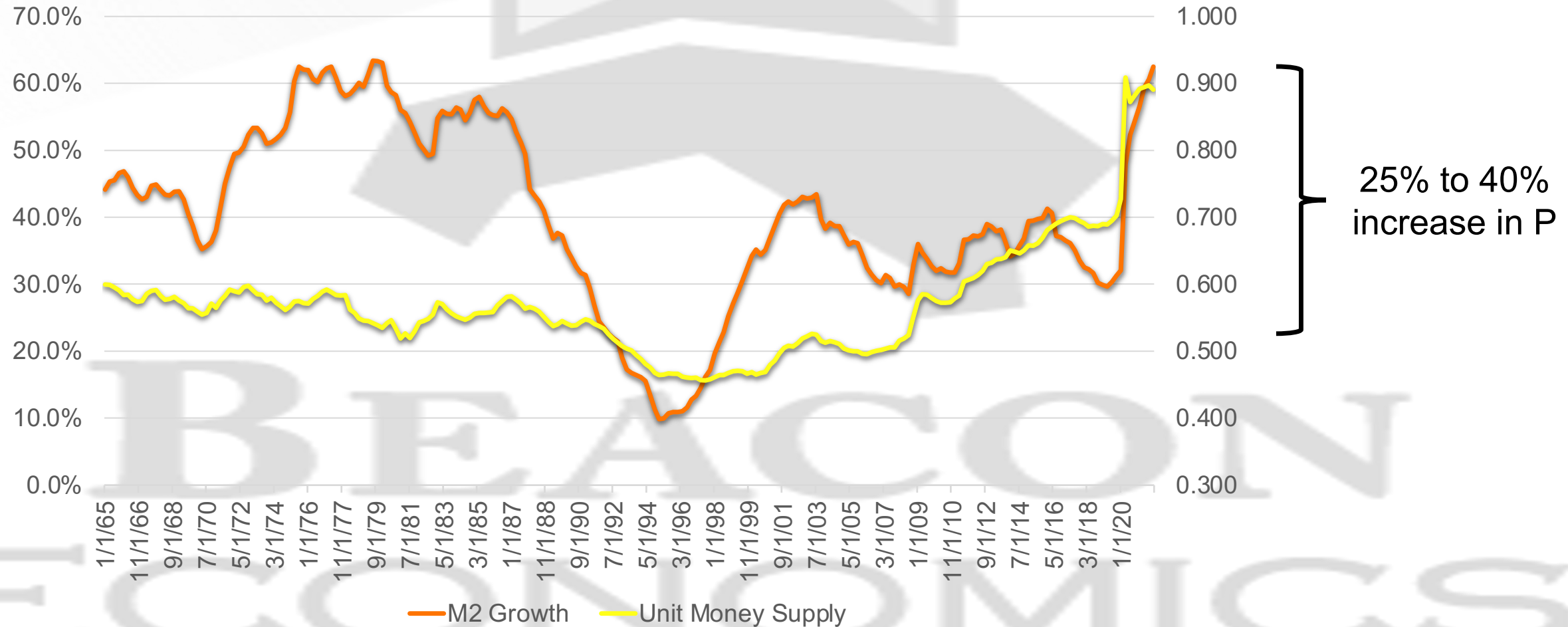
US Household Savings Rate



How Much Farther Can Inflation Go??



5 Year Cumulative Growth Rates



The Inflation Conversation




Excuses for Inflation

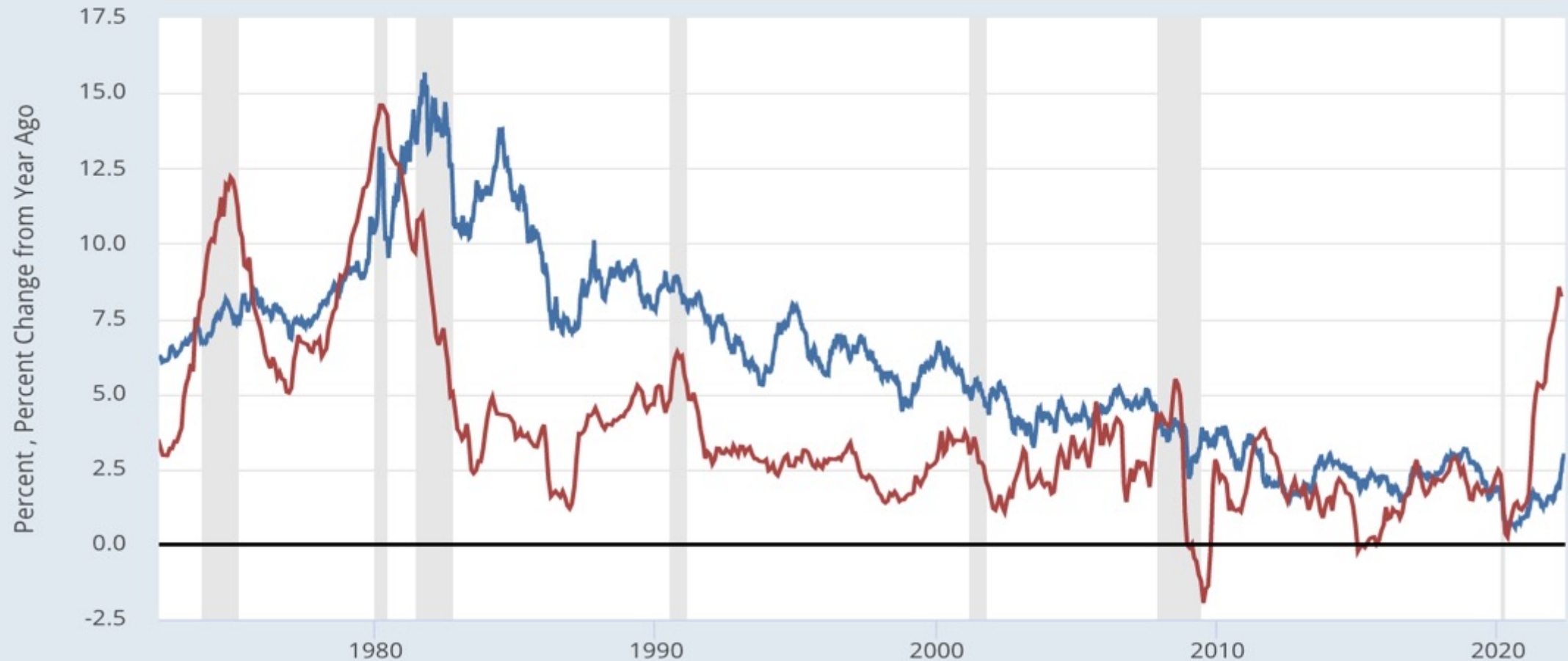
- Supply chain issues
- The federal deficit
- Greedy corporations and profiteering
- Not enough manufacturing jobs in the US
- Biden's bad green energy policies
- It's Mr. Putin's fault!
- Saturn isn't aligned with Jupiter
- Disco is making a comeback
- Its that new host on *Jeopardy!*

“Inflation is always and everywhere a monetary phenomenon in the sense that it is and can be produced only by a more rapid increase in the quantity of money than in output.”

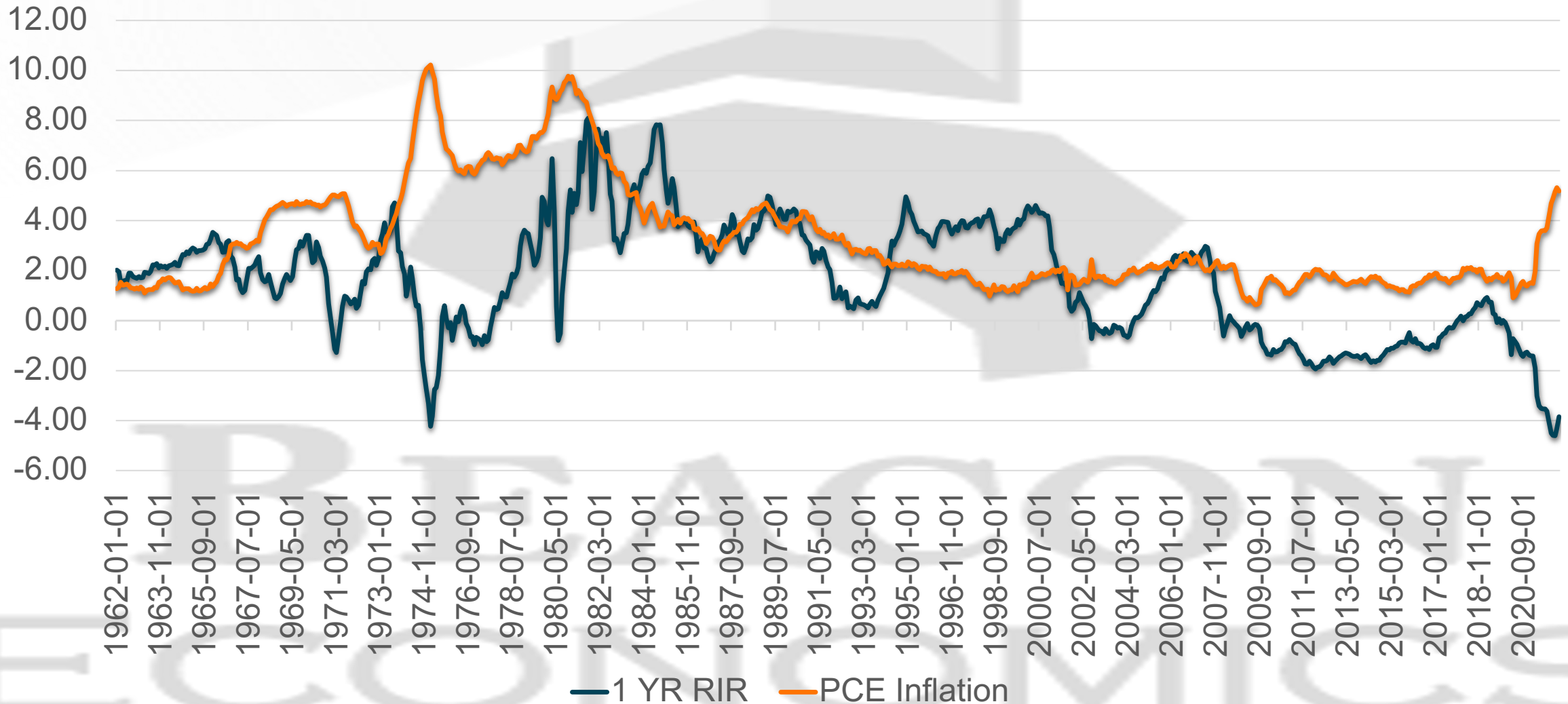
Milton Friedman

First Rumbblings

FRED  — Market Yield on U.S. Treasury Securities at 10-Year Constant Maturity
— Consumer Price Index for All Urban Consumers: All Items in U.S. City Average



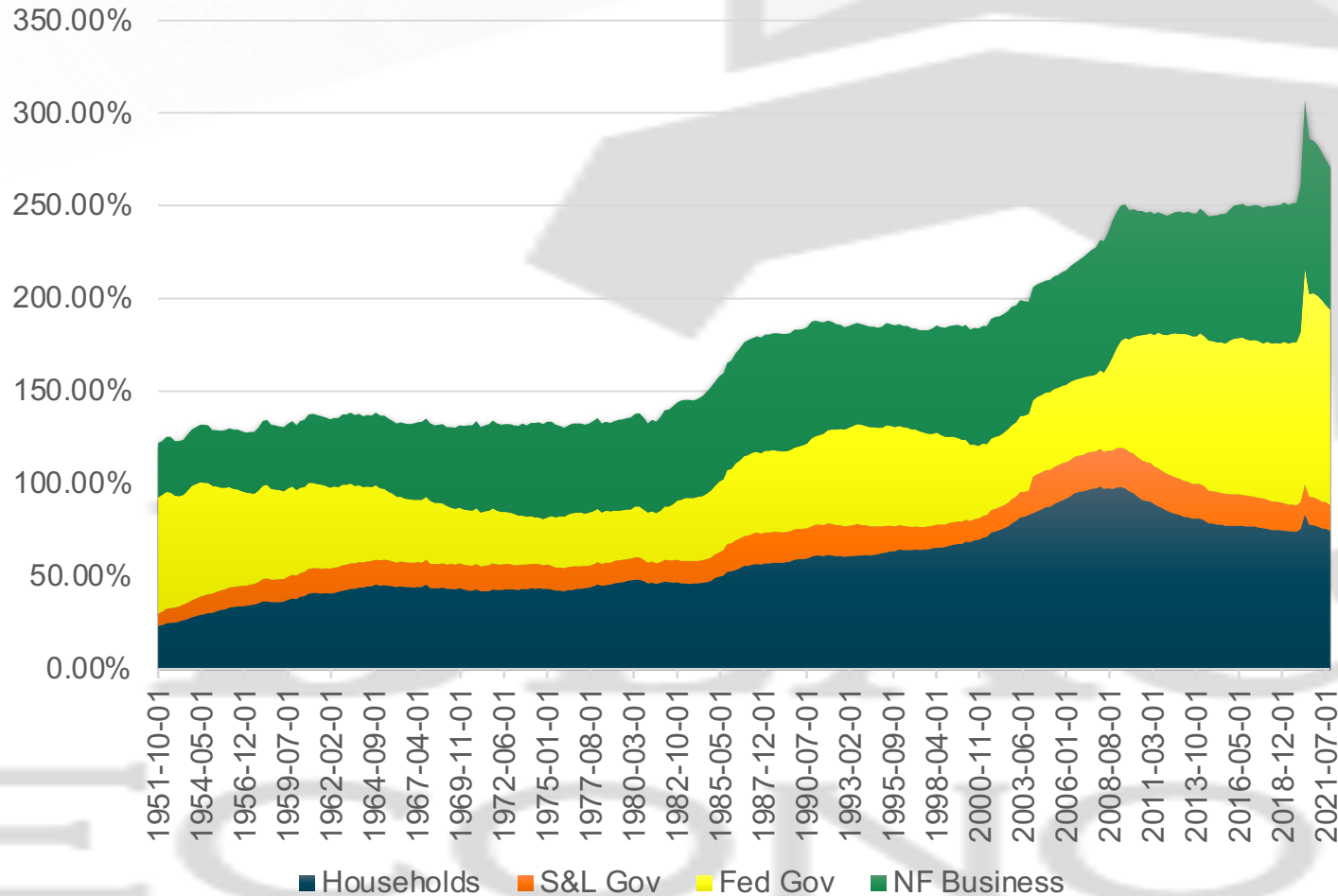
The Unwelcome Antidote



The Debt Nation

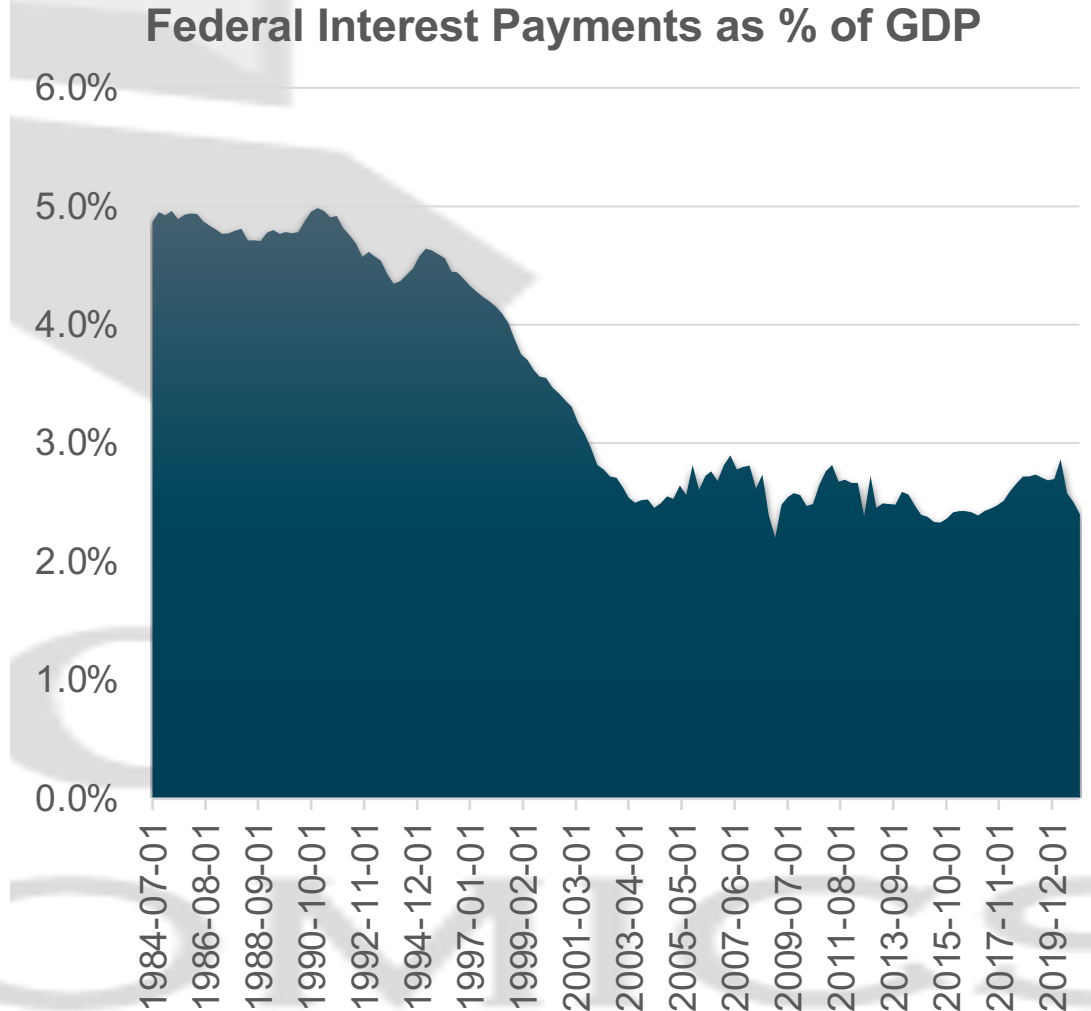
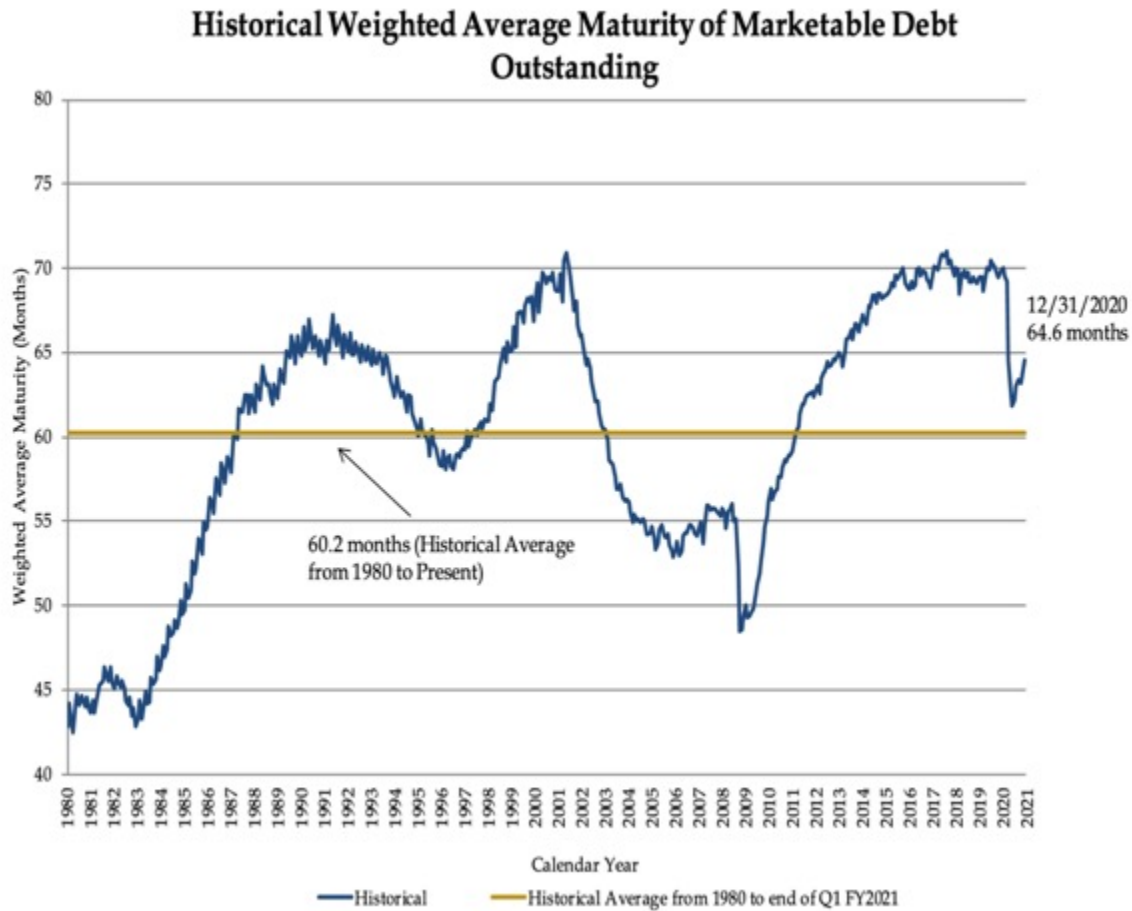


Debt to GDP



5 Year		
	Growth	Change
Household	25.7%	2666.8
S&L Gov	4.2%	133.8
Fed Gov	63.6%	8111.1
NF Business	40.4%	3826.8
Nominal GDP	30.3%	3859.1
20 Year		
Household	142.3%	10532.3
S&L Gov	166.1%	2041.8
Fed Gov	514.0%	21191.4
NF Business	179.2%	11901.2
Nominal GDP	129.2%	13532.6

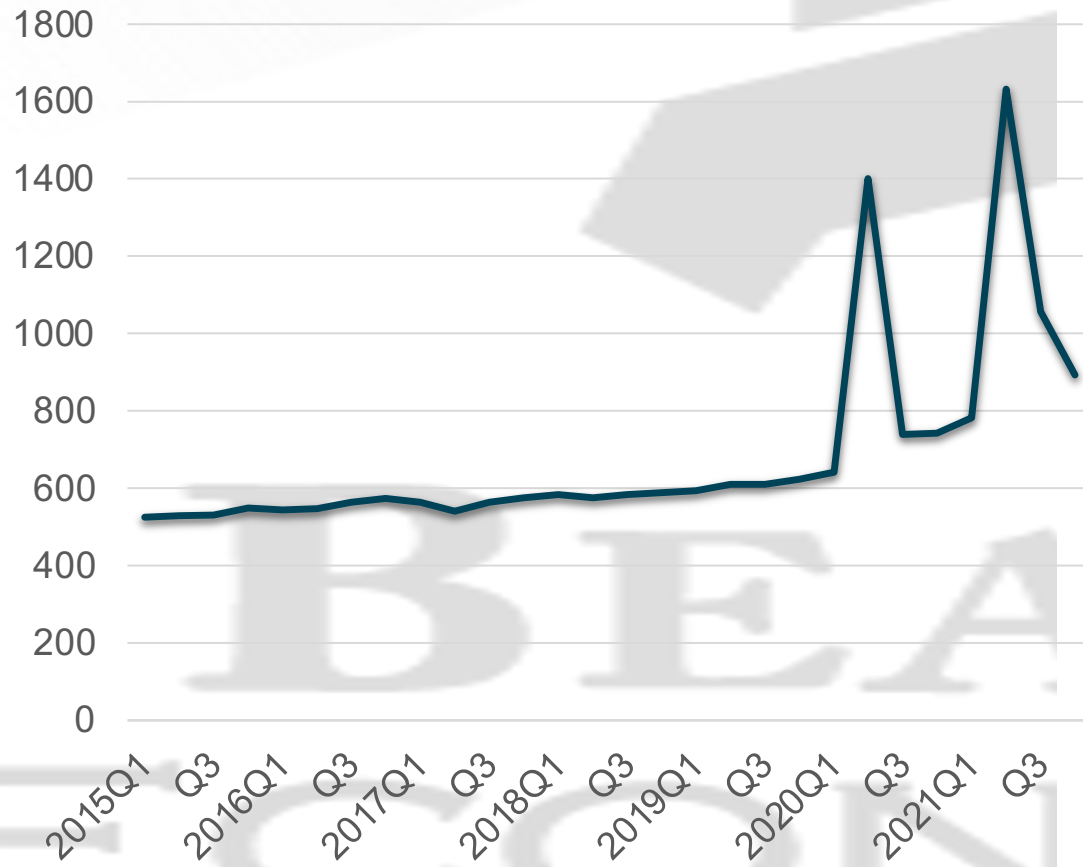
Interaction of Monetary and Fiscal Problems



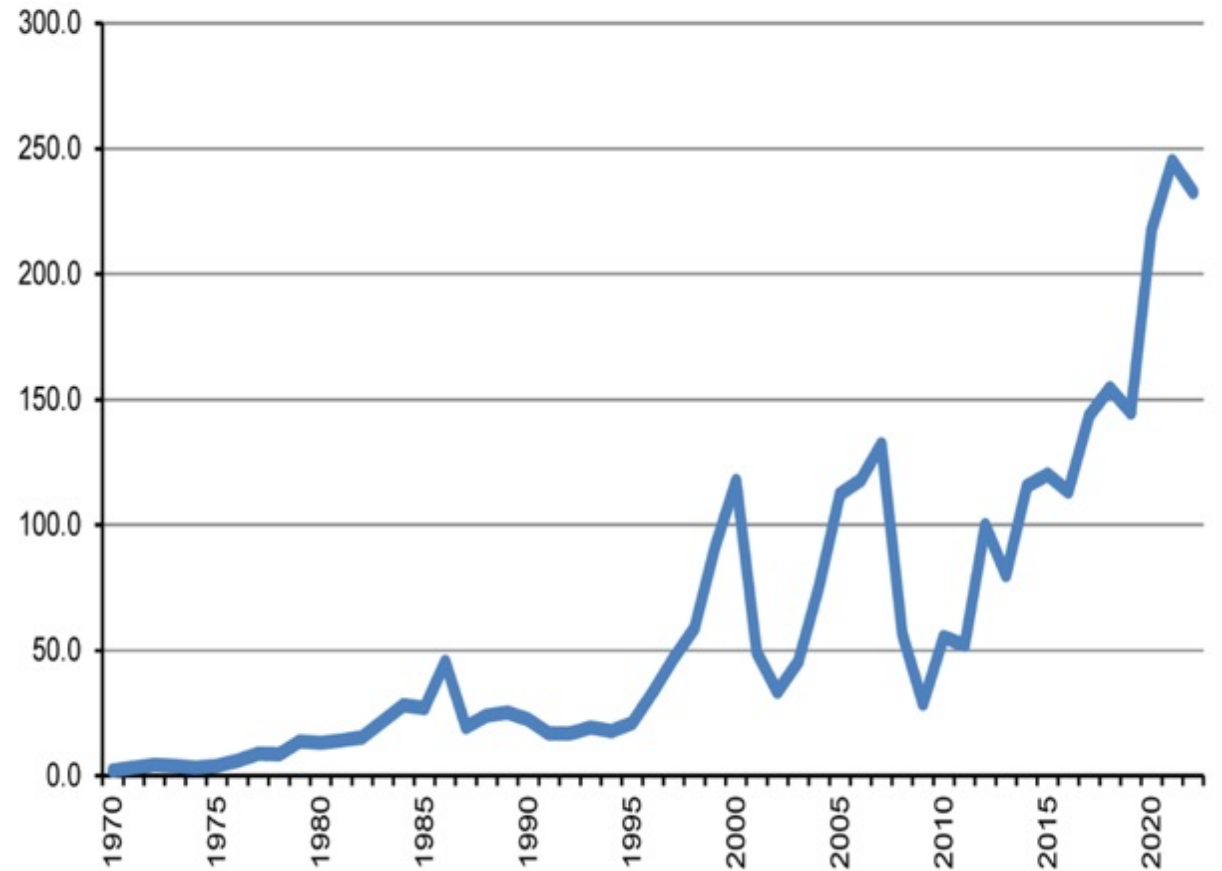
The Local Risks



Federal grants-in-aid to State and Local Government



Capital Gains Realizations (Dollars in Billions)



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
- Consumers are pushing inflation, not being hurt by it, demand is still strong
- Global geopolitics are mainly a dangerous distraction

- **The Outlook: Hot until Not**

- US economy will remain heated for the next year, unemployment to 3% by year end?
- Inflation will continue to be hot, unclear when rates will reflect reality
- Expect a sugar crash to come, combination of tight federal budget and inflation.

- **Potential Scenarios**

- 1: Dramatic Fed action turns the tide before things get out of control
- 2: Consumer Spending drives the economy until a moderately painful crash
- 3: Investment / debt fueled boom drives the economy even farther with a more painful crash

Beacon Economics Services



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



Thank You

Chris@BeaconEcon.com | beaconecon.com