

About Beacon Economics

Our accurate, insightful, and empirically-based analysis drives informed decisions about growth, investment, revenue, and policy. We deliver energetic and engaging forecasts that have drawn audiences for over a decade. Let us guide you into the future! We first built our reputation by being one of the few organizations to stand against the tide and correctly forecast the 'Great Recession'. We continue that commitment to accuracy and empirical excellence every day.

Leveraging unique proprietary models, vast databases, proven methodologies, and sophisticated data processing, we equip our clients with the intel needed to understand today's on-the-ground realities and to make the best business and policy decisions possible.

As part of our commitment to spread accurate, balanced information, Beacon publishes a series of free monthly and quarterly analyses that deliver the latest data and commentary on the direction of the economy, employment, income, real estate markets, consumer and business spending, and more.

Sustainable Growth & Development

Beacon has deep in-house expertise conducting industry and policy analysis on vital sustainability topics including green innovation, technology and workforce development, long-term economic development, and industry sector strategies.

Housing, Land Use, & Real Estate Advisory

Beacon leverages long- and short-range economic models to identify growth and investment opportunities and advance solutions to housing and real estate challenges across urban, suburban, and rural landscapes.

Economic & Revenue Forecasting

Beacon is a recognized leader in delivering highly accurate economic, fiscal, and revenue outlooks that inform public and private sector decision making. Banks, governments, public utilities, and major industries rely on Beacon forecasts.

Litigation Support & Expert Testimony

Working for both plaintiffs and defendants, we bring our reputation for analytical excellence and objectivity to bear on every client's case.

Economic, Fiscal, & Social Impact Analysis

Beacon evaluates the economic impact and value of universities, events, public policies, and infrastructure/real estate development. Our analyses have provided support and justification for proposed legislation, construction projects, sustainable power projects, and large-scale events.

Regional & Sub-regional Analysis

Beacon conducts analysis at an international, national, state, county, and city level – even down to the zip code. We identify highly specific trends occurring within communities in Employment, Industry, Real Estate, and Consumption, and deliver actionable steps that capitalize on local strengths and address local challenges.

Our Clients:



"The professional and technically skilled staff at Beacon Economics delivered an excellent product that has been key in our District's long term planning and fiscal health."

~ East Bay Regional Parks District





Navigating the Stimulus Hangover

Focus on Northern Colorado

March 2023

Christopher Thornberg, PhD

Founding Partner, Beacon Economics

Director, UCR SoBA Center for Economic Forecasting and Development

**2023
TALENT
SUMMIT**



2022: Recession Watch



Renters Hit Breaking Point in a Sudden Reversal for Landlords

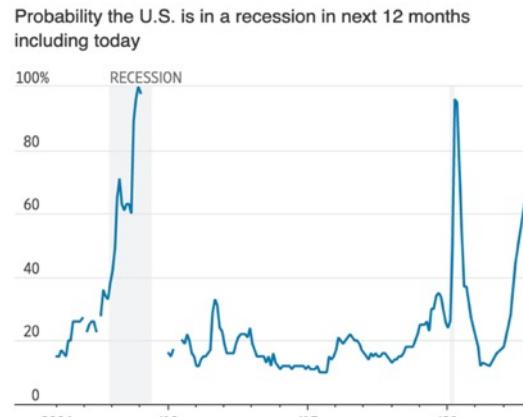
Affordability pressures and inflation are holding back tenants, forcing landlords to ease off big increases.

There's a 98% chance of a global recession, research firm warns



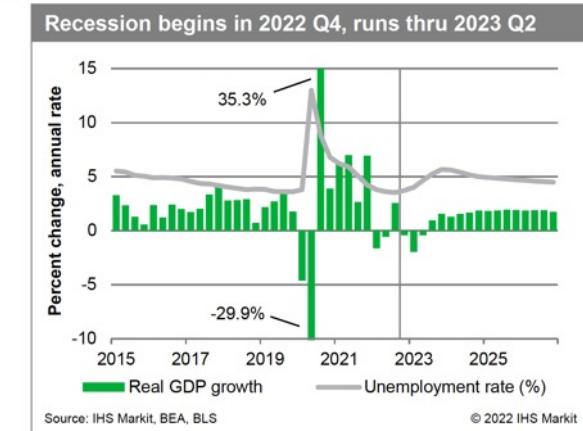
By [Matt Egan](#), CNN Business

Updated 11:27 AM EDT, Wed September 28, 2022



Jamie Dimon Says JPMorgan Is Bracing Itself for Economic 'Hurricane'

- Says Fed actions, war in Europe create unprecedented challenge
- Still too soon to say how intense the storm will be. CEO says



The housing market just slid into a full-blown correction, says top economist Mark Zandi

BY LANCE LAMBERT
May 27, 2022 9:36 AM PDT

BUSINESS

Stocks entered a bear market. Here's what that means

May 20, 2022 · 3:40 PM ET

More Americans Are Going Hungry, and It Costs More to Feed Them

The director of the nation's largest network of food banks is seeing support dwindle as need rises: "You're in the middle of a battle, and people are leaving the field."

2019: The Year of the Bear

Real Estate Markets Could Be Flashing Red Across The Country, And It's Not Just The Winter Effect

Trump could...

Morgan Stanley says more China tariffs, especially if the trade war escalates, will be here in 12 months

DoubleLine CEO Jeffrey Gundlach warns of a recession driven by 'cocktail of factors'

"The economy is on the precipice and this would just push us over into the abyss. I don't think we're very far from recession as it is,"

Moody's Analytics chief economist Mark Zandi tells me.

For the U.S. Economy, Storm Clouds on the Horizon

Market Crisis 2.0: The Jury Is Still Out

2018-2019

Real Estate | Market Outlook

Economy at 'very real risk' of falling into recession in late 2020, UCLA forecast says

in World Economic News

© 15/03/2019

Economy
Trump is heading into reelection with a deep manufacturing recession

September marked the worst month for U.S. manufacturing since the Great Recession

Global recession
economists predict

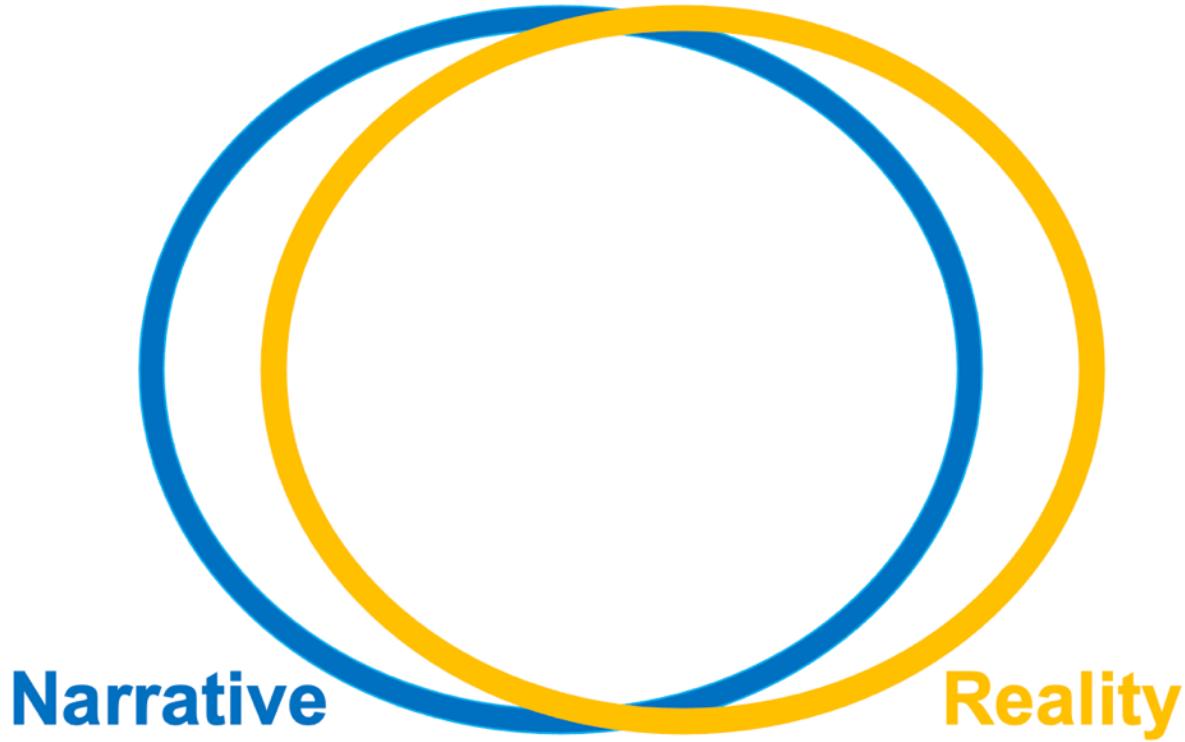
Housing Is Already in a Slump. So It (Probably) Can't Cause a Recession

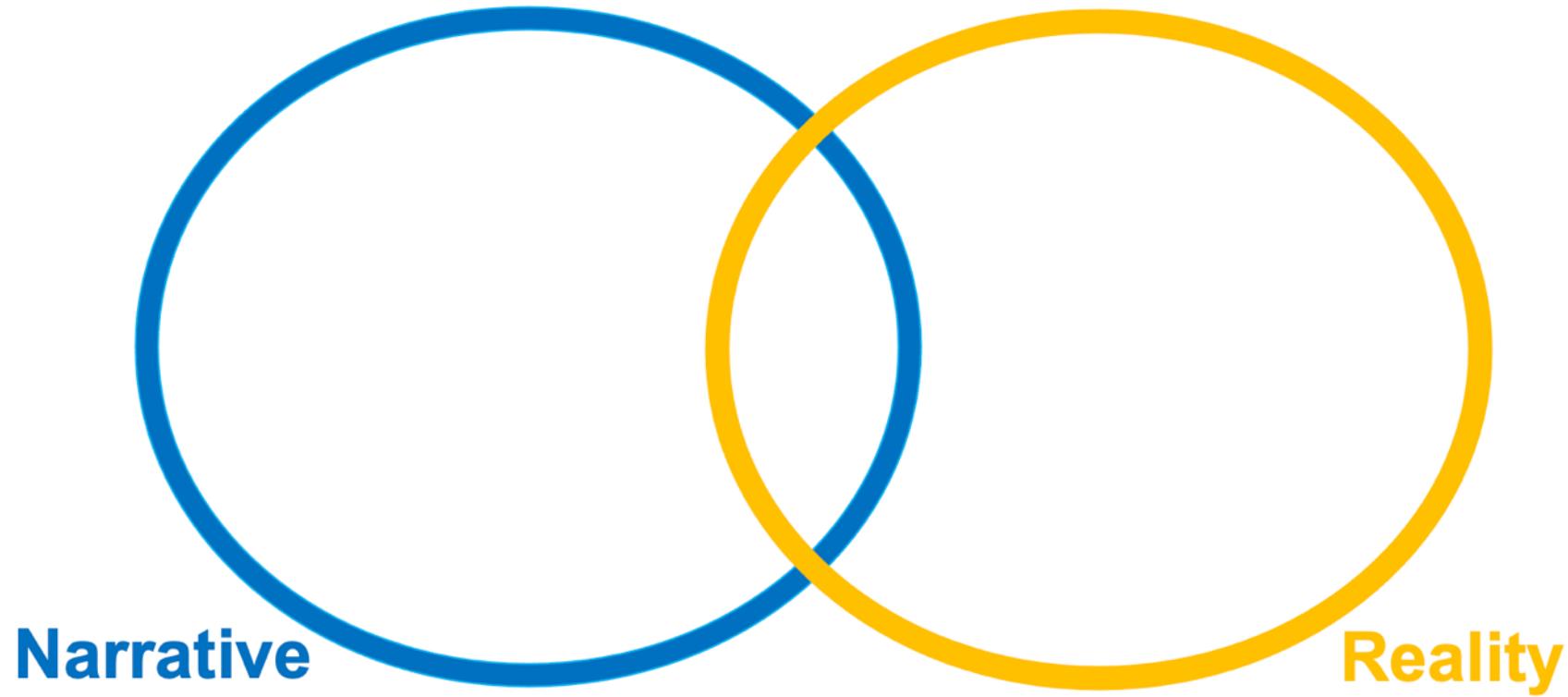
How to solidify your financial plan in case the trade war sparks a recession



Miserabilism: the philosophy of pessimism.

Beware the Narrative!



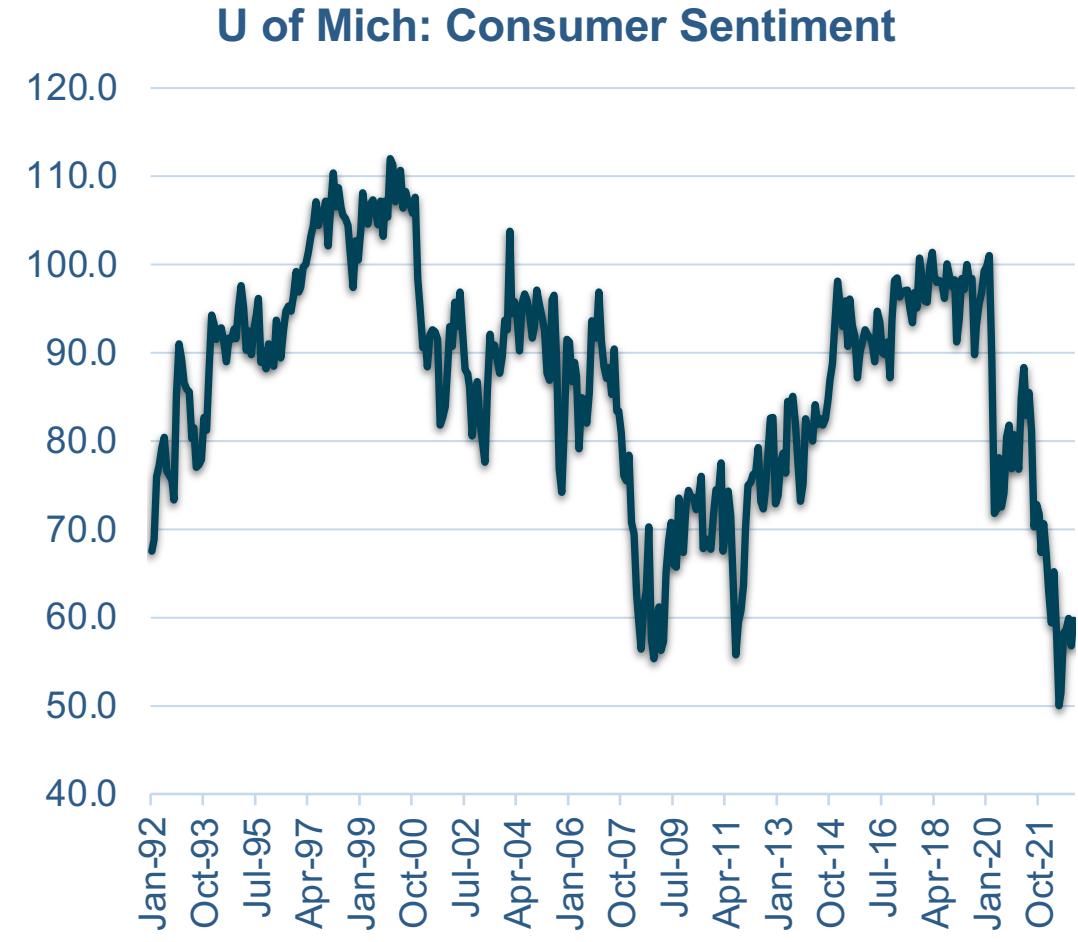




The great enemy of the truth is very often not the lie -- deliberate, contrived, and dishonest -- but the myth -- persistent, persuasive, and unrealistic.

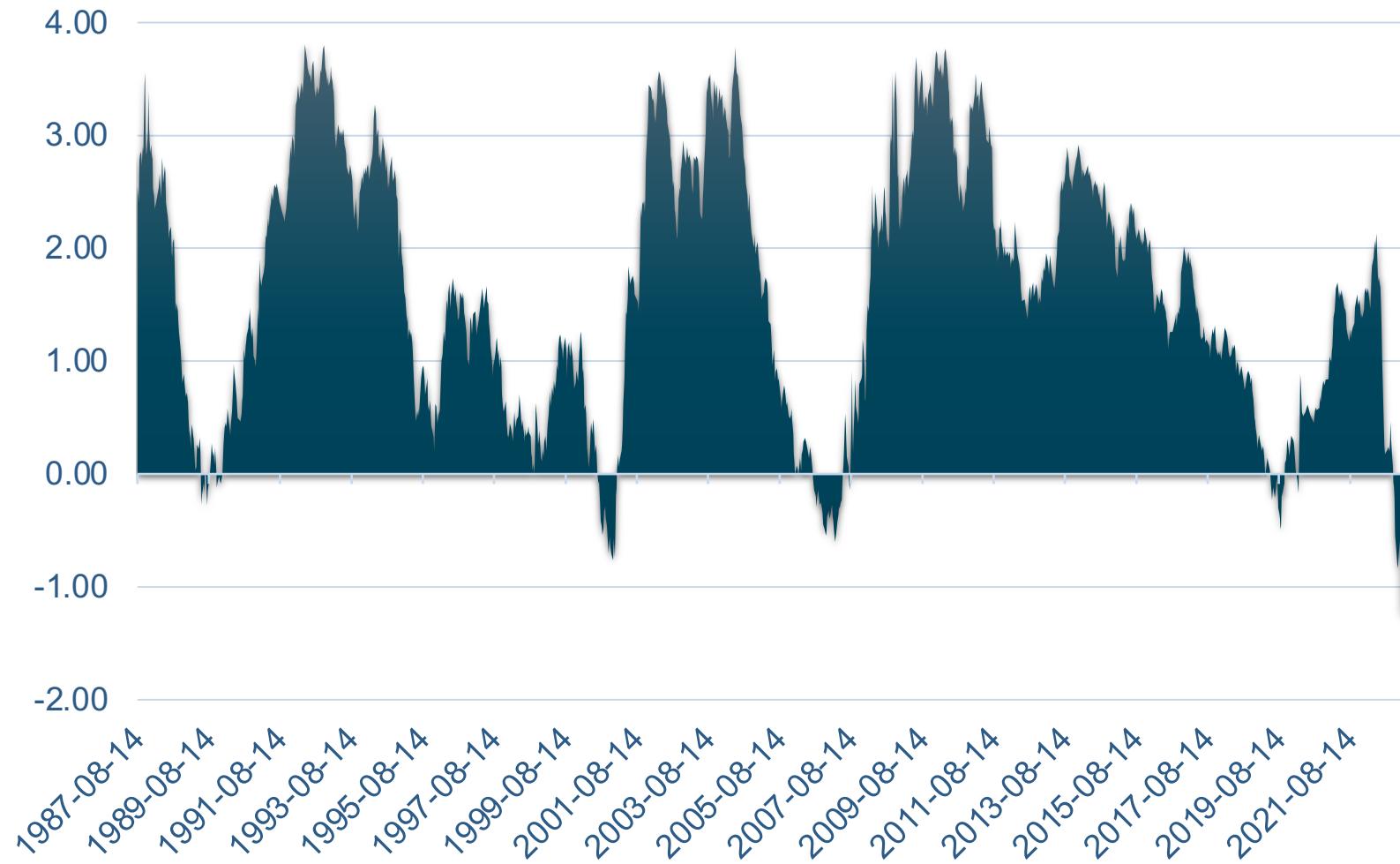
— John F. Kennedy

Mixed Economic Signals to start 2023

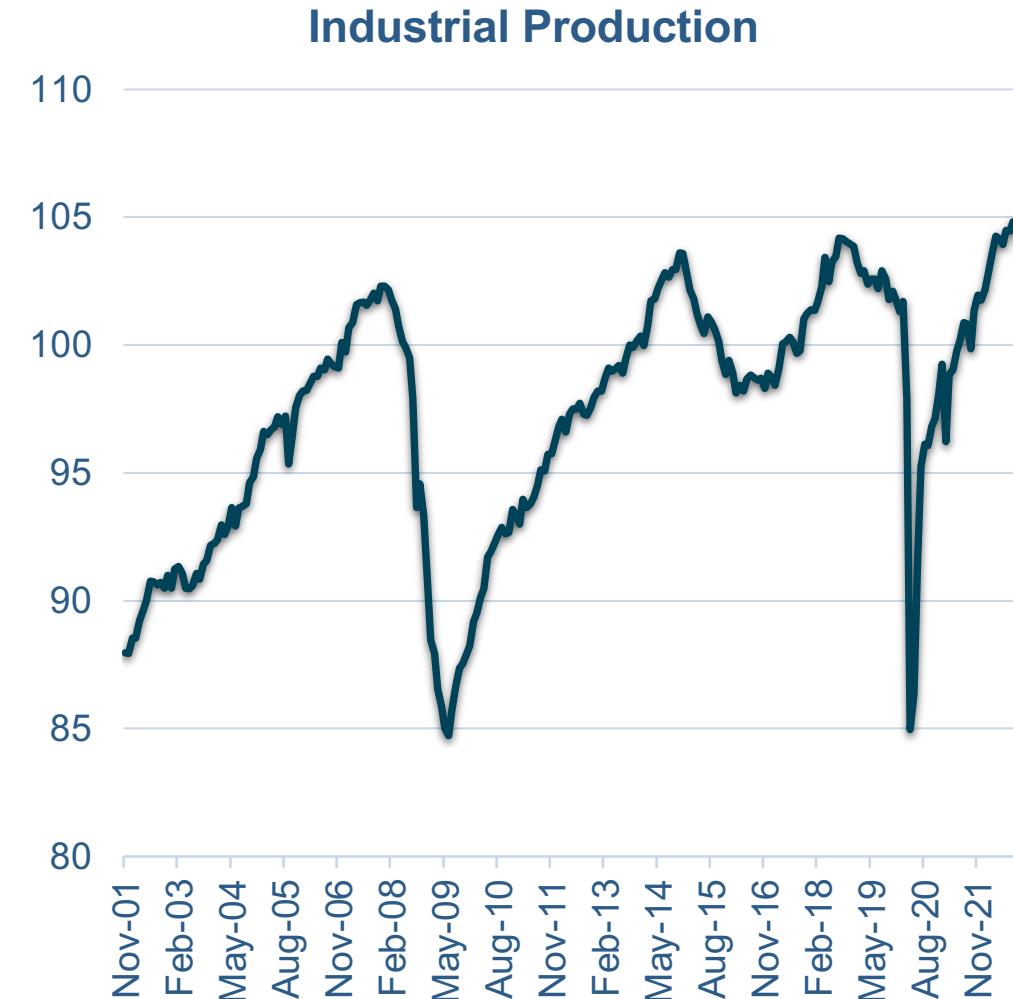
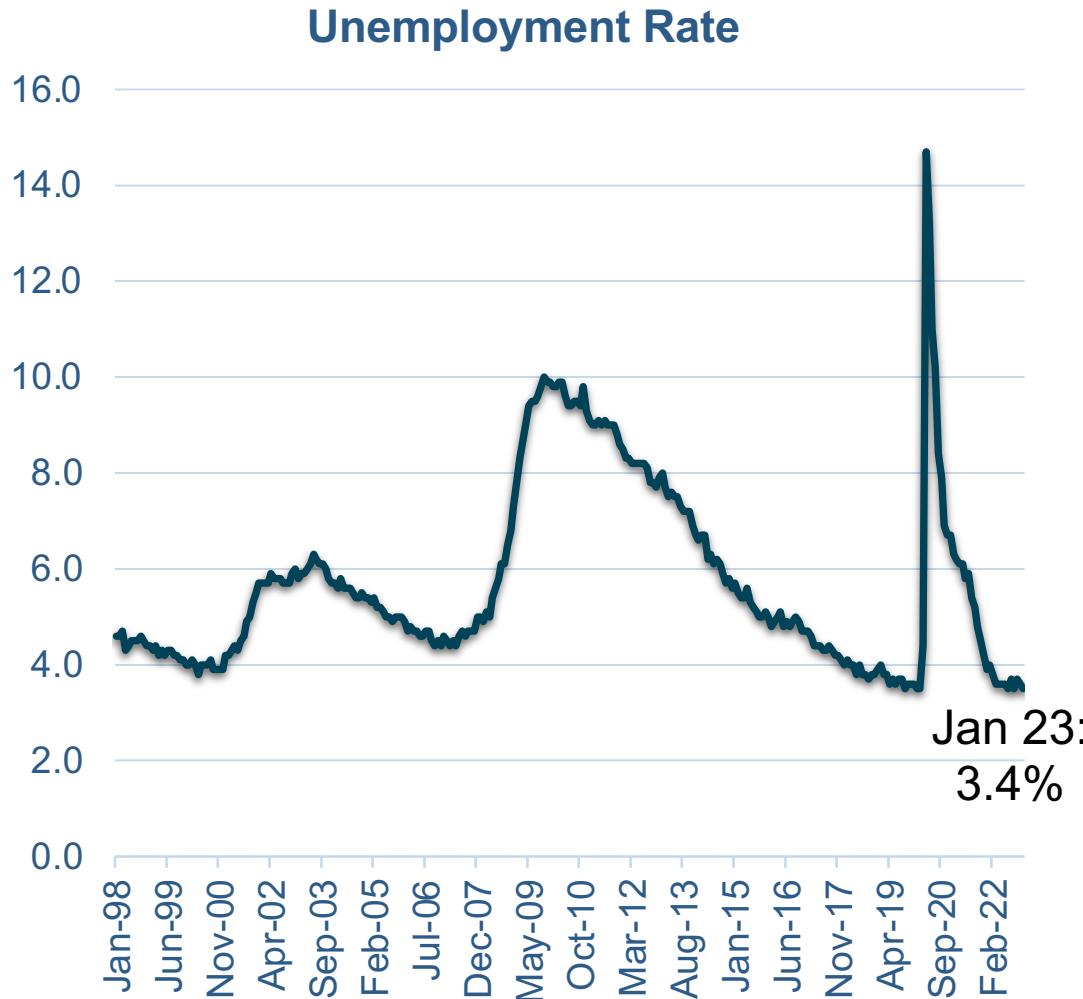




10 Year – 3 Month Yield Curve



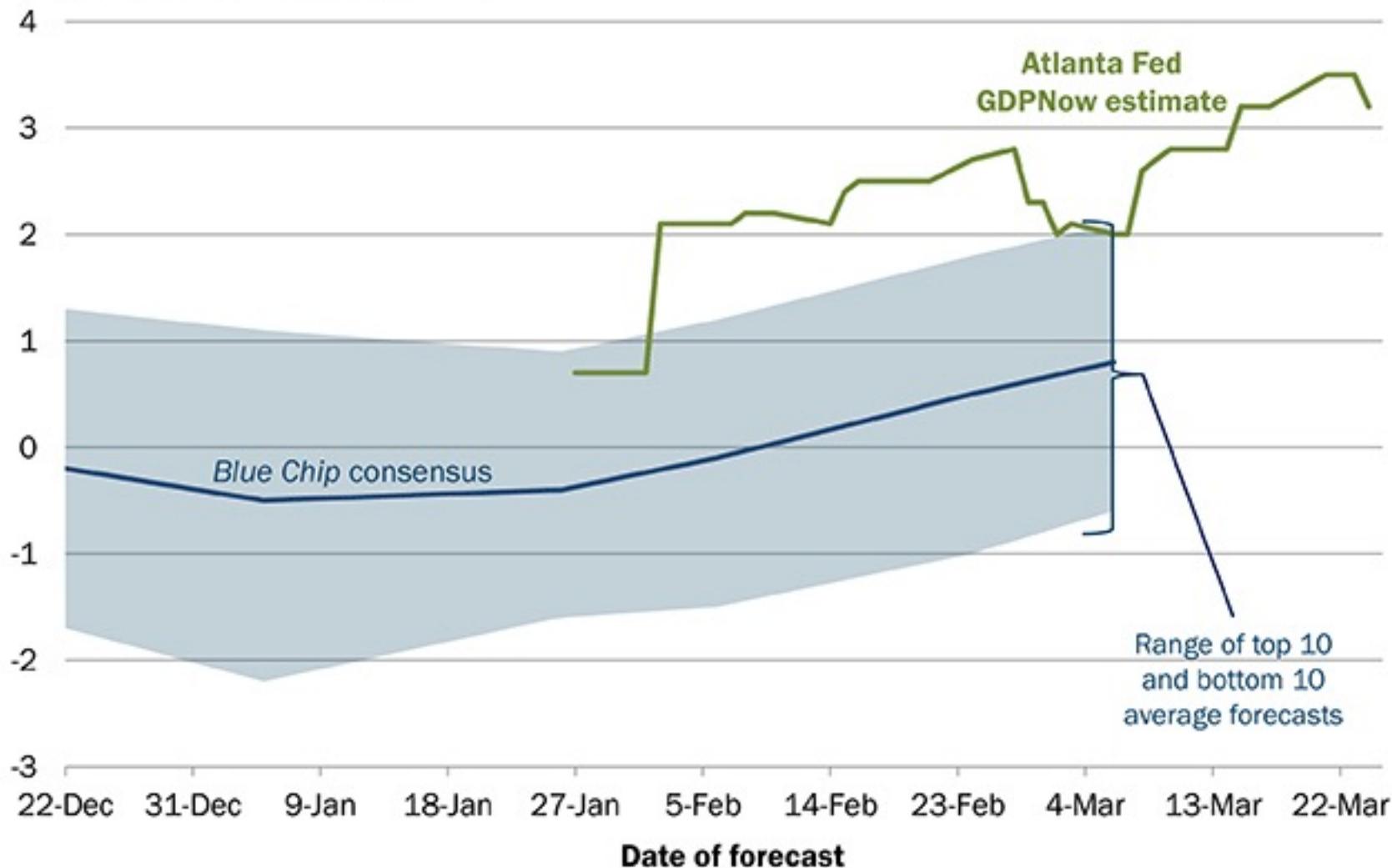
The US is clearly not in a recession now





Evolution of Atlanta Fed GDPNow real GDP estimate for 2023: Q1

Quarterly percent change (SAAR)





Leeds Business Confidence Index

Component	Q2 2022	Q3 2022	Q4 2022	Q1 2023	Q2 2023	Quarterly Change	Annual Change
State Economy	51.9	39.8	40.0	41.8	46.4	▲	▼
National Economy	40.4	27.7	30.7	34.4	37.1	▲	▼
Industry Sales	59.1	46.4	42.2	40.9	50.4	▲	▼
Industry Profits	55.0	42.2	41.7	39.7	47.6	▲	▼
Industry Hiring	60.4	48.3	43.3	42.1	46.7	▲	▼
Capital Expenditures	56.7	42.1	40.8	39.7	42.4	▲	▼
LBCI	53.9	41.1	39.8	39.8	45.1	▲	▼



Federal Deposit Insurance Corporation

Add Topic +

ECONOMY

Silicon Valley Bank, Signature Bank collapses explained, live updates on new developments

Elisabeth Buchwald, Francesca Chambers, Bailey Schulz and Medora Lee

USA TODAY

Updated 8:38 p.m. ET March 13, 2023



So where are we heading?



- **The Narrative: A recession is nigh!**
 - Economy already in crisis due to ... (pick your favorite boogie man)
 - Inflation is hurting consumers
 - Real Estate collapse driven by mortgage rate hikes
 - The banking failures are a sign of the rot
- **The Reality: Recession highly unlikely in the next 2 years**
 - Inflation / rising rates are the consequences of excessive stimulus
 - No major structural imbalances in the economy
 - Consumers / business investment will offset weakness in real estate, finance
 - Asset prices, including homes, will continue to slowly deflate, yet fundamentals will remain just fine
 - Banking issues are caused by dramatic shifts in Fed policy, not bank lending practices
- **The Real Worries**
 - Collapse in filtering will intensify housing shortages
 - Labor shortages are now endemic
 - Public deficit challenges at state and federal levels
 - The potential (and pointless) bank credit crisis
 - The ongoing gap between the narrative and the reality

How did we get here? Miserabilism...



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

Coronavirus: Leading economist warns of 10 years of depression and debt

© 22 May 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.

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

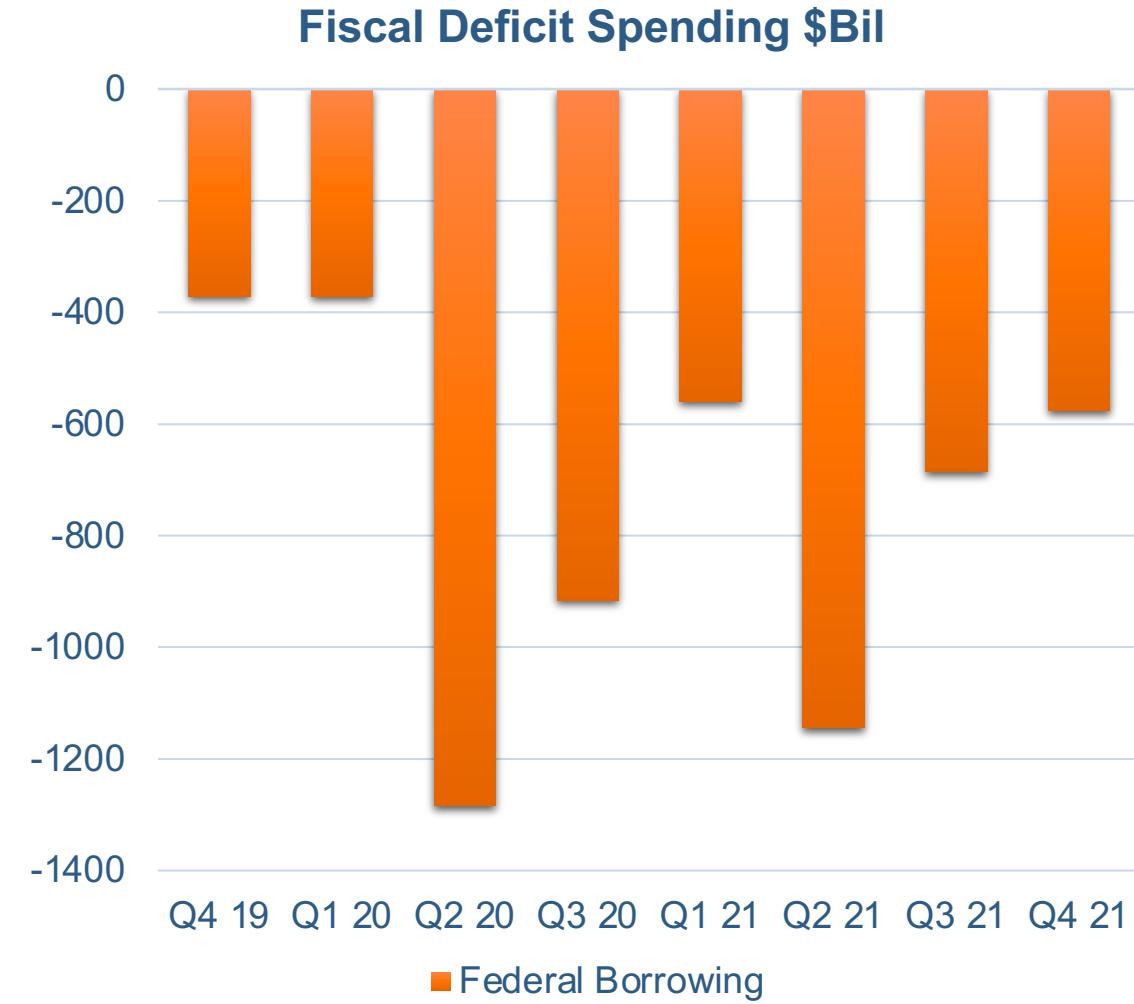
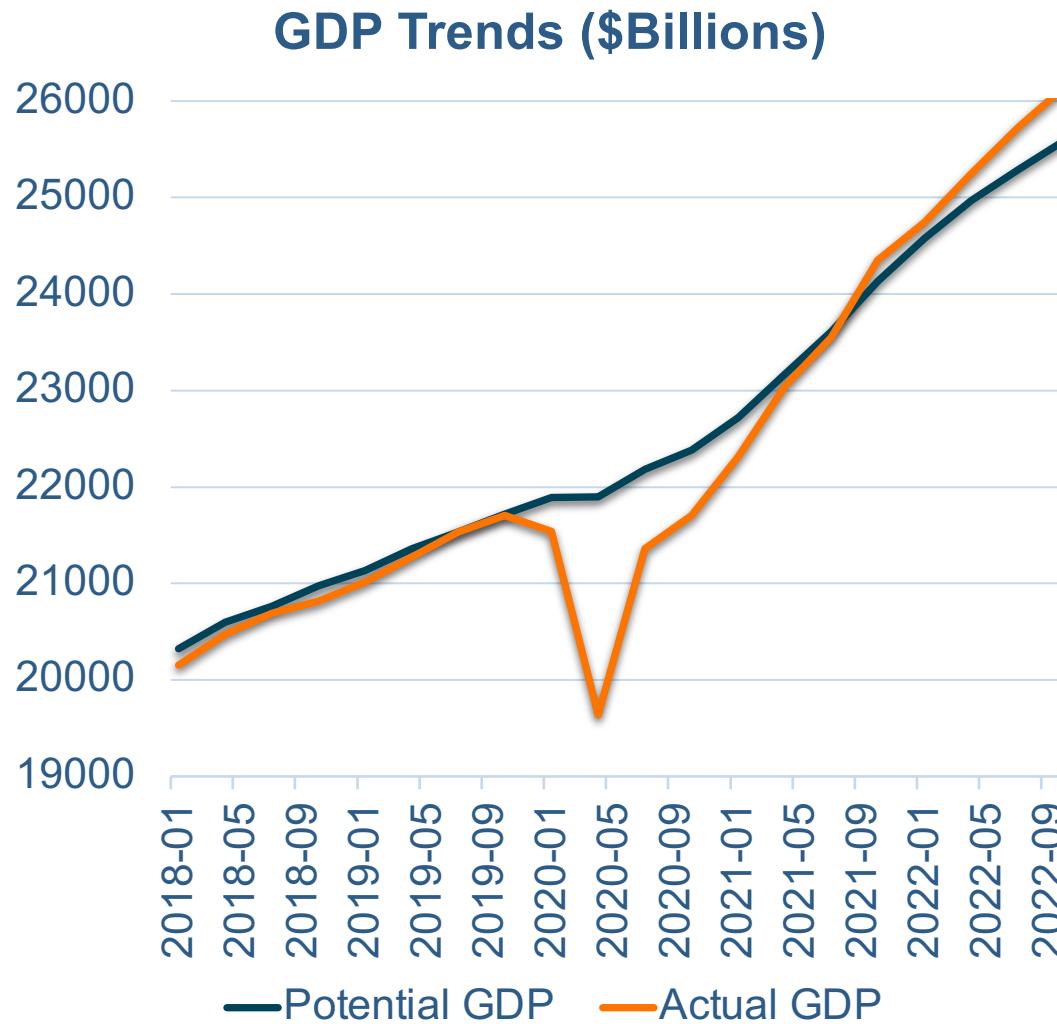
FINANCE • ECONOMY

What shape will the recovery take? U-shape, check mark, square root symbol, and swoosh are all on the table, say economists

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

'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

Federal Fiscal (Over)reaction

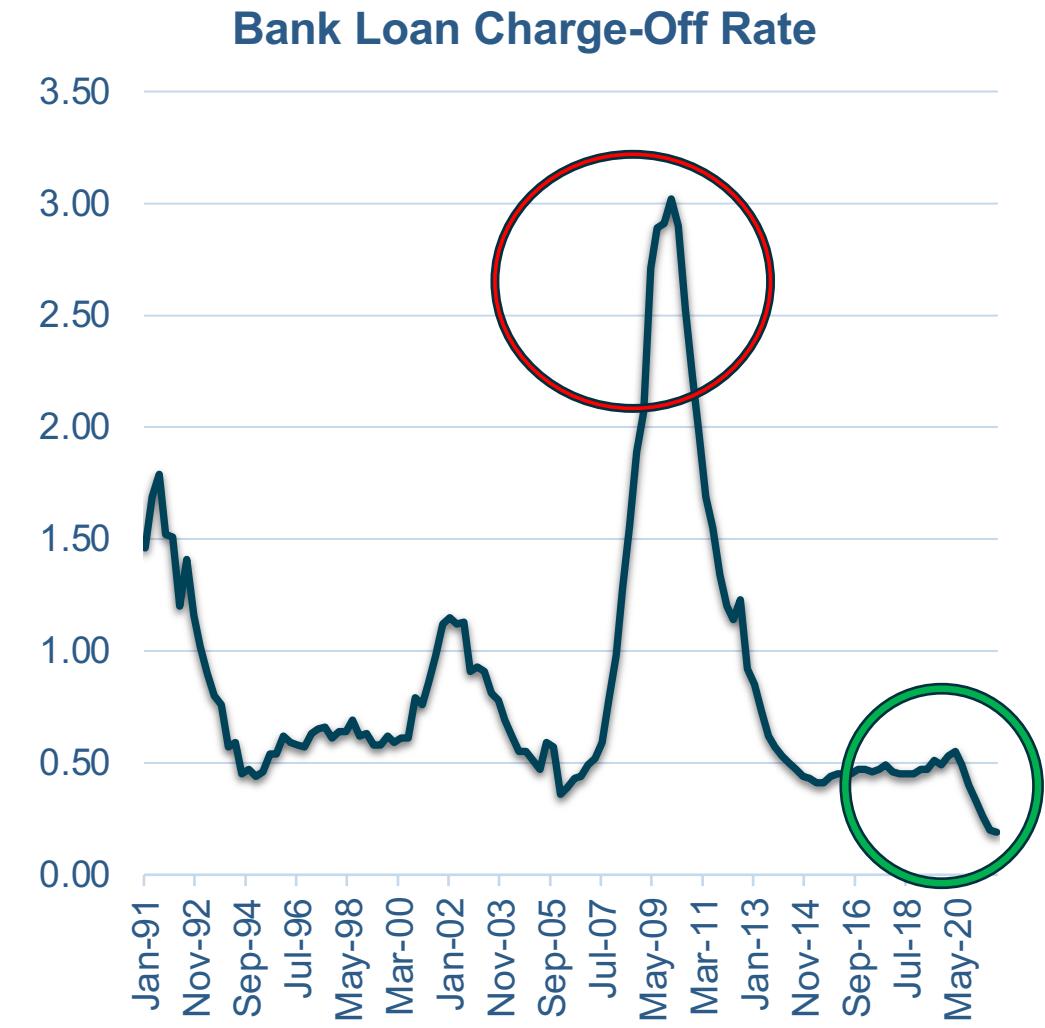
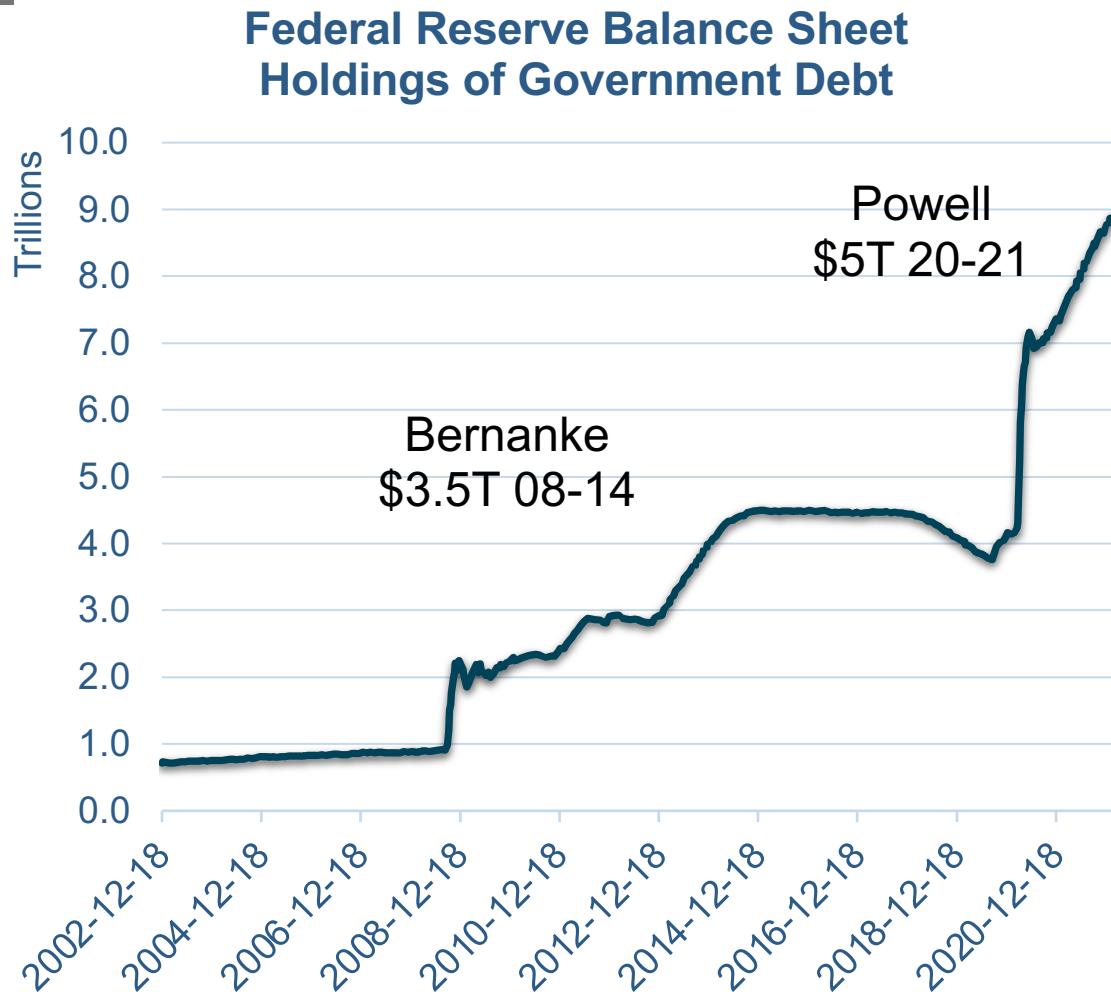




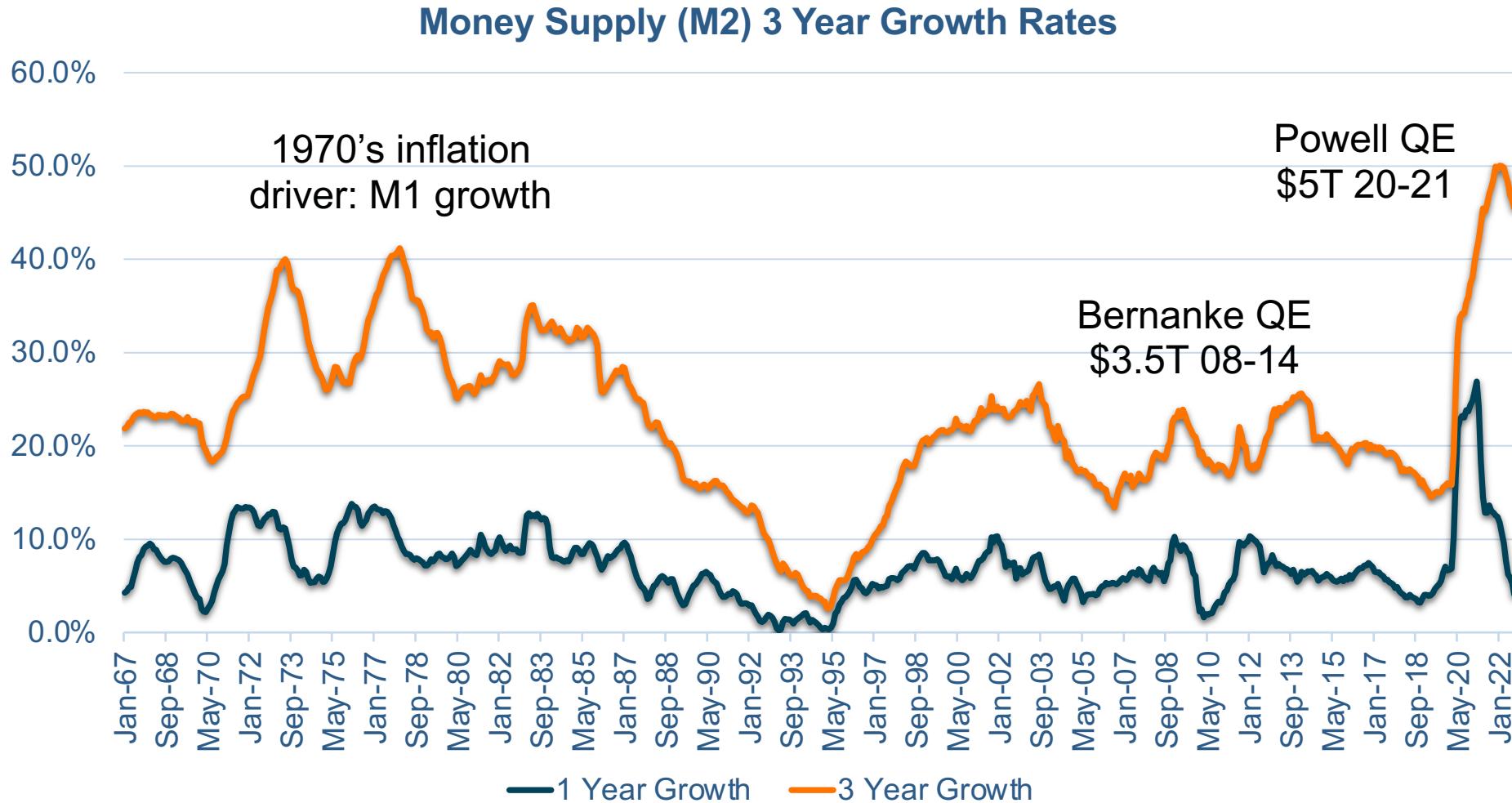
**Pandemic “Lost” GDP:
\$1.2 Trillion**

**Fiscal Deficit Spending:
\$6 Trillion**

Better Call Powell...



QE and Money: Now vs Then



QE and Money: Then vs Now



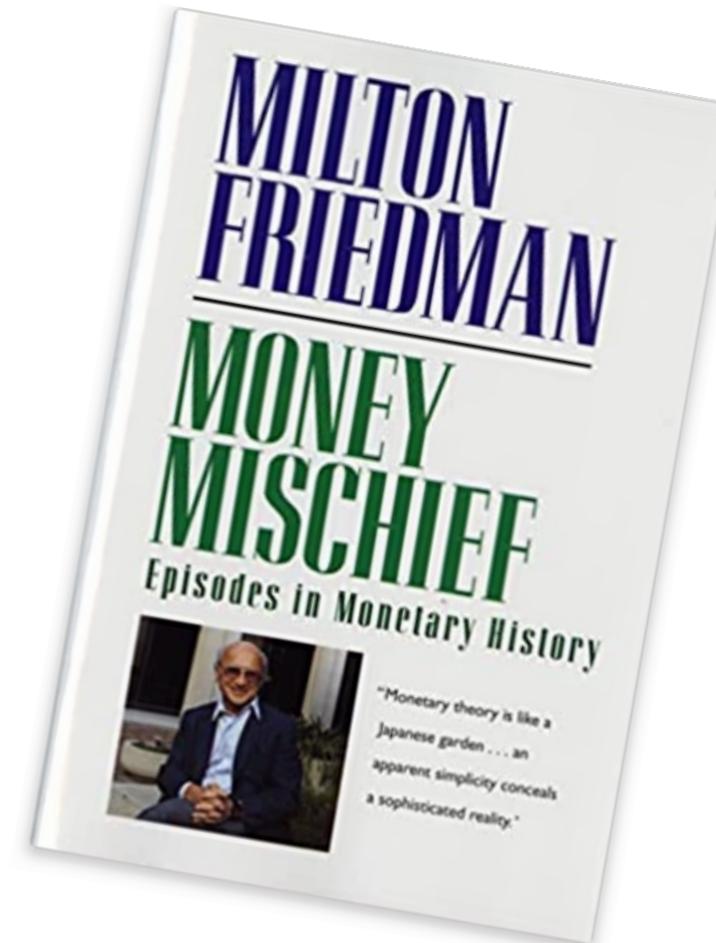
The Problem of Excess Money

Short run: Money illusion

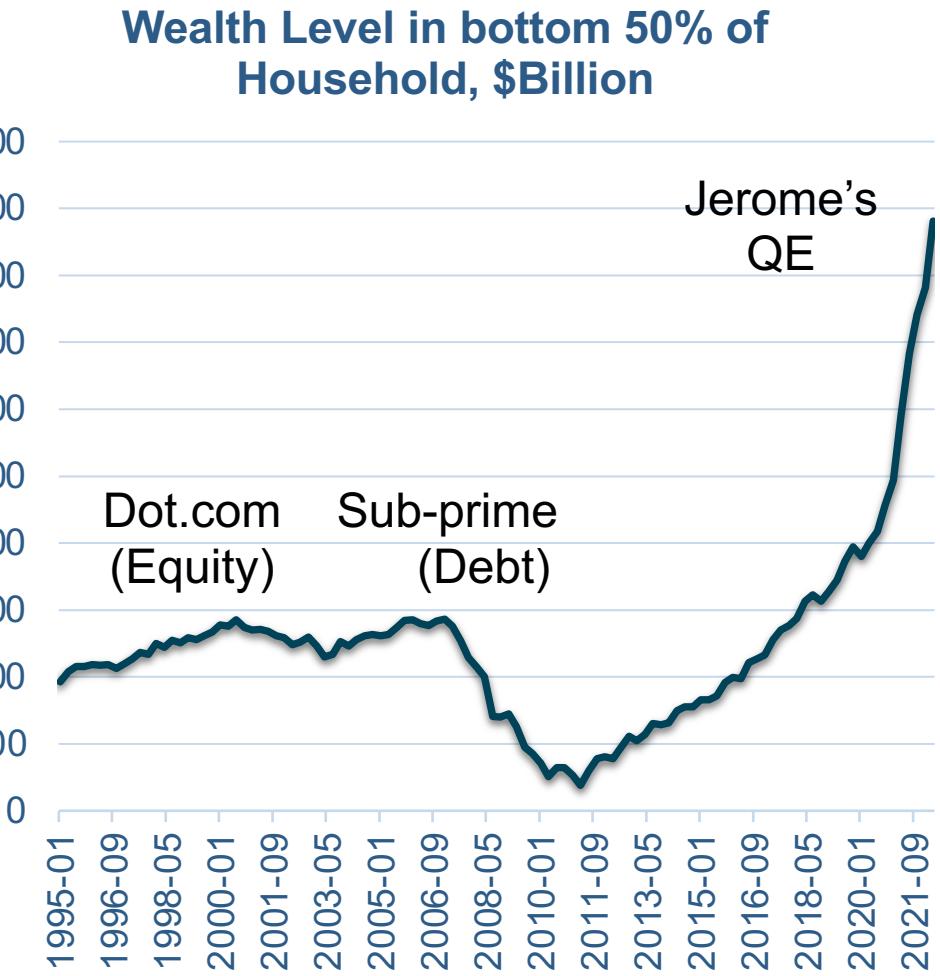
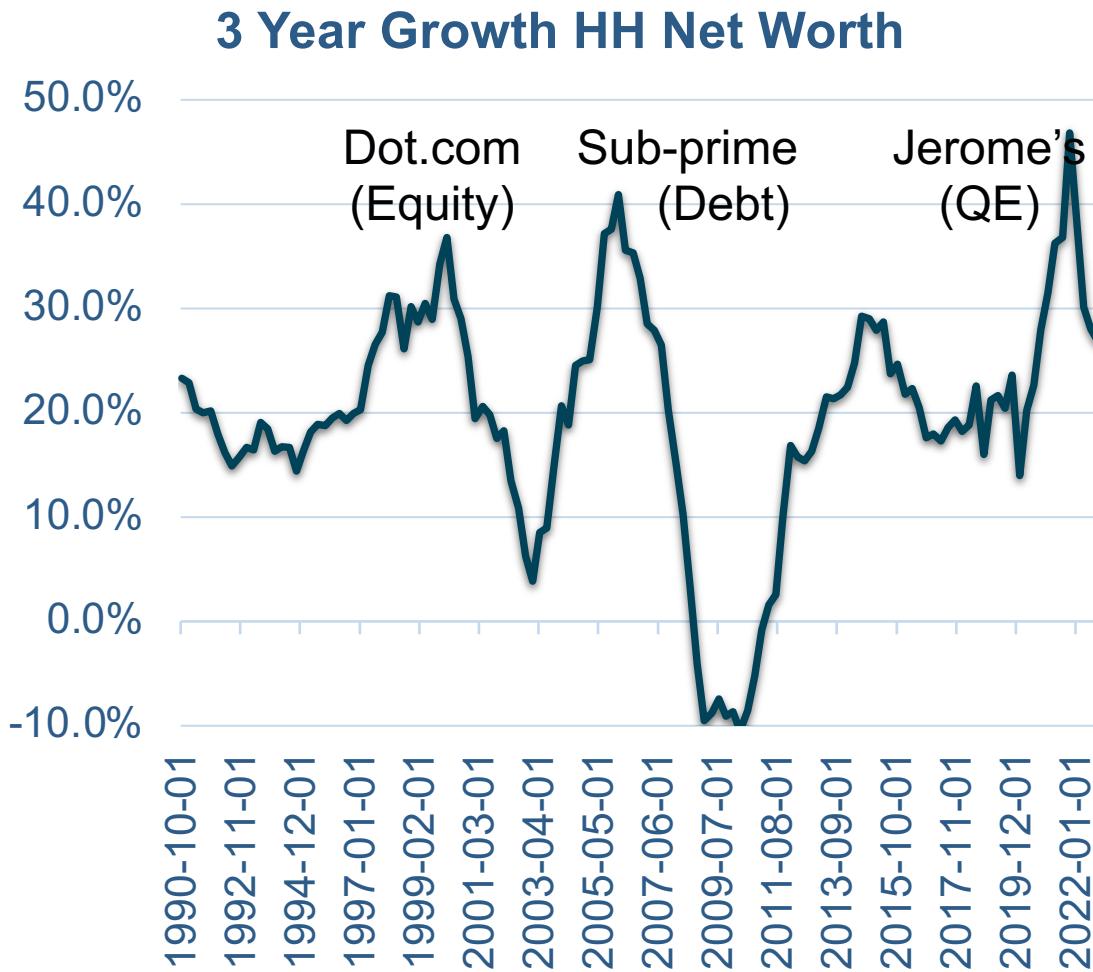
- Falling interest rates
- Asset price bubbles form
- Spending and investment binge ensues

Long run: The Hangover

- SR: Inflation and rates rise
- SR: Asset markets sag
- LR: Sharp transfers of real wealth
- LR: Investments risk rises



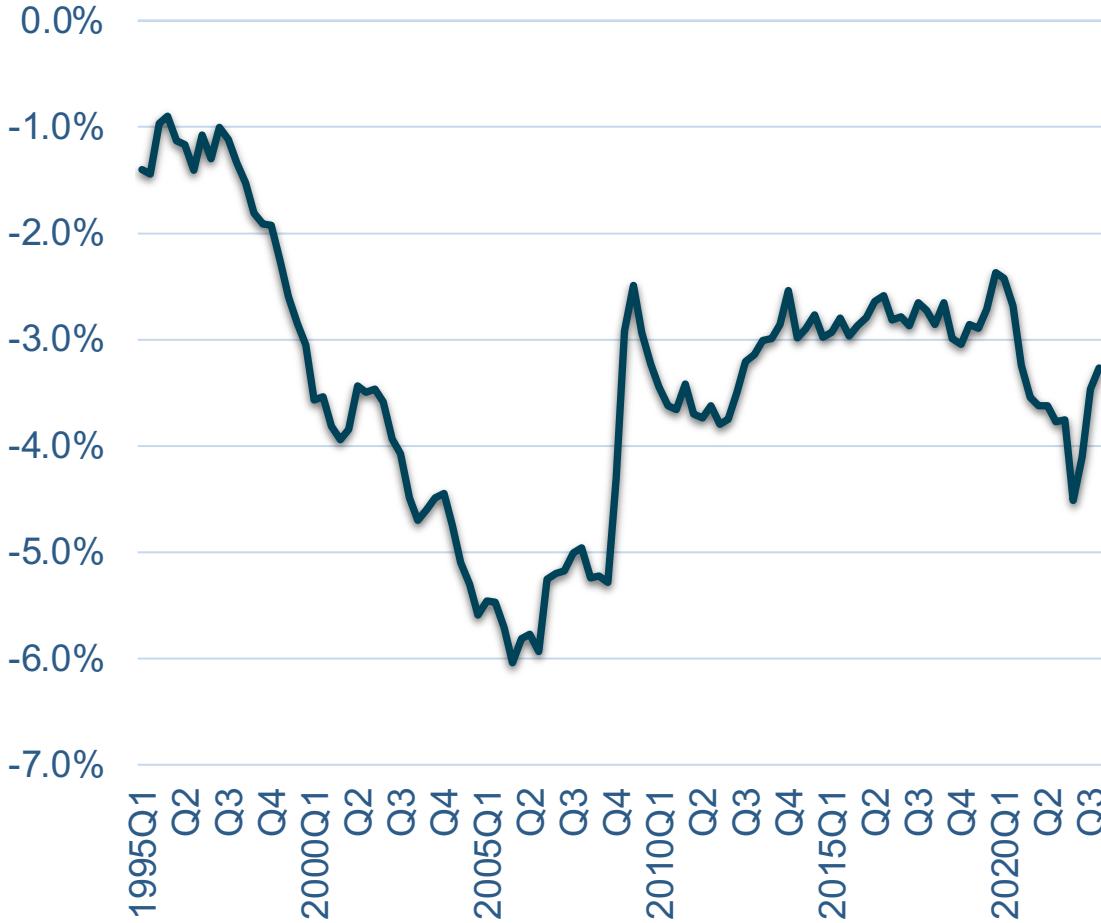
A progressive asset bubble...



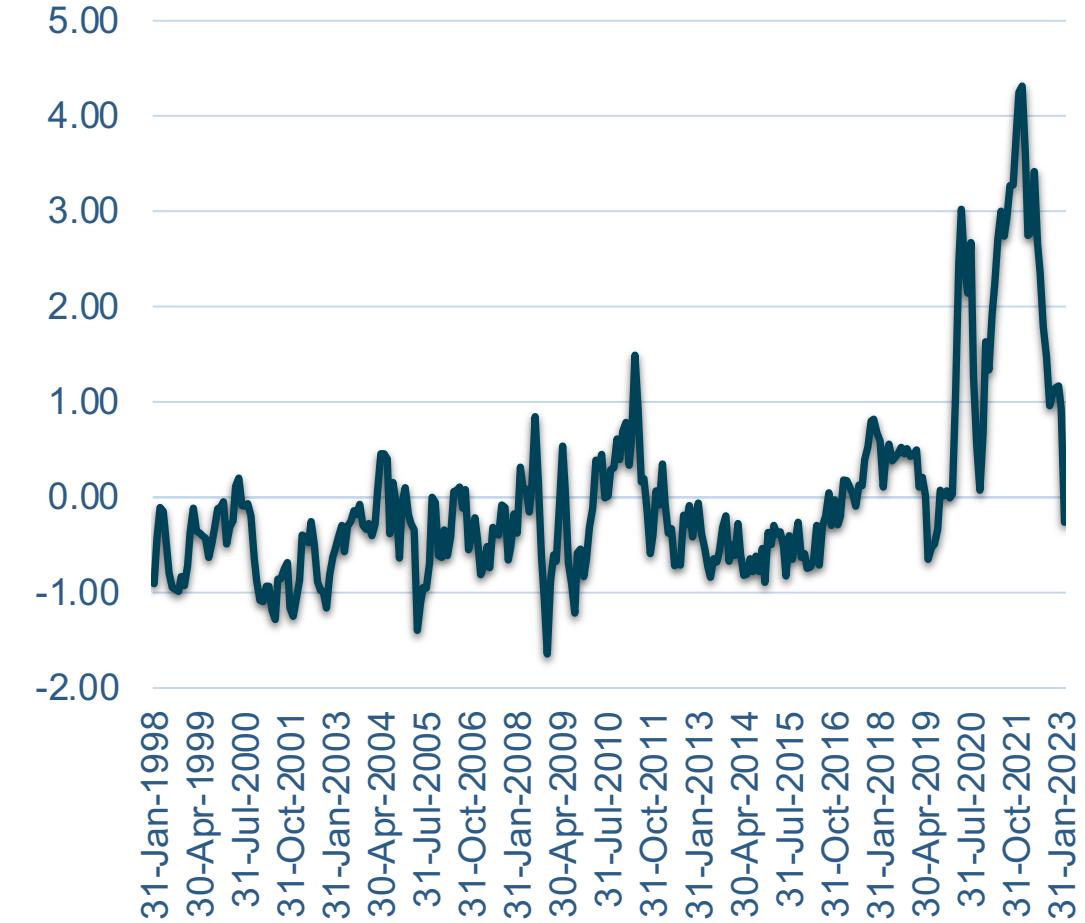
Impact of the US Spending Binge



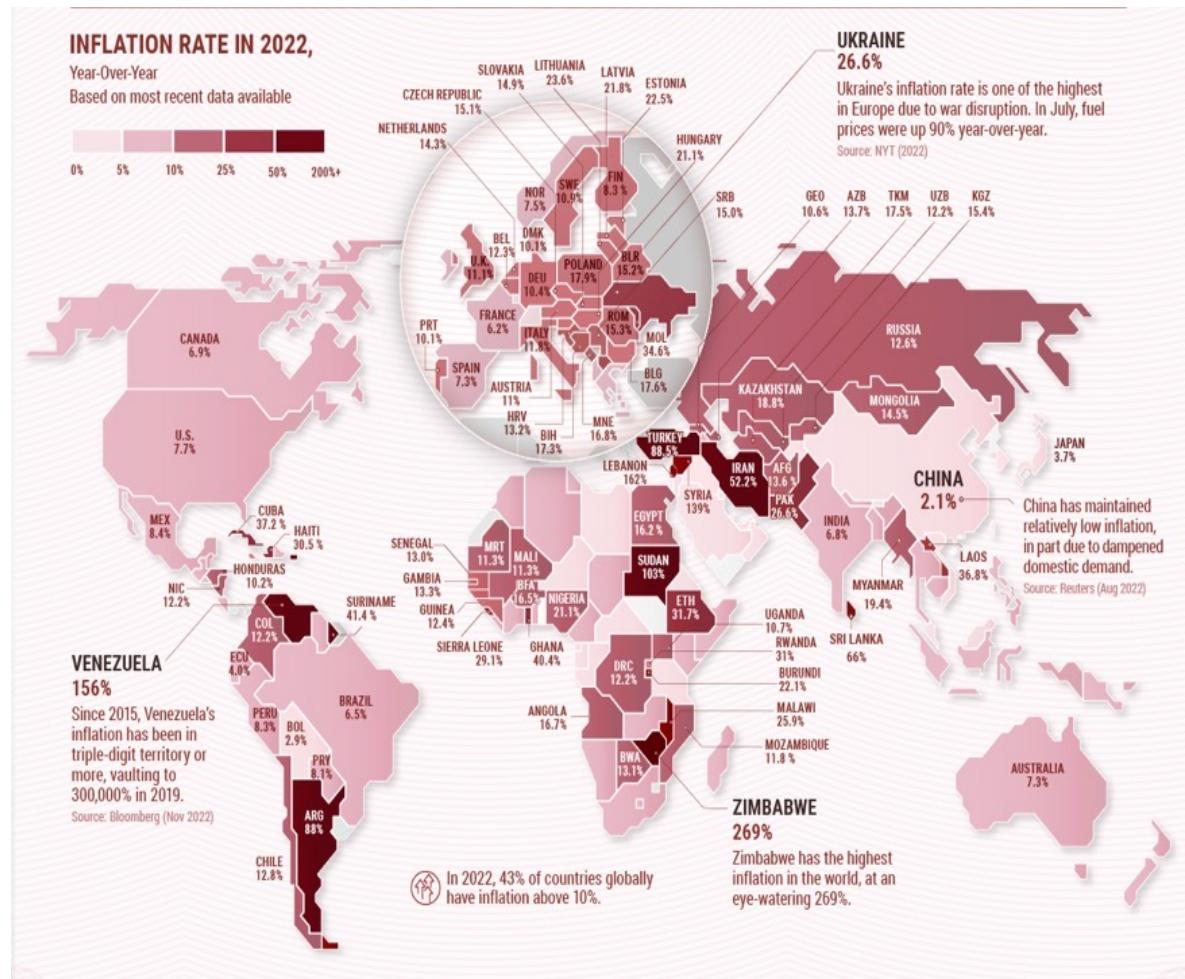
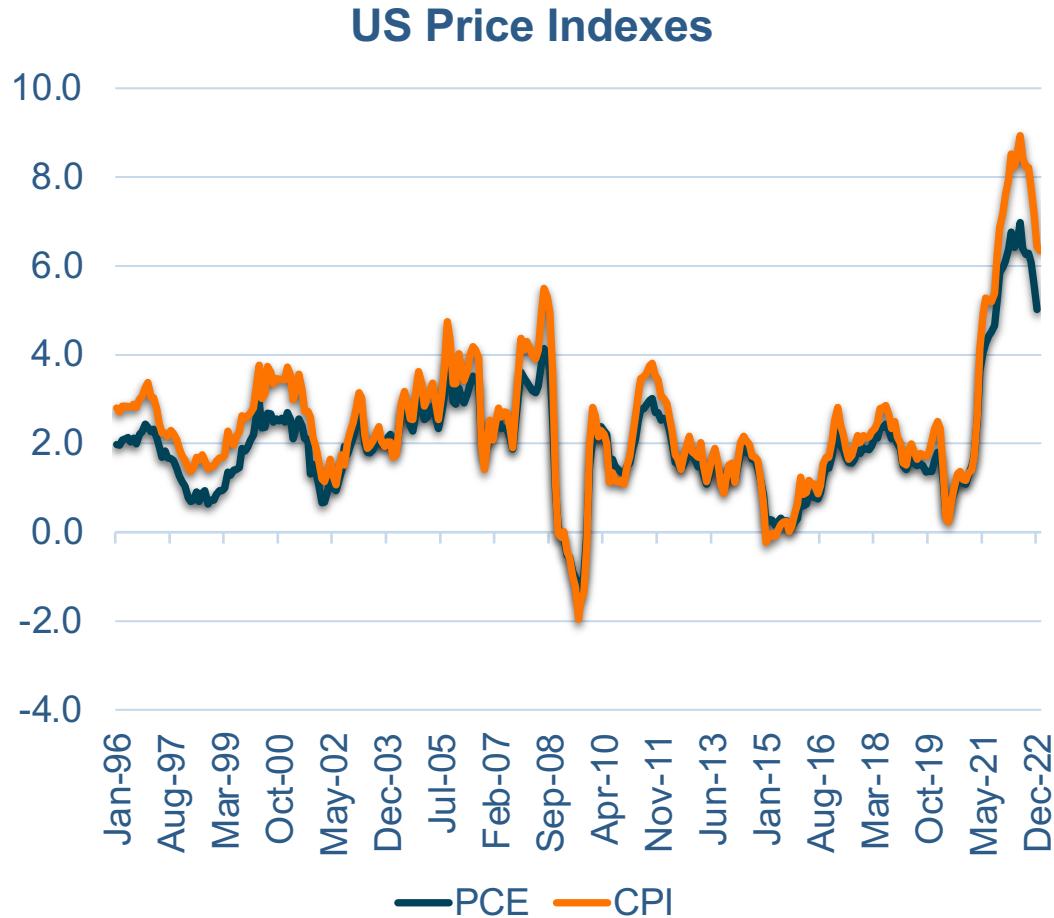
US Trade Deficit as % of GDP



Global Supply Chain Pressure Index

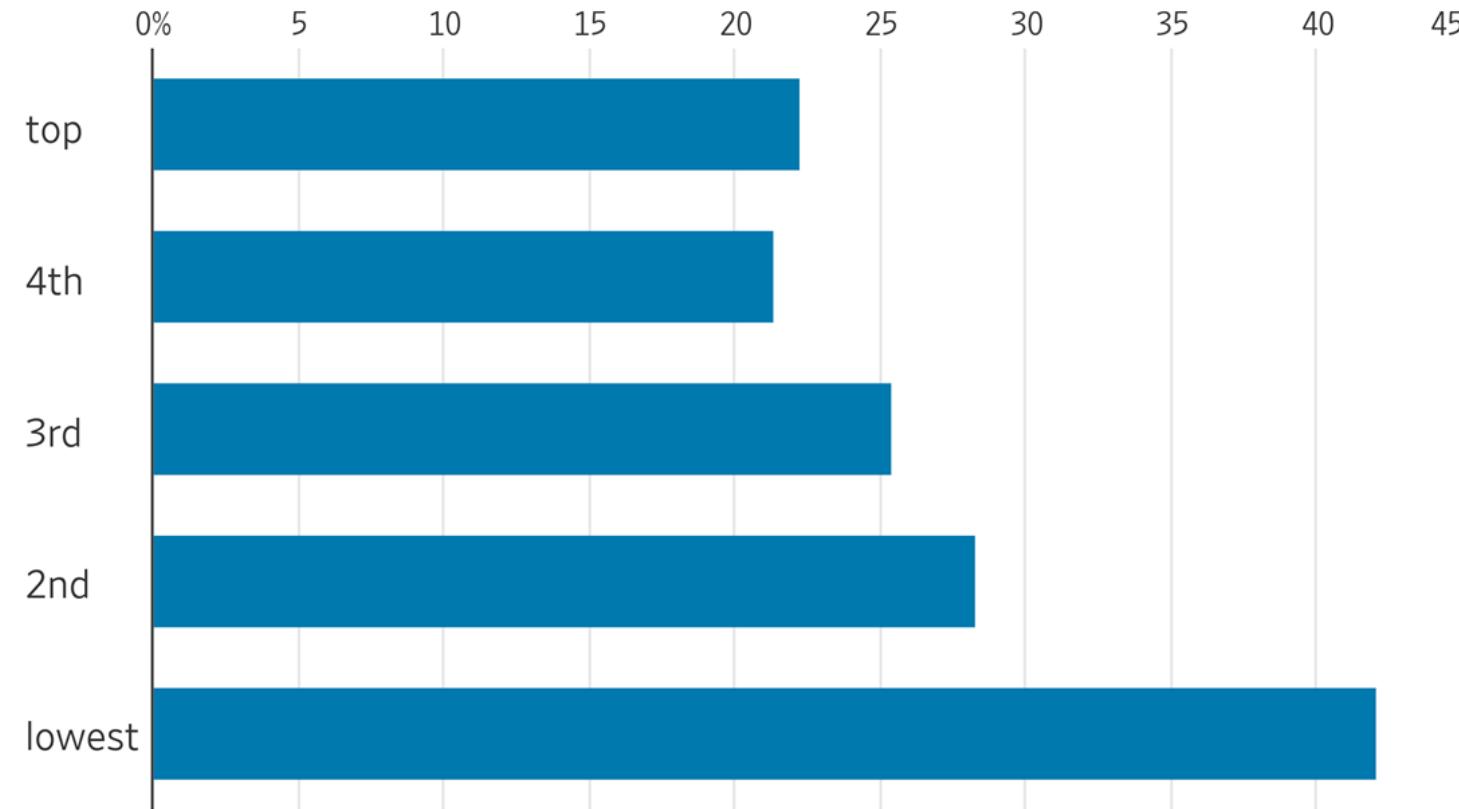


Inflation nation...





Change in household net worth by income quintile, 4Q 2019 to 3Q 2022



Source: Federal Reserve

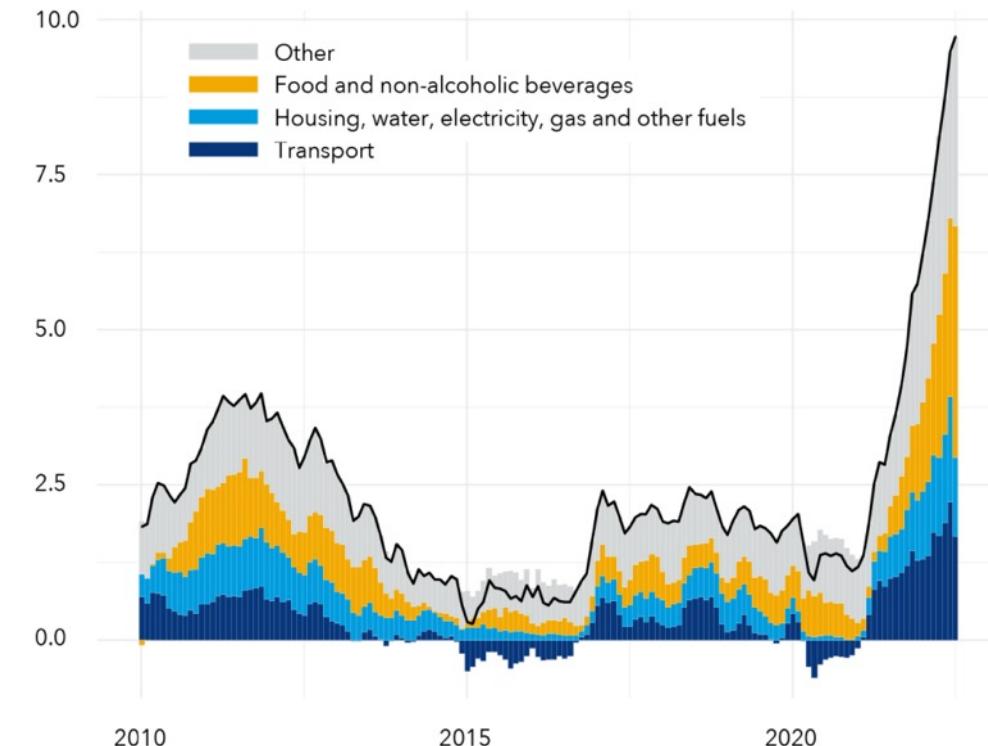
The Inflation Conversation



- Supply chain issues
- The federal deficit
- Greedy corporations and profiteering
- Not enough manufacturing jobs in the US
- Biden's bad green energy policies
- Putin's fault!
- Saturn is aligned with Jupiter
- Kim shouldn't have dumped Kanye
- The Nuggets horrible perimeter D

Inflation drivers

Food and energy prices continue to drive the global inflation surge.
(percent, median inflation rate)

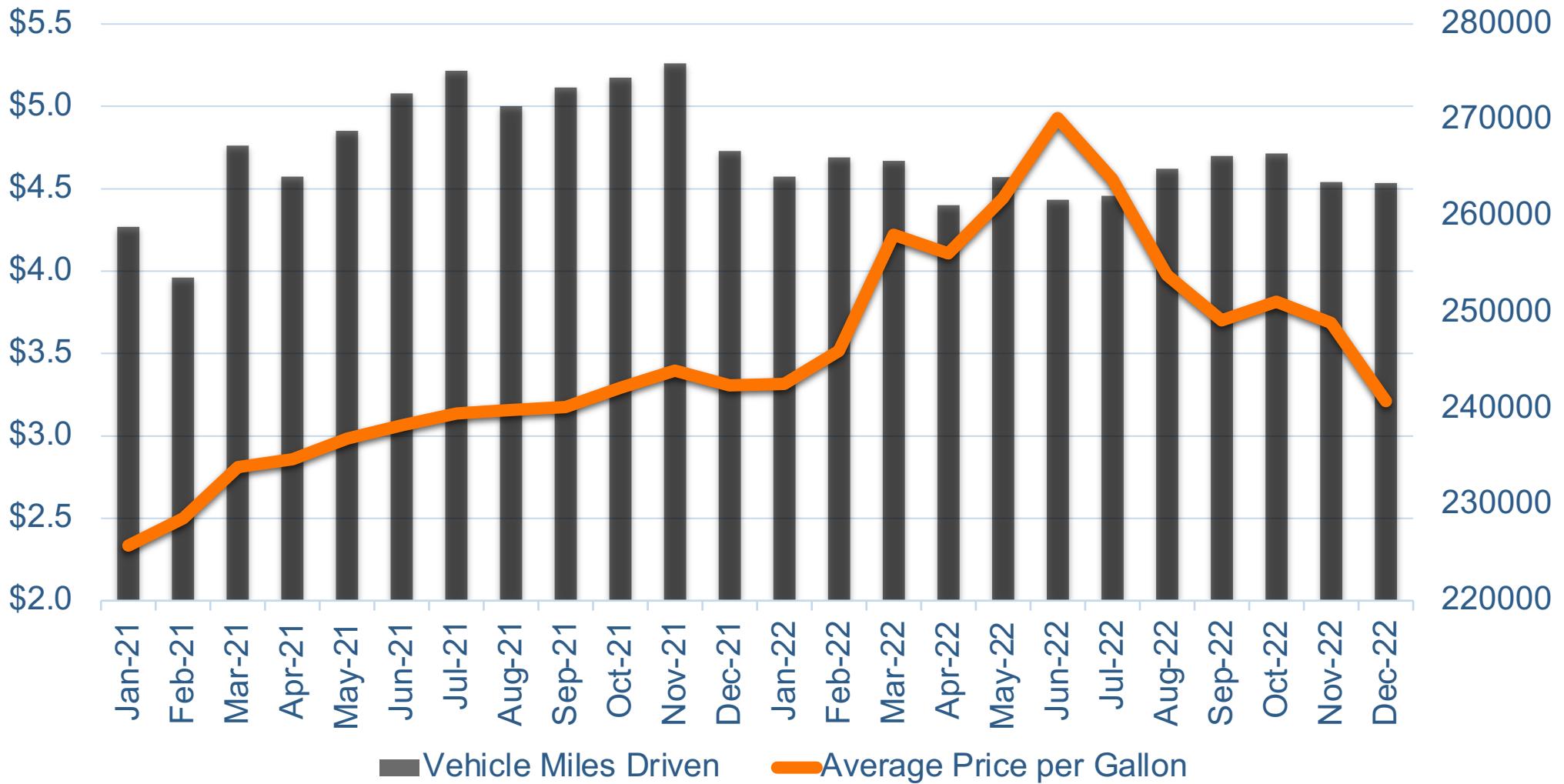


Source: IMF CPI database and IMF staff calculations.

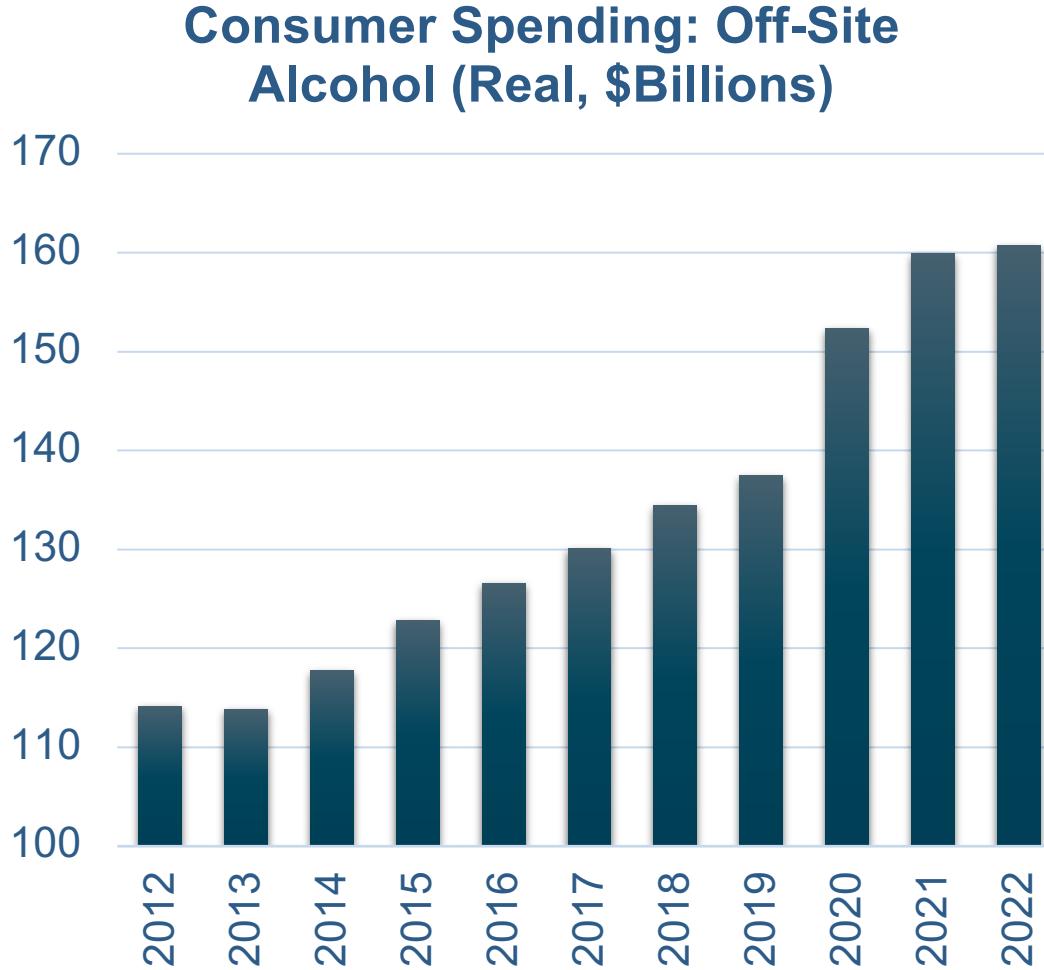
Note: Chart shows median total inflation and in select categories across 88 countries, including 28 advanced economies and 60 emerging and developing economies.

IMF

Supply or Demand?



Americans: How rough do we have it?



Recent Real GDP Growth



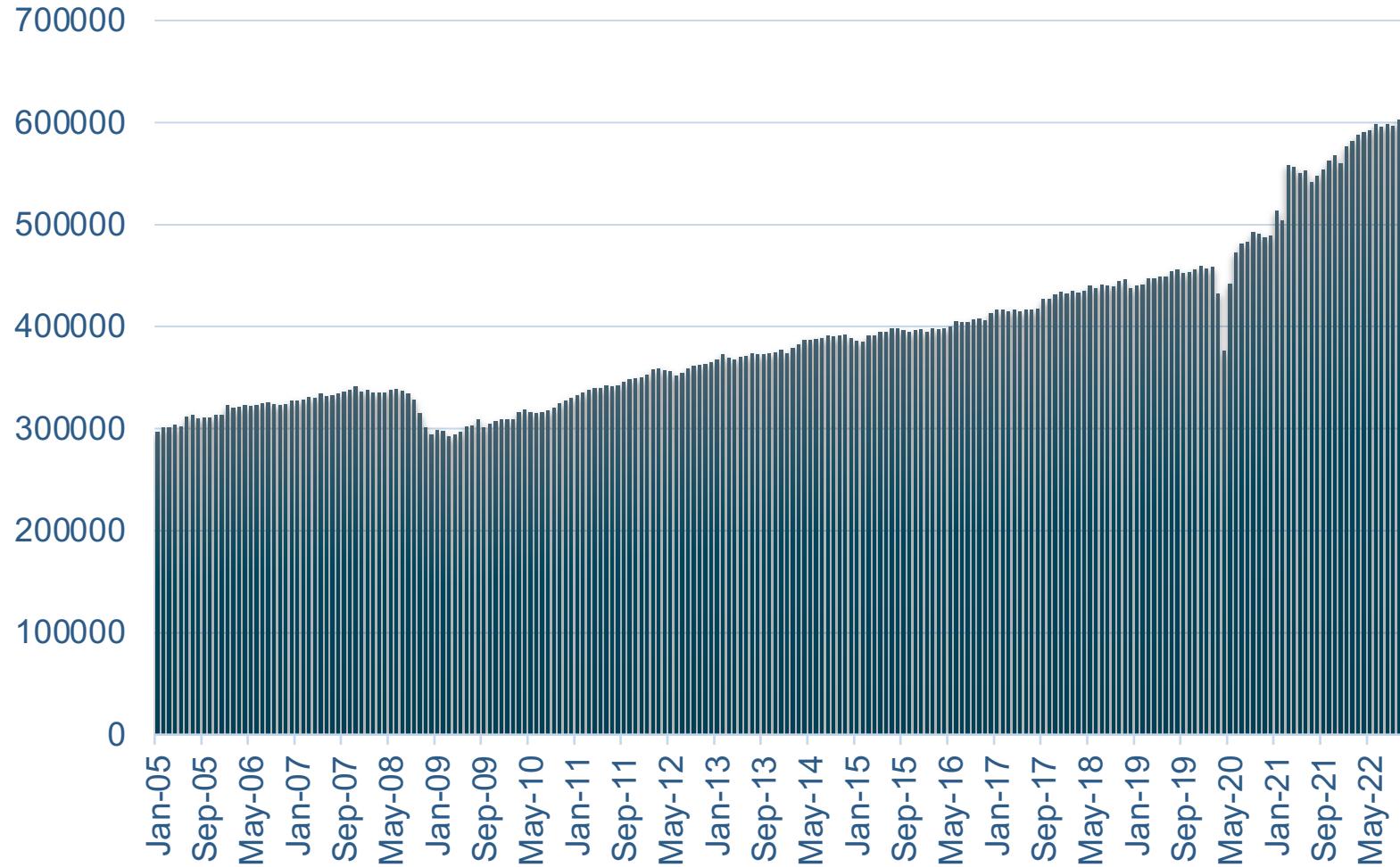
Contributions to Real GDP Growth

	2019	2020	2021	2022
GDP	2.30	-2.80	5.90	2.10
Final Demand	2.36	-1.99	6.91	1.76
Personal consumption	1.34	-2.01	5.54	1.90
Durable goods	0.27	0.70	1.46	-0.03
Nondurable goods	0.39	0.37	1.26	-0.07
Services	0.69	-3.08	2.83	1.99
Fixed investment	0.44	-0.49	1.56	-0.06
Structures	0.07	-0.32	-0.19	-0.20
Equipment	0.07	-0.59	0.52	0.22
Intellectual property	0.34	0.23	0.50	0.45
Residential	-0.04	0.28	0.47	-0.54
Change in inventories	0.05	-0.55	0.24	0.74
Net exports	-0.11	-0.26	-1.25	-0.40
Exports	0.06	-1.54	0.64	0.81
Imports	-0.17	1.28	-1.89	-1.20
Government	0.58	0.45	0.11	-0.10
Federal	0.25	0.41	0.17	-0.17
State and local	0.32	0.04	-0.06	0.07

Bad News?



Nominal Retail Sales to December

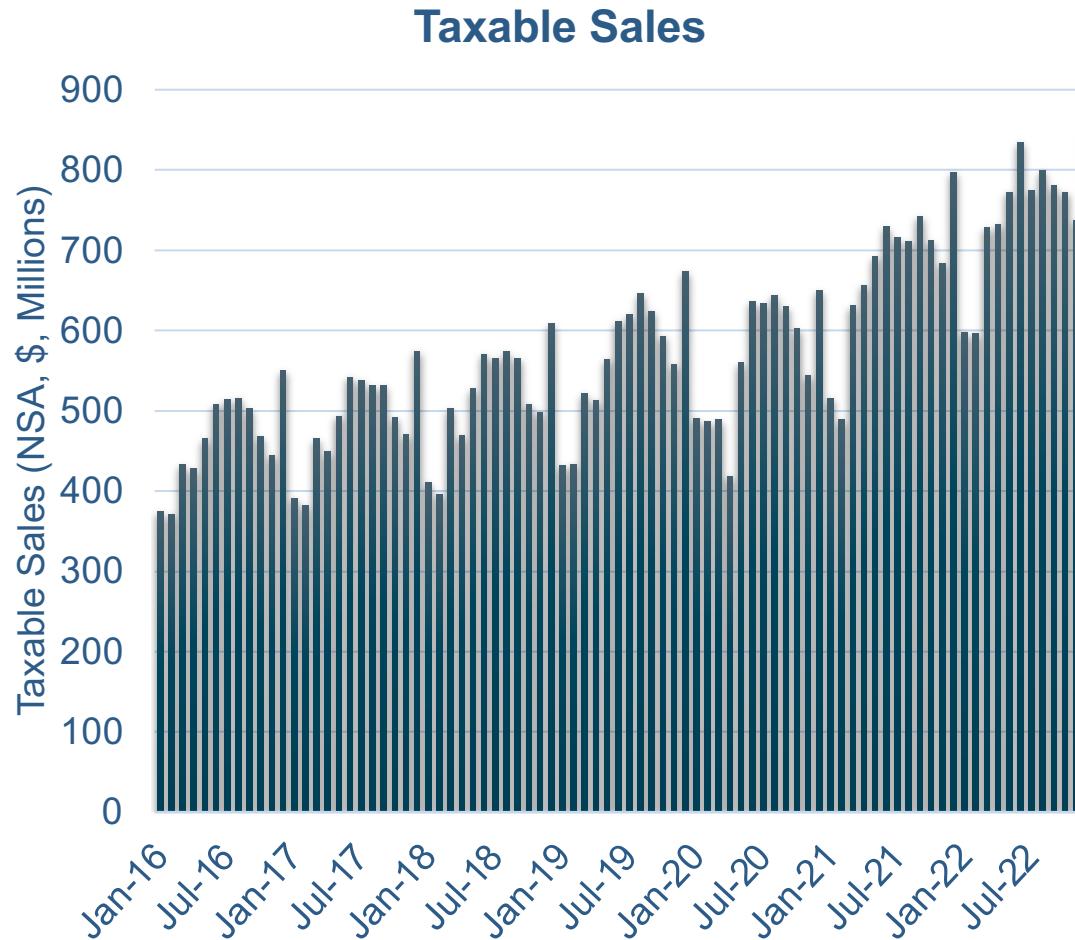




Retail Sales Surge as Prices Rise and Shoppers Keep Buying

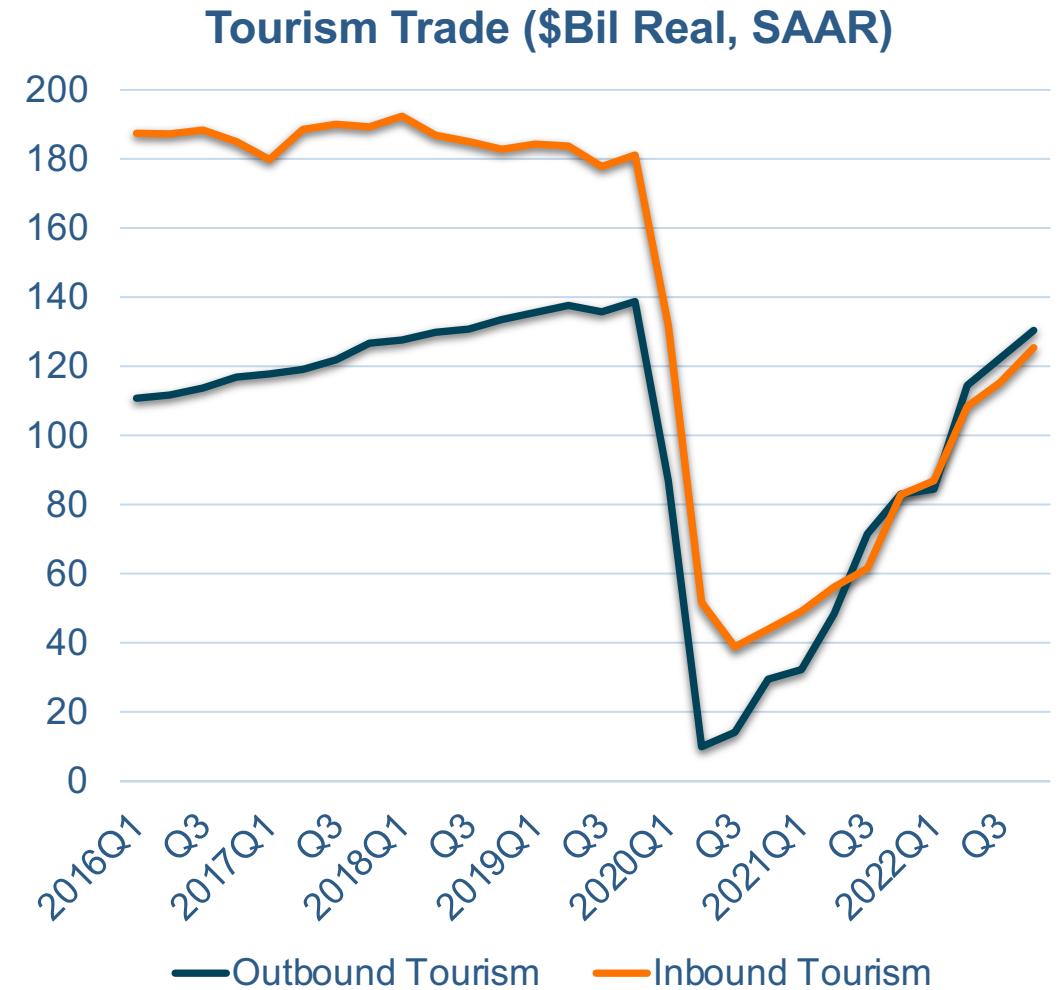
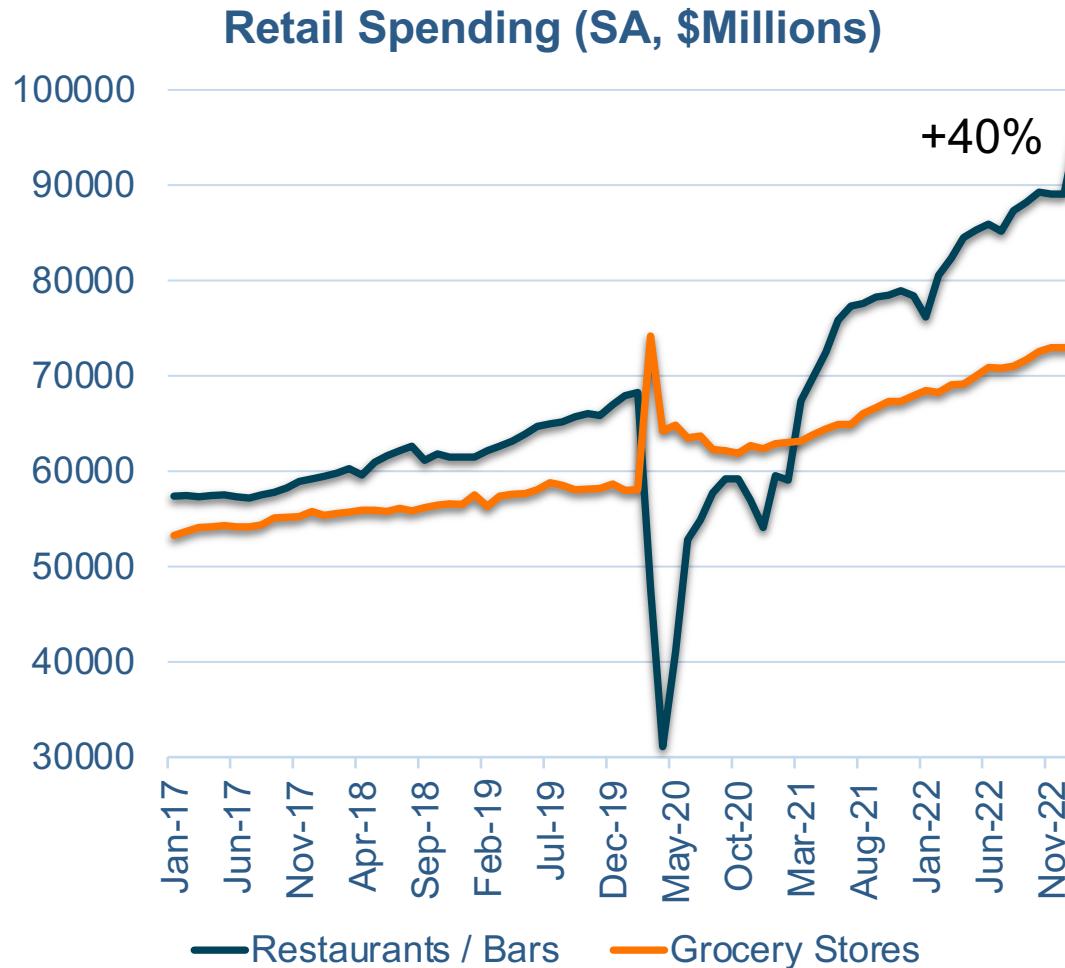
Consumer spending jumped in January, which was good news for retailers but could weigh on the Federal Reserve's efforts to tame rapid inflation.

Business Activity – Larimer County

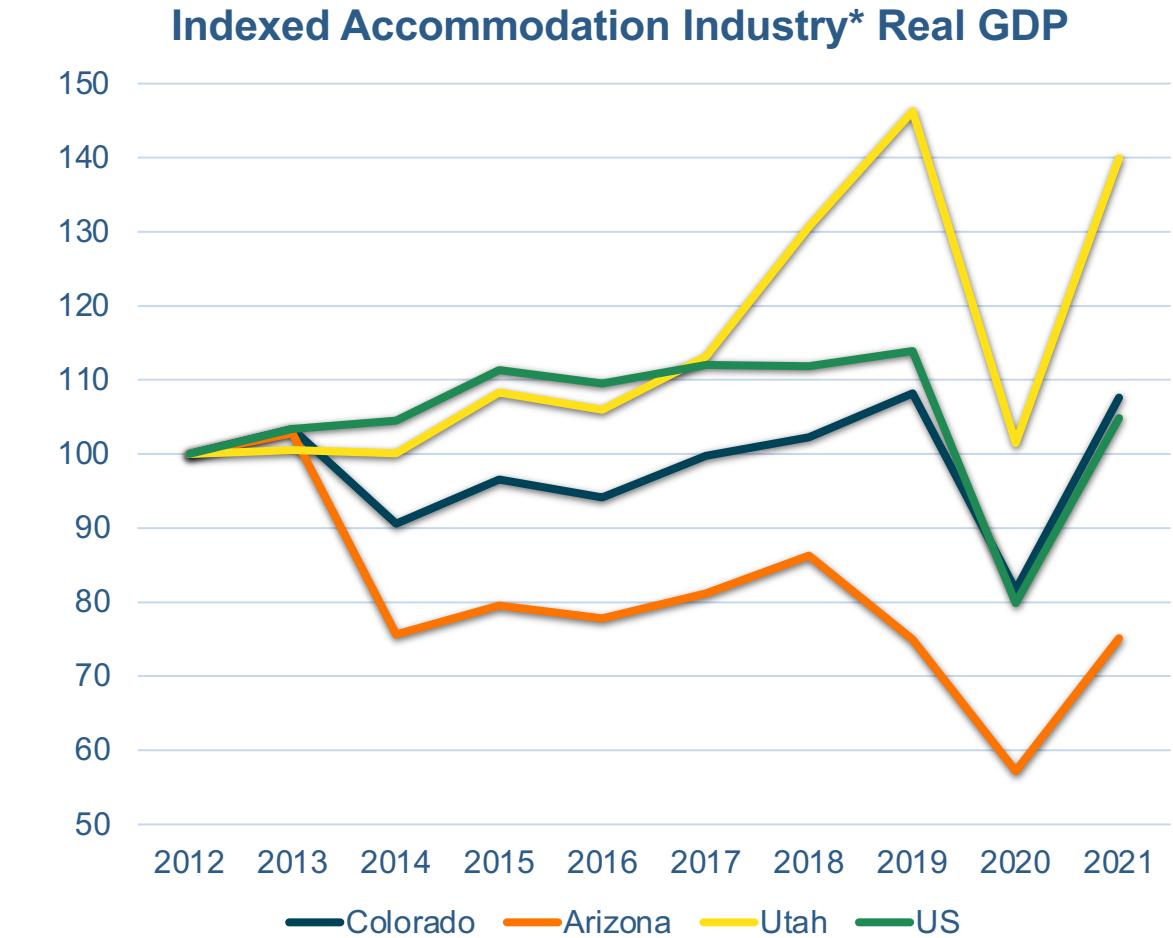
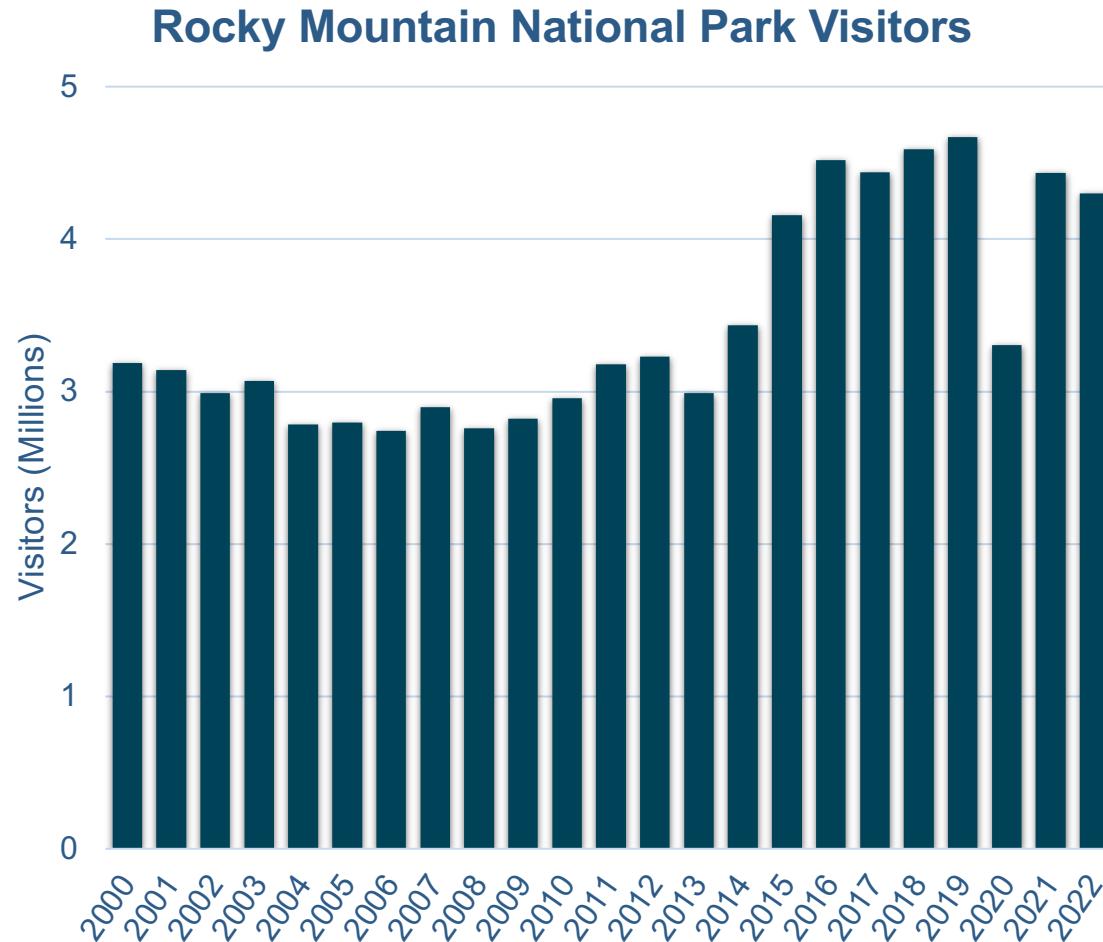


County	2022 Taxable Sales (\$, Bil)	3-Yr % Growth
Larimer	9.0	32.2
Adams	13.9	33.3
Jefferson	12.6	29.9
Boulder	7.9	28.5
Arapahoe	16.4	27.7
Denver	21.6	21.1
Weld	7.5	17.2

A shift back to consumer services...



Travel and Accommodation

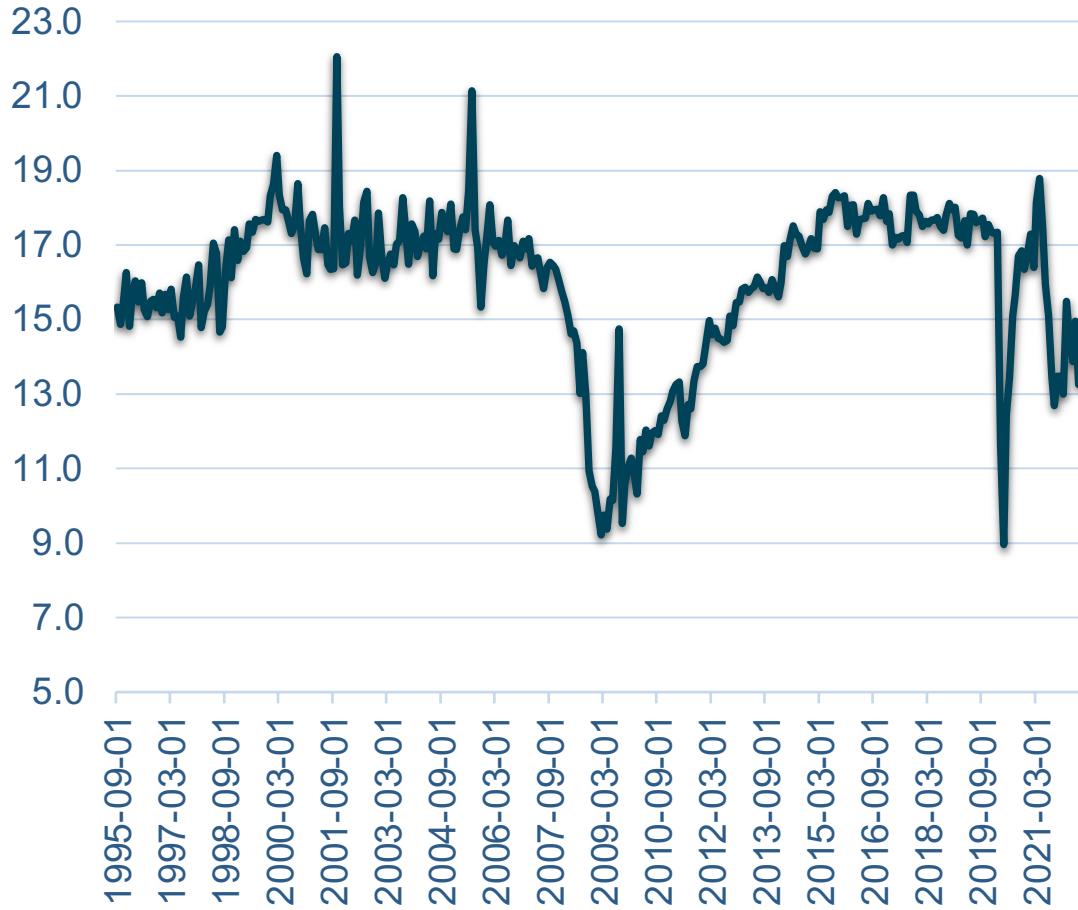


*NAICS 721

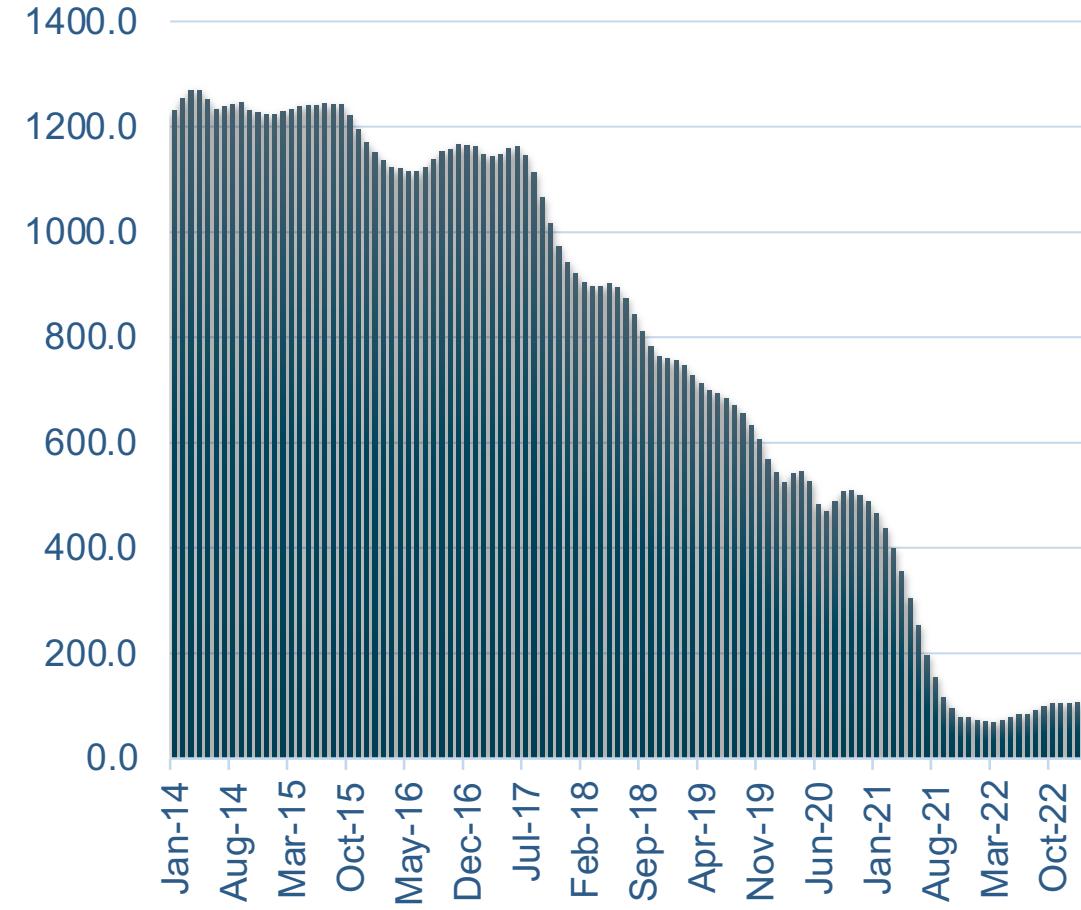
Still Pent-Up Consumer Demand



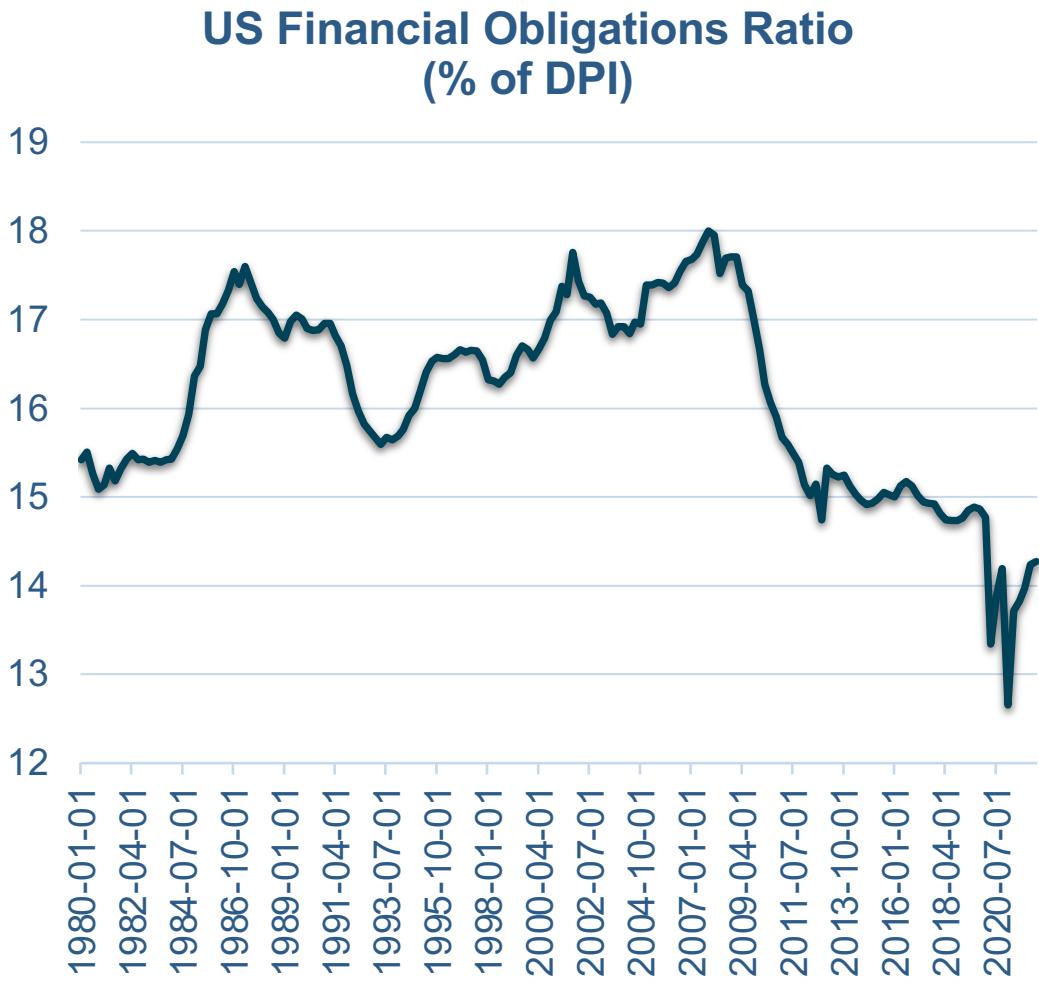
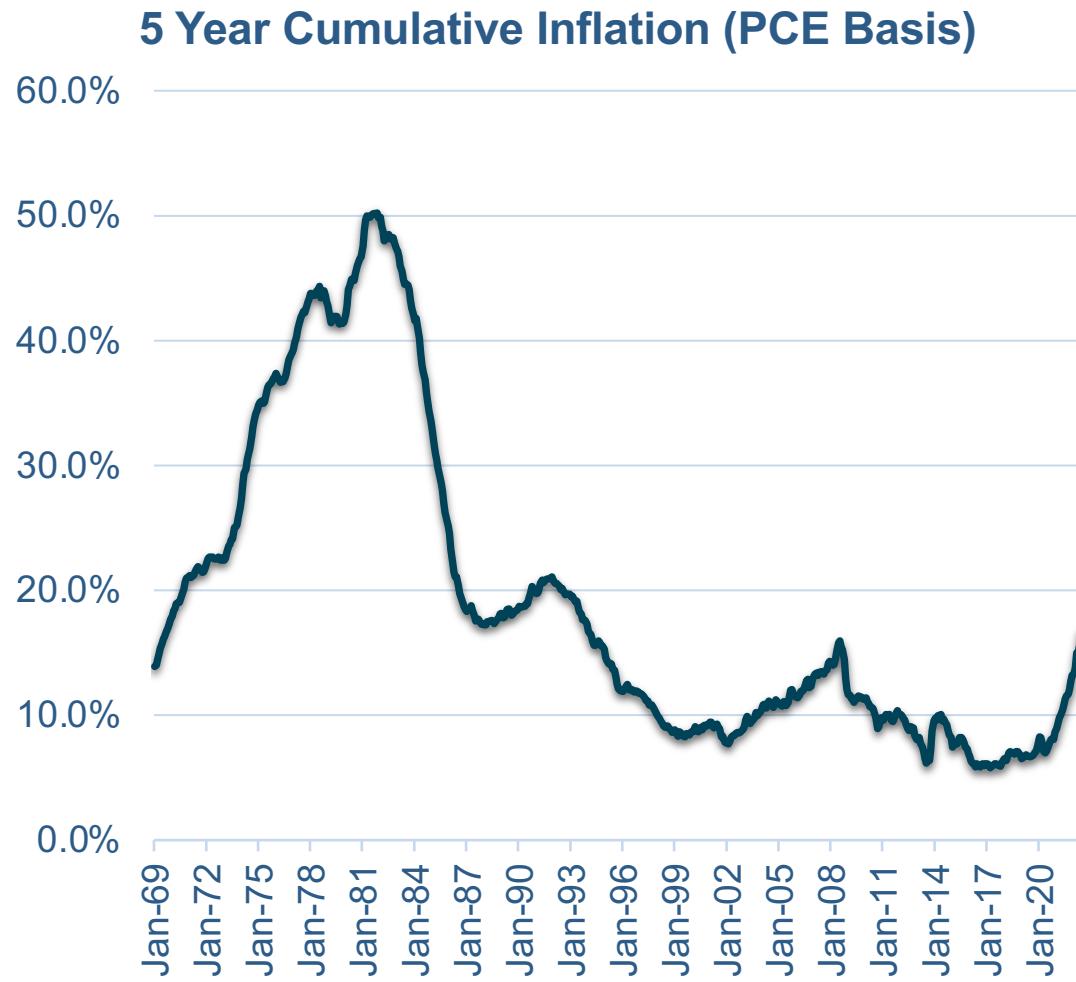
New Auto Sales SAAR (Mil Units)



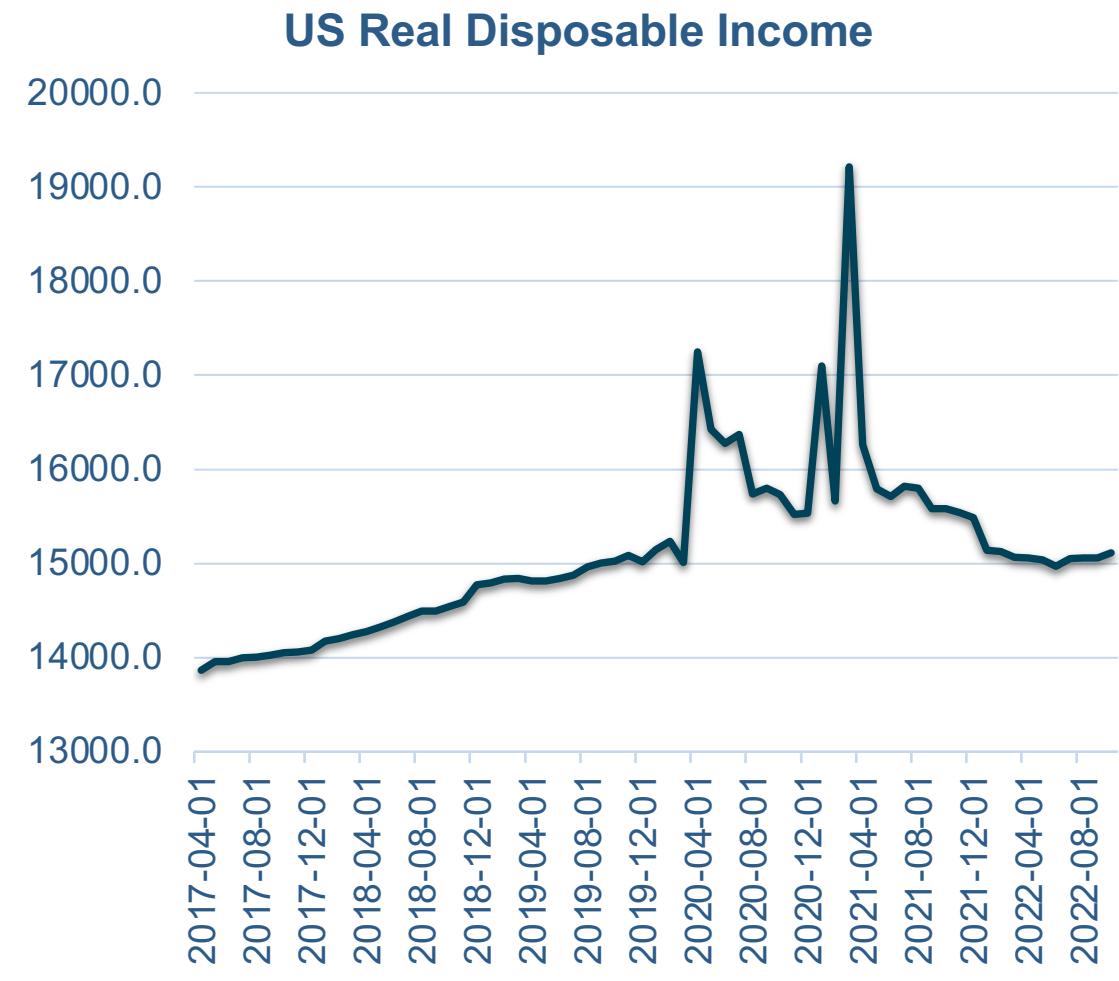
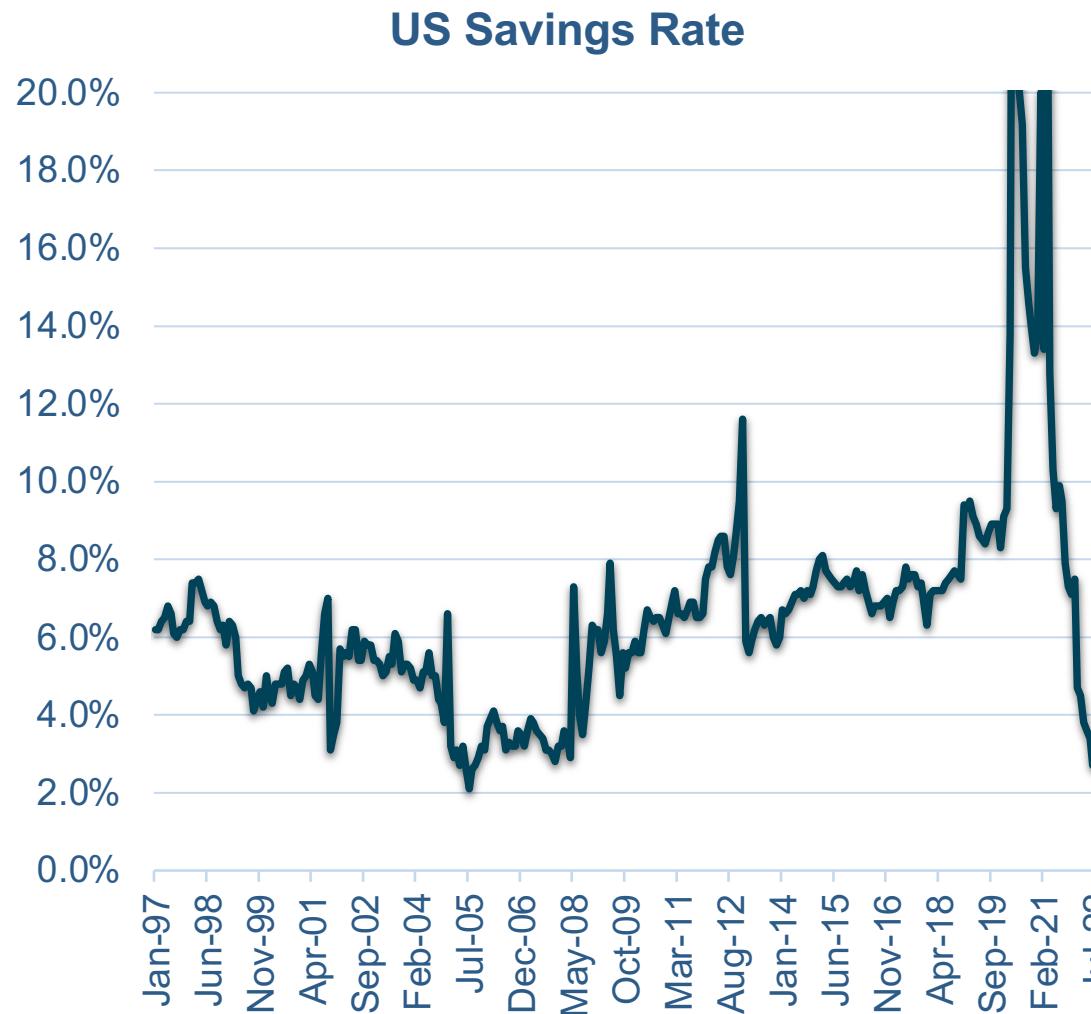
Domestic Auto Inventories (SA, 000s)



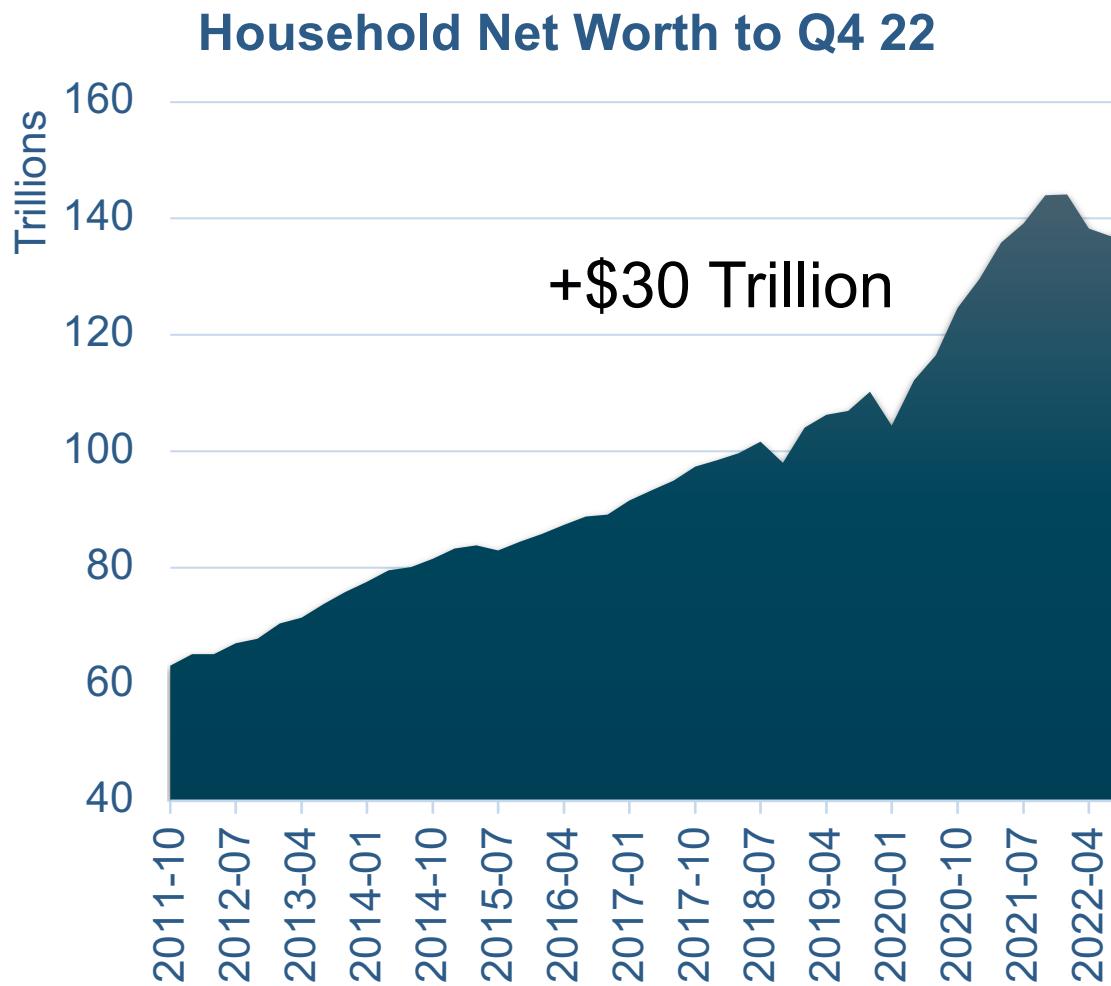
Can the consumer survive? Context...



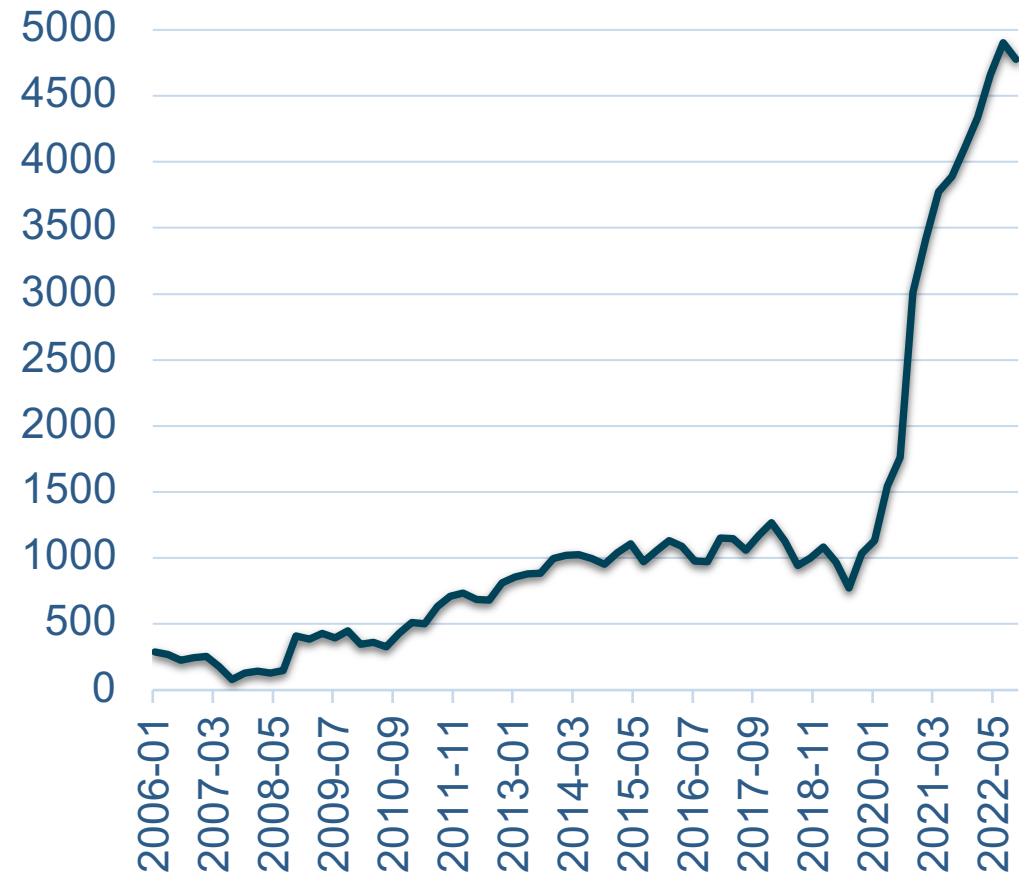
The Income Argument



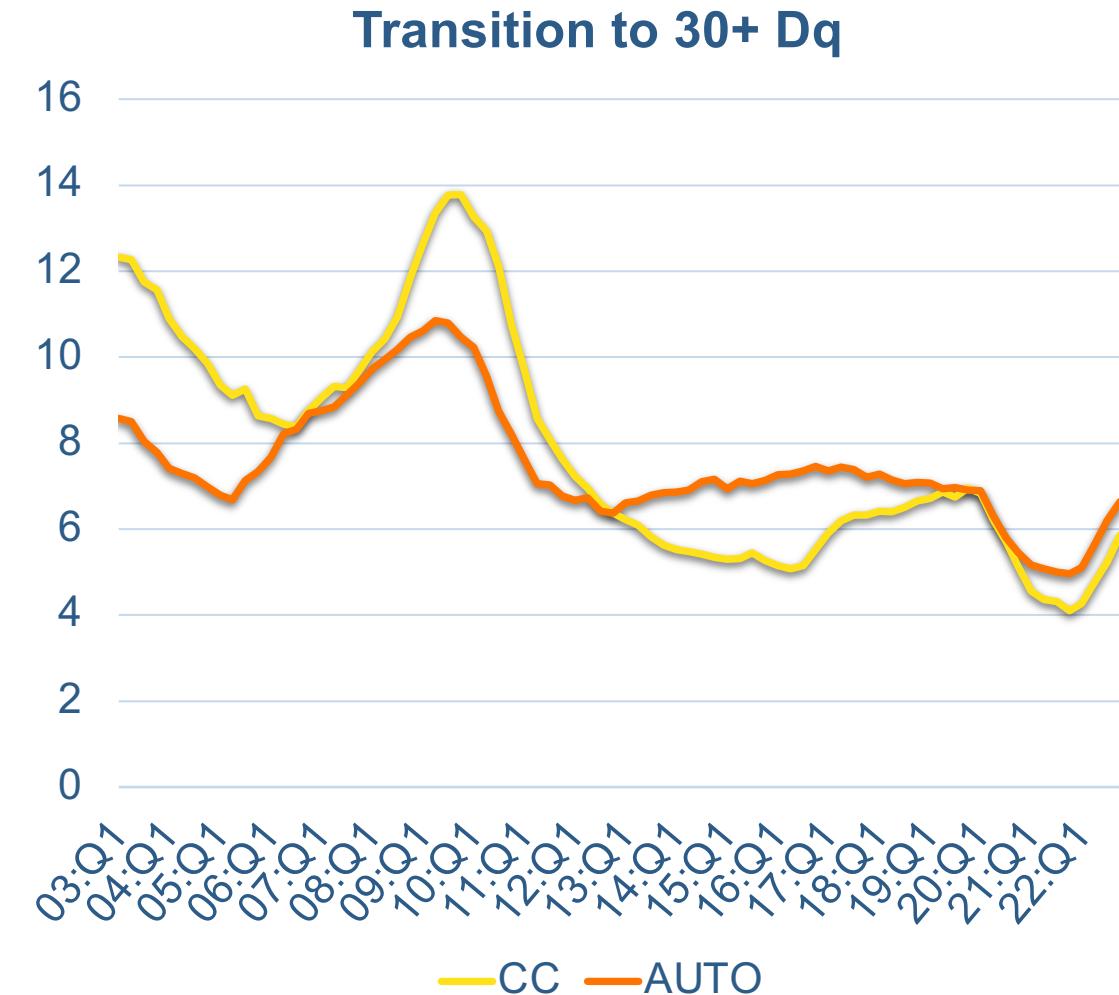
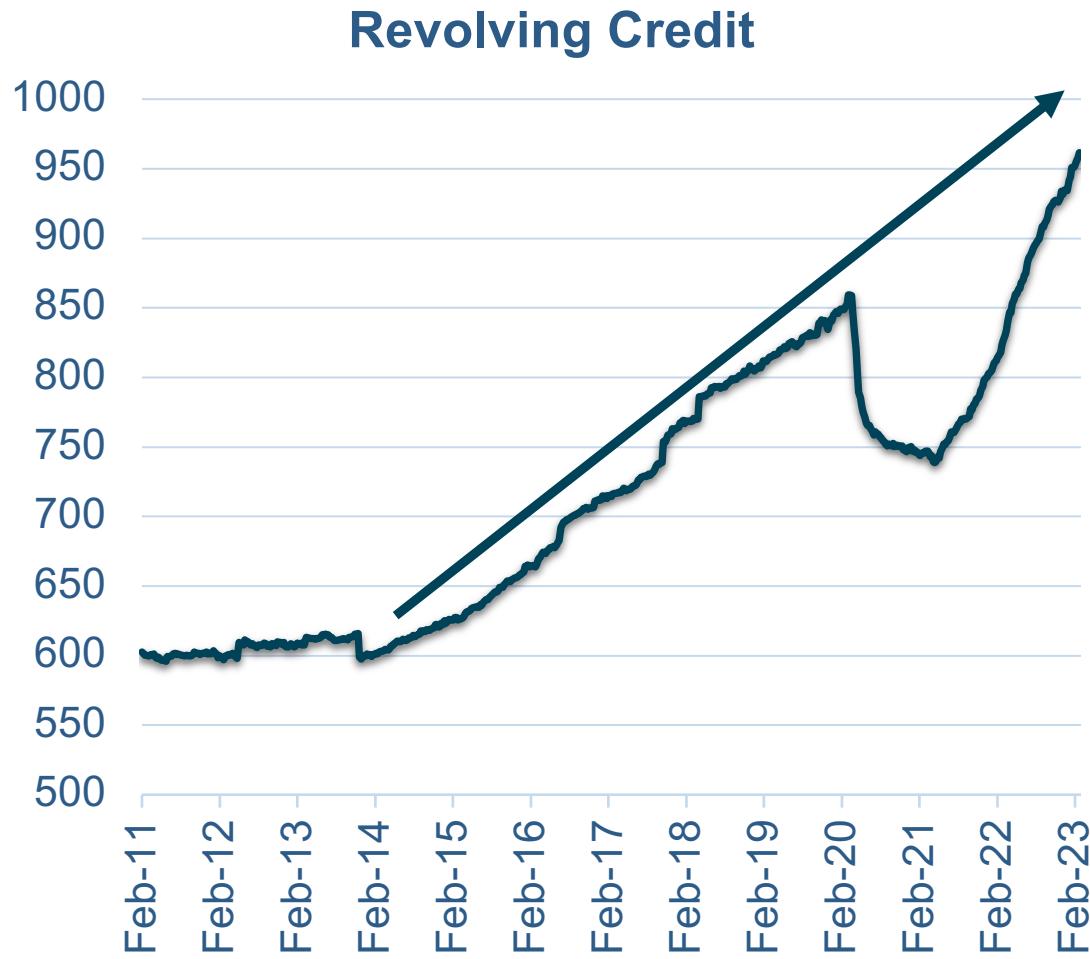
Income vs Wealth



**Household Checkable Deposits
to Q4 2022 \$Bil**



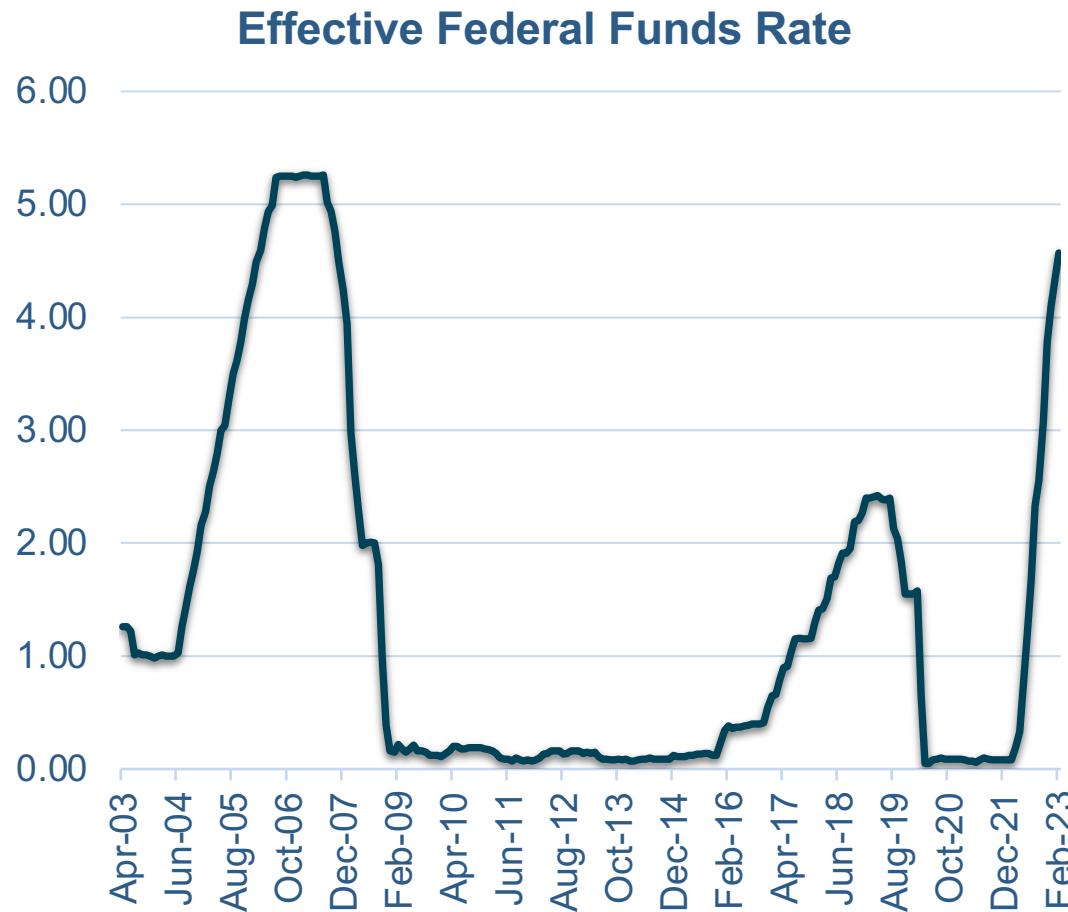
Scary Debt Stories? Nah...



The Fed Response Part 1

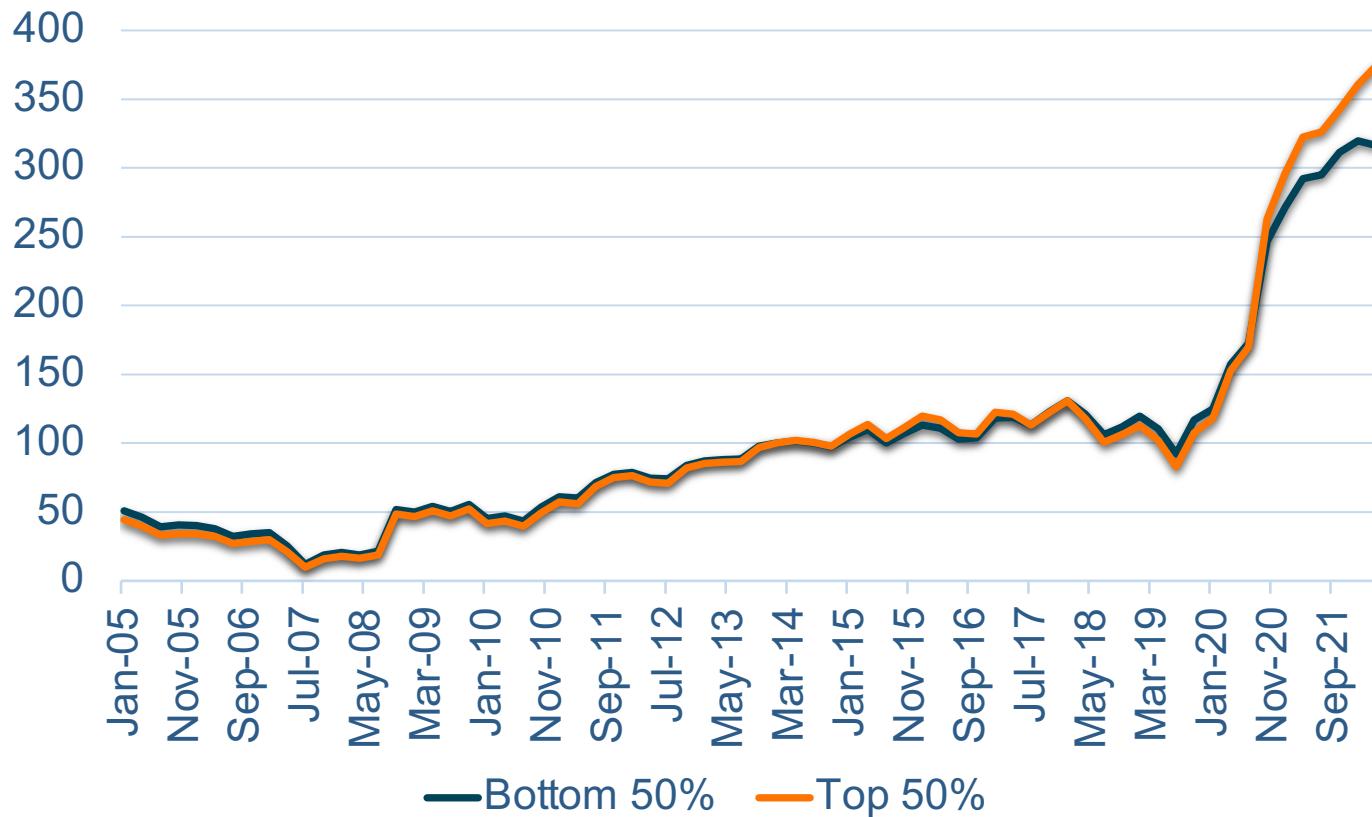


Changing the pace of price adjustment, not the scale of it...





Indexes of Checkable Deposits by Household Income Level



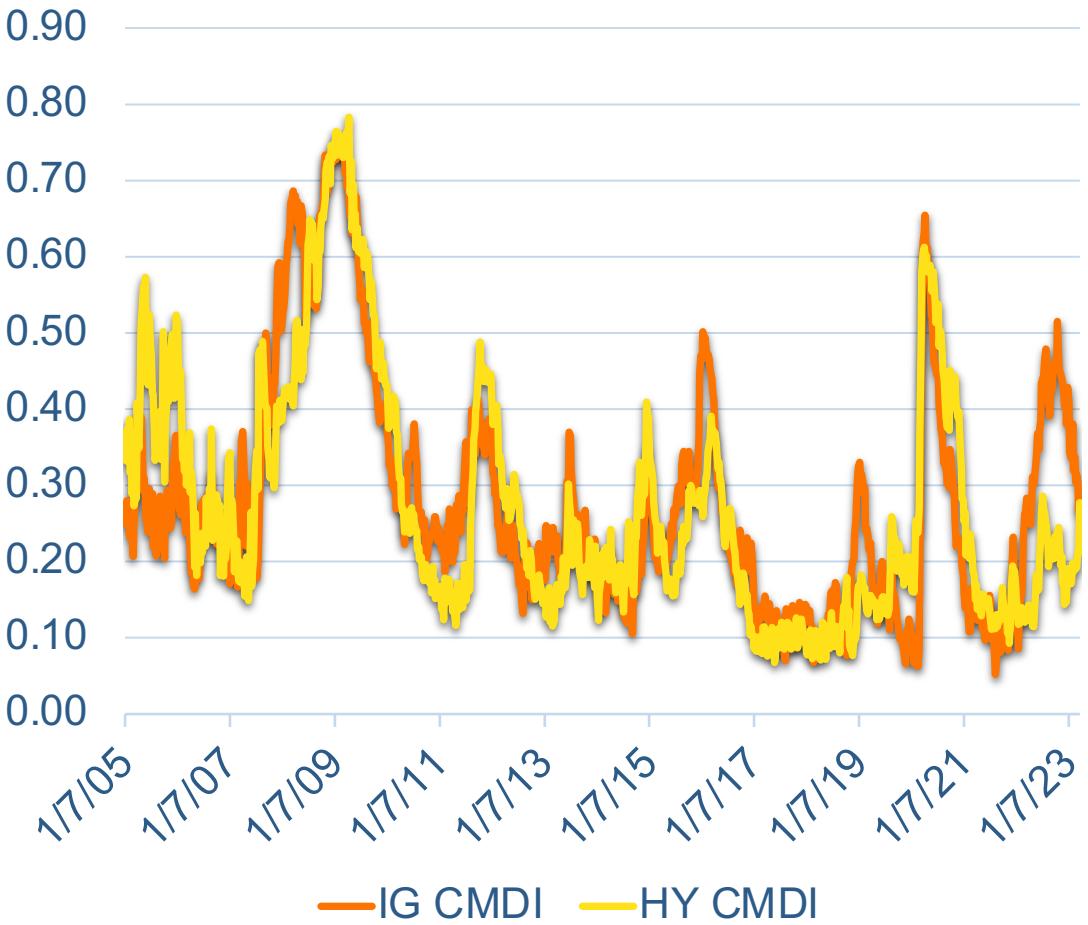
The Fed Response Part 1...



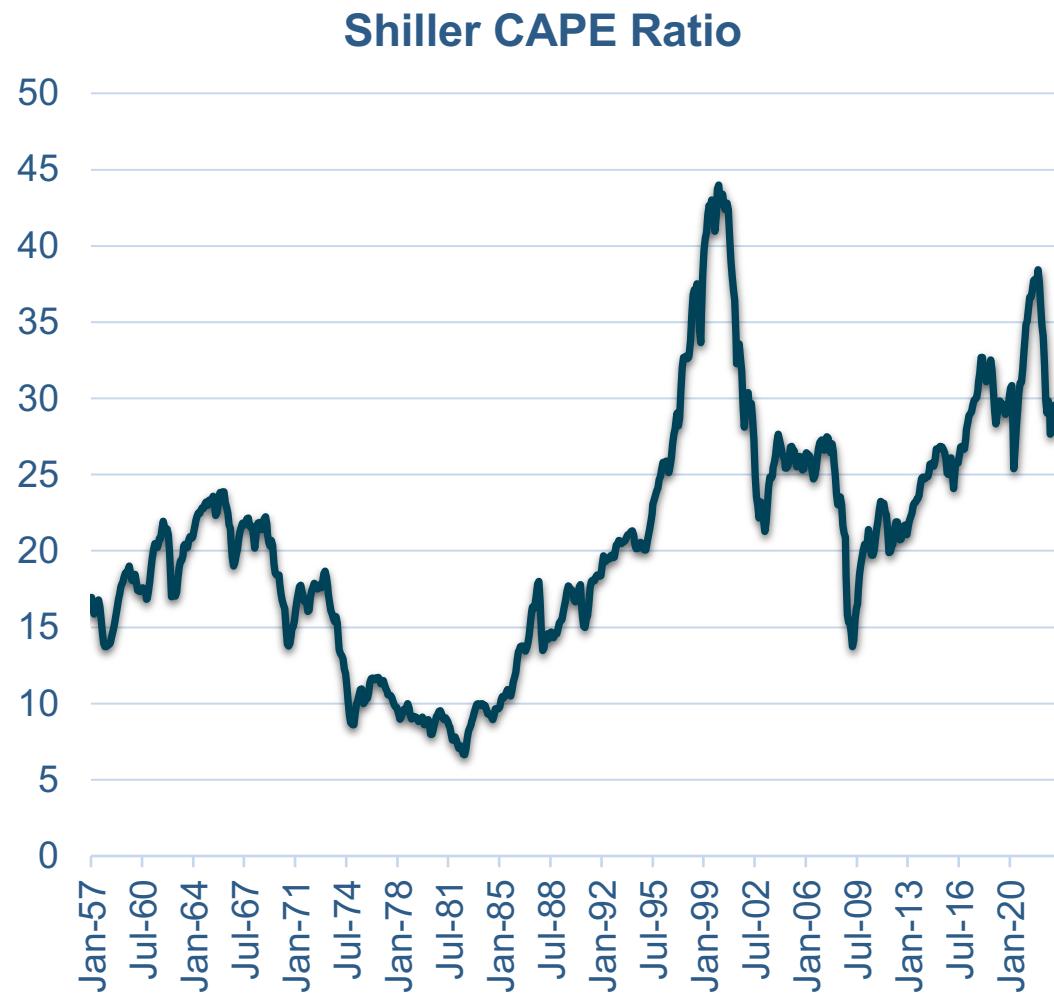
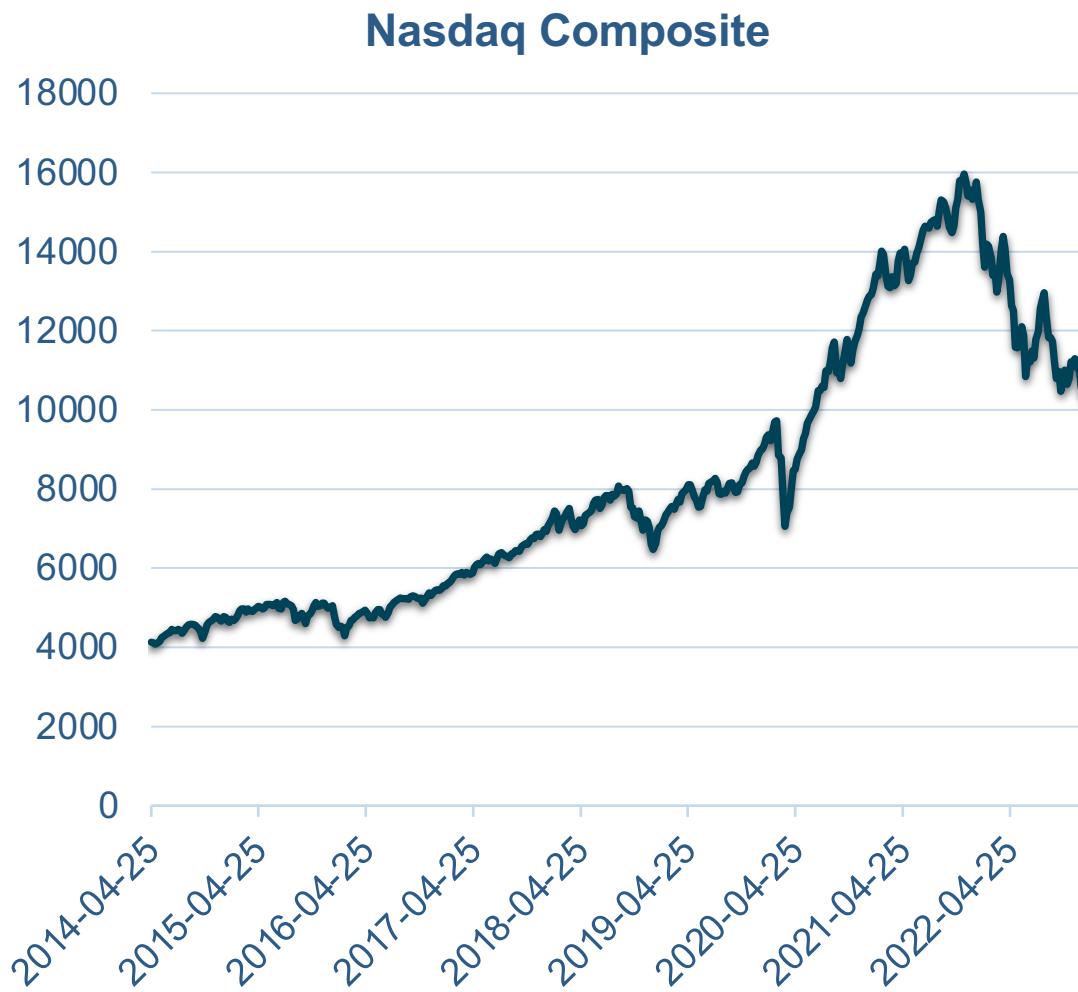
Long Run Interest Rates



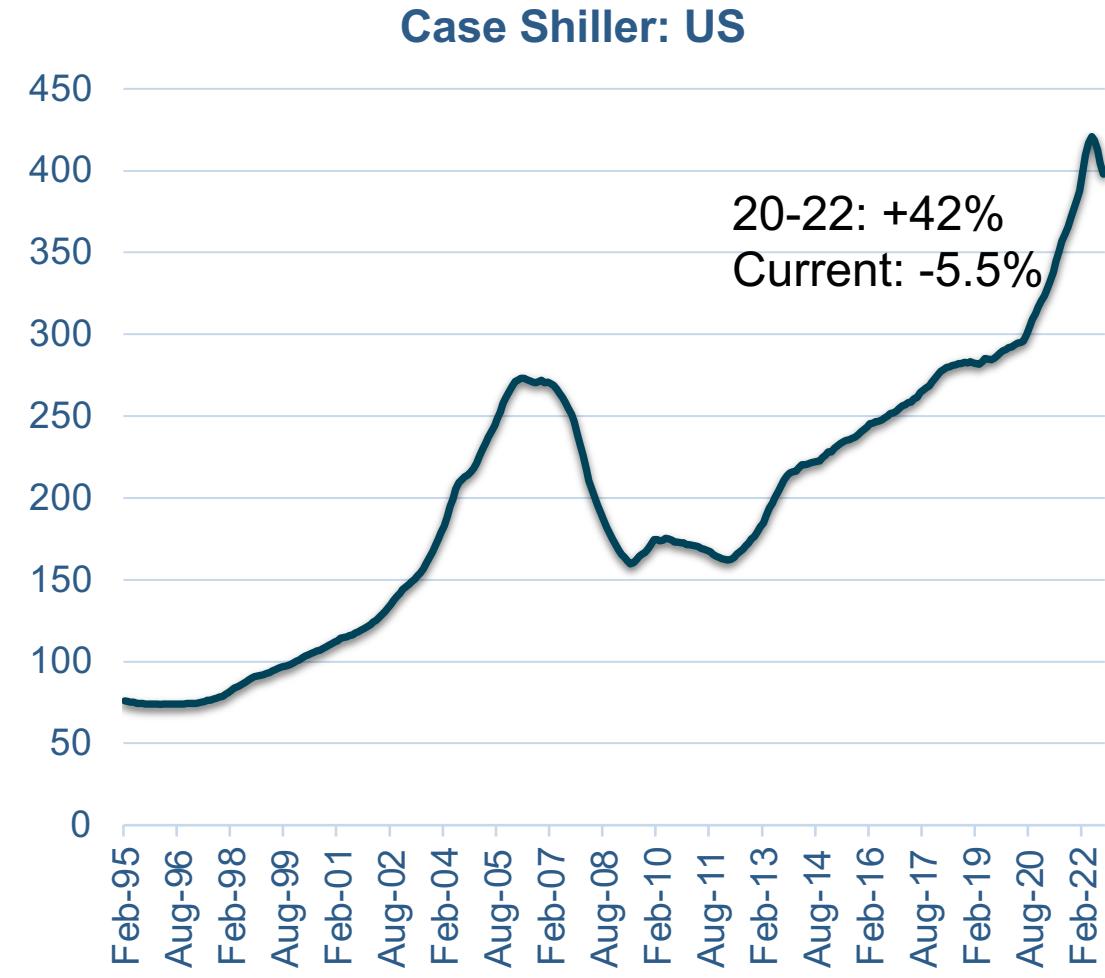
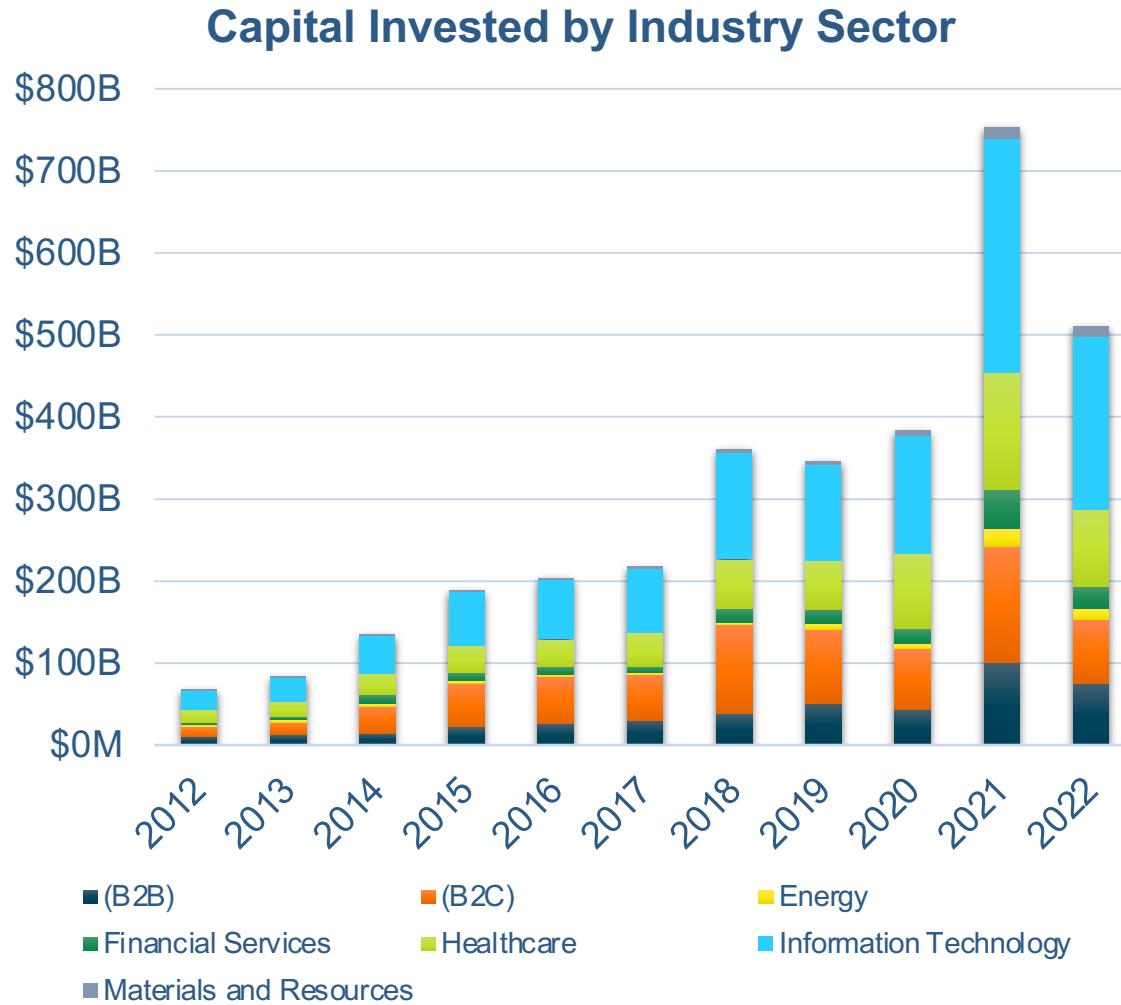
Bond Market Distress (NYFed)



Gravity still works...



Gravity, VC and Housing





How much farther can inflation go?



Unit Money Supply



} 8% to 13%
increase in P
to offset M2
(with little real
growth)

2 Year Inflation Scenarios

To Date	Target UMS	Weak QT	Strong QT
M2	32.5%	0.75	-0.7%
Real Growth	5.0%	0.70	6.2%
Inflation	13.6%	0.65	13.7%
Remainder	14.0%	0.60	21.1%
			16.1%



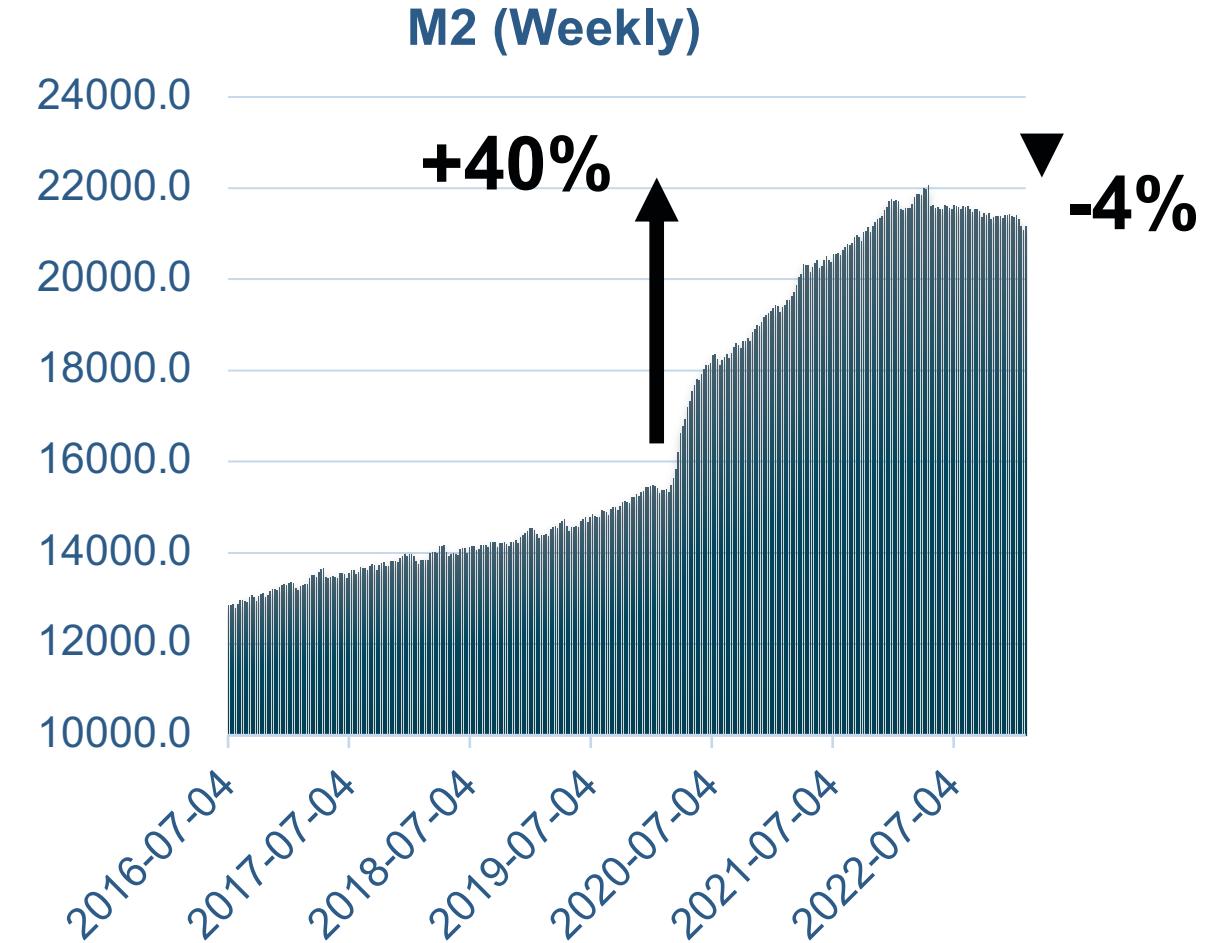
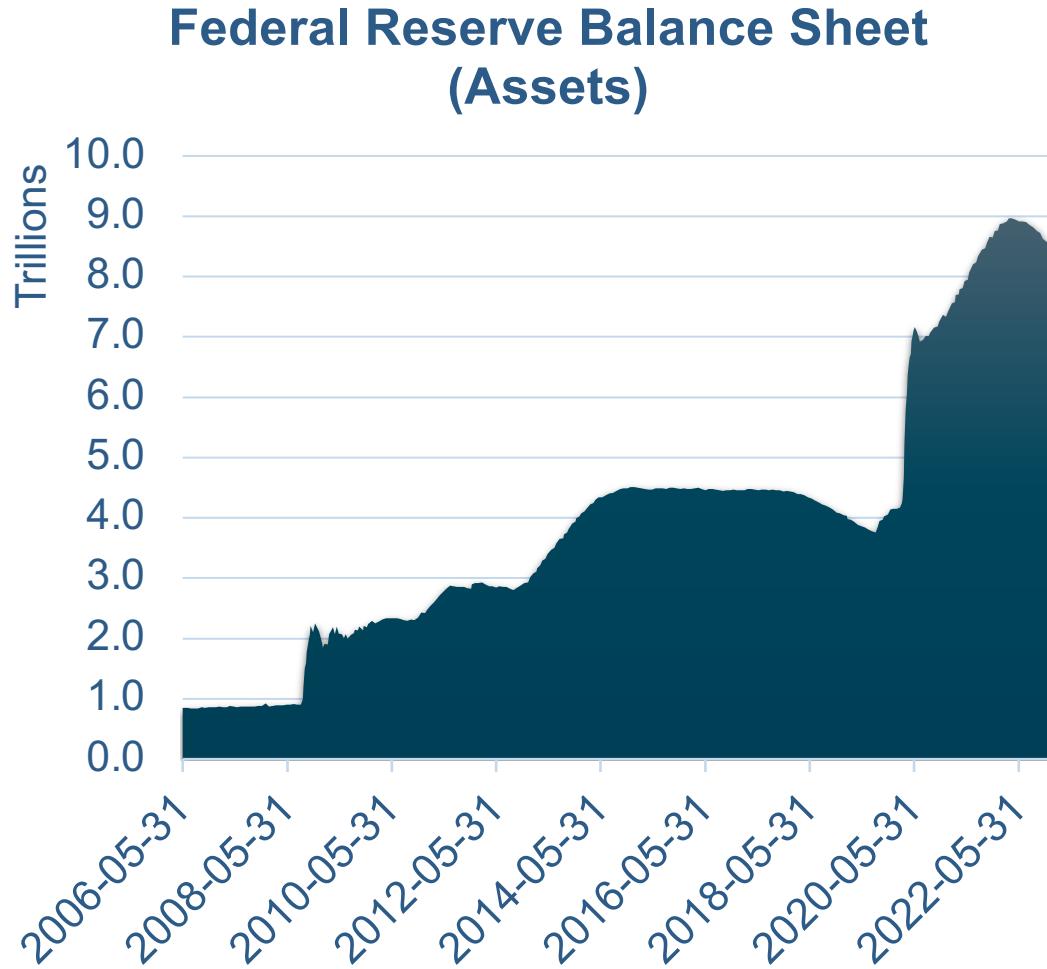
US interest rates

+ Add to myFT

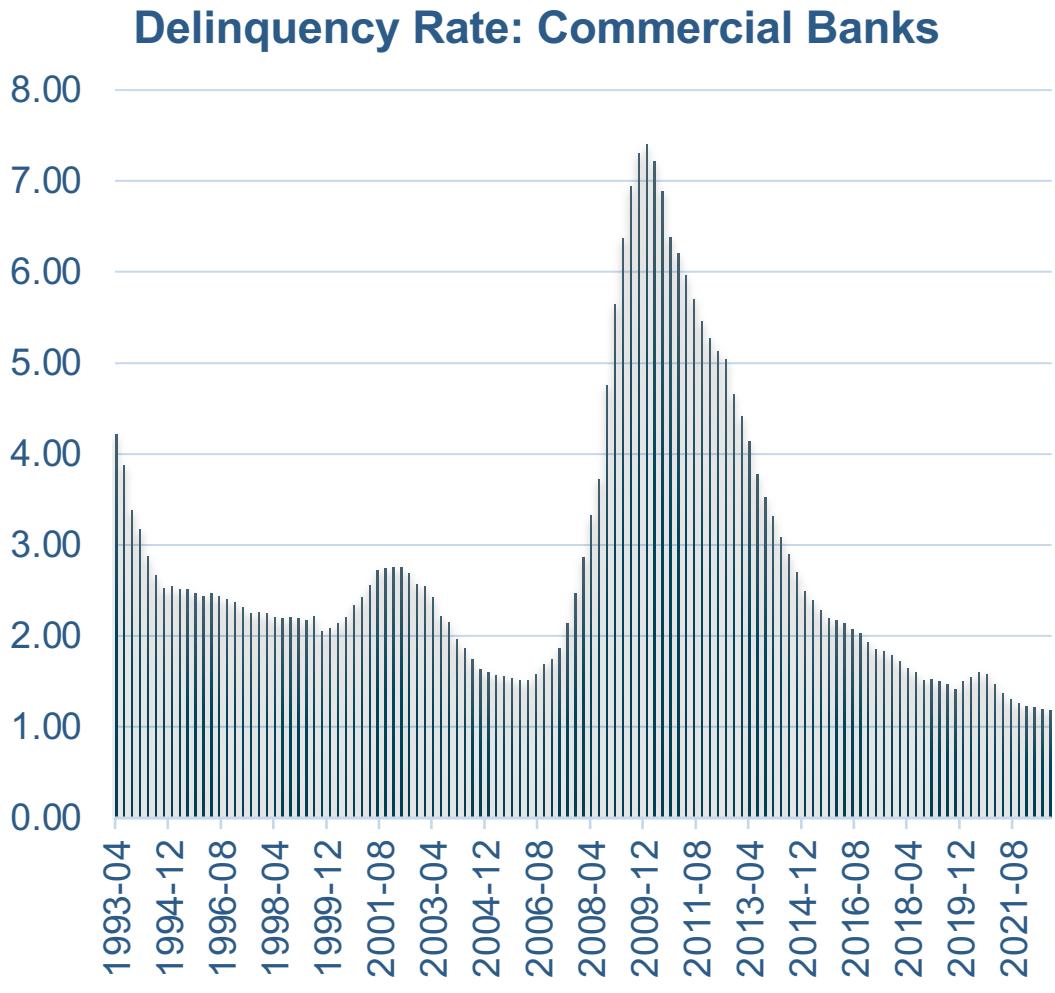
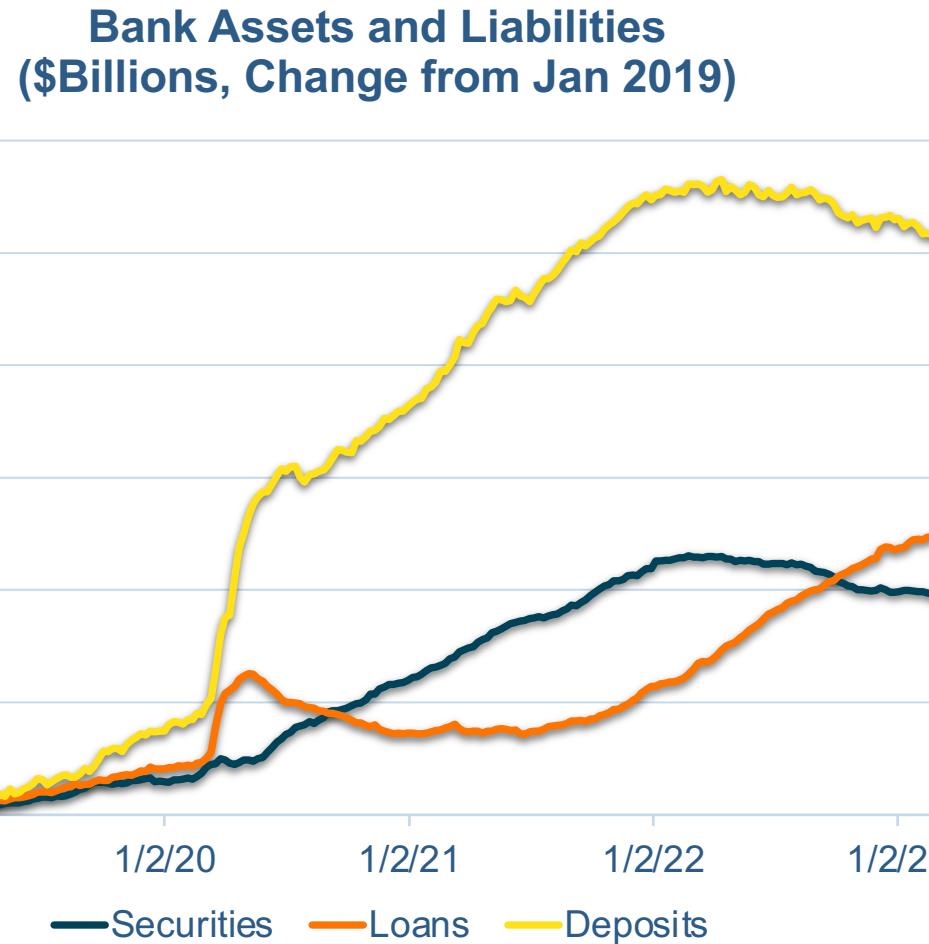
Jay Powell warns Fed is prepared to return to bigger interest rate rises

High-stakes testimony before Senate committee comes as central bank struggles to cool US economy

The Fed Response Part 2: QT



The impact on banking...



Fed Policy



- *Conducting the nation's monetary policy by influencing money and credit conditions in the economy in pursuit of full employment and stable prices.*
- *Supervising and regulating banks and other important financial institutions to ensure the safety and soundness of the nation's banking and financial system and to protect the credit rights of consumers.*

Error #1: Panic over full employment has negatively impacted price stability

Error #2: Panic over price stability has negatively impacted the banking system



THE WALL STREET JOURNAL.

MARKETS | FINANCIAL REGULATION

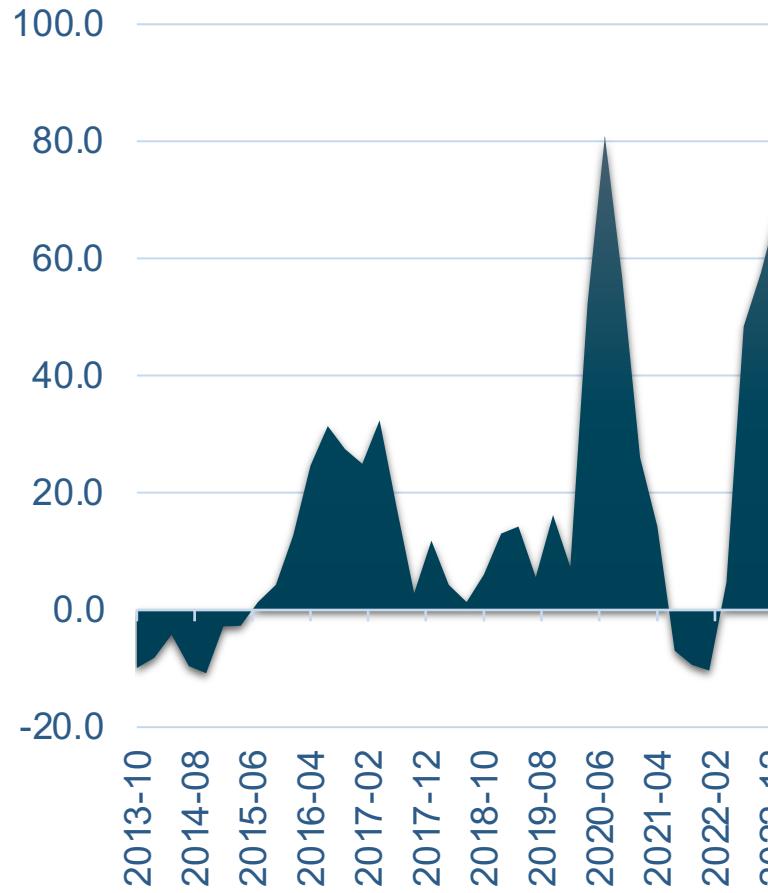
Fed's Barr Calls Silicon Valley Bank a ‘Textbook Case of Mismanagement’

Top bank regulator to testify Tuesday alongside other officials

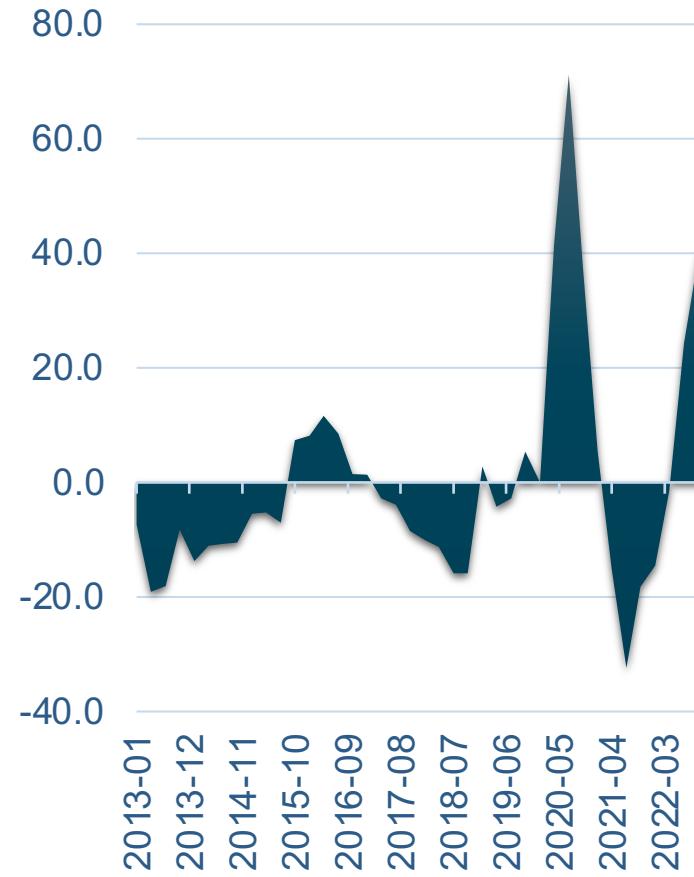
The impact on banking...



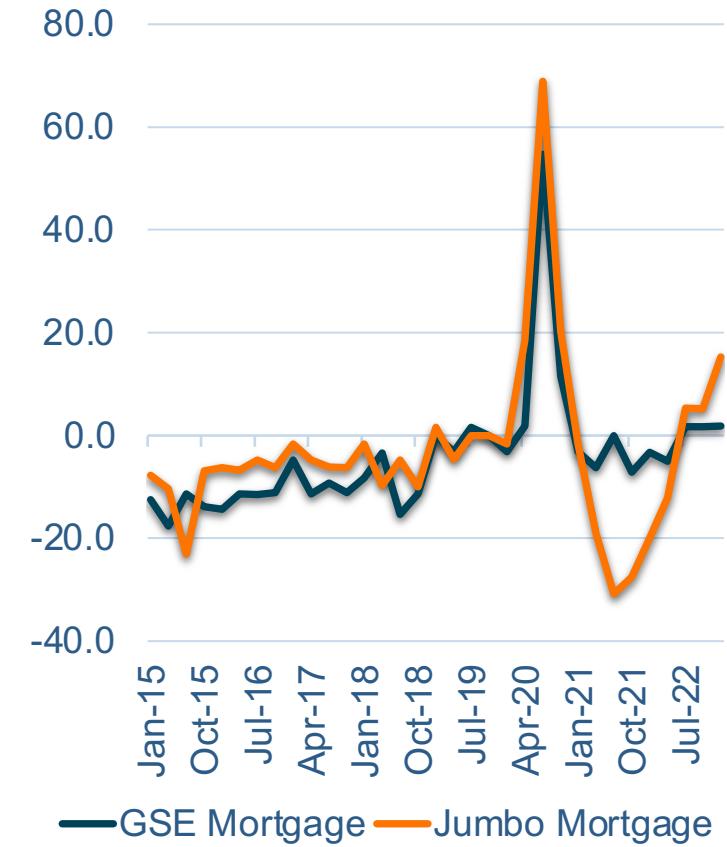
Increasing Standards on
Commercial RE Loans



Increasing Standards on
C&I Loans



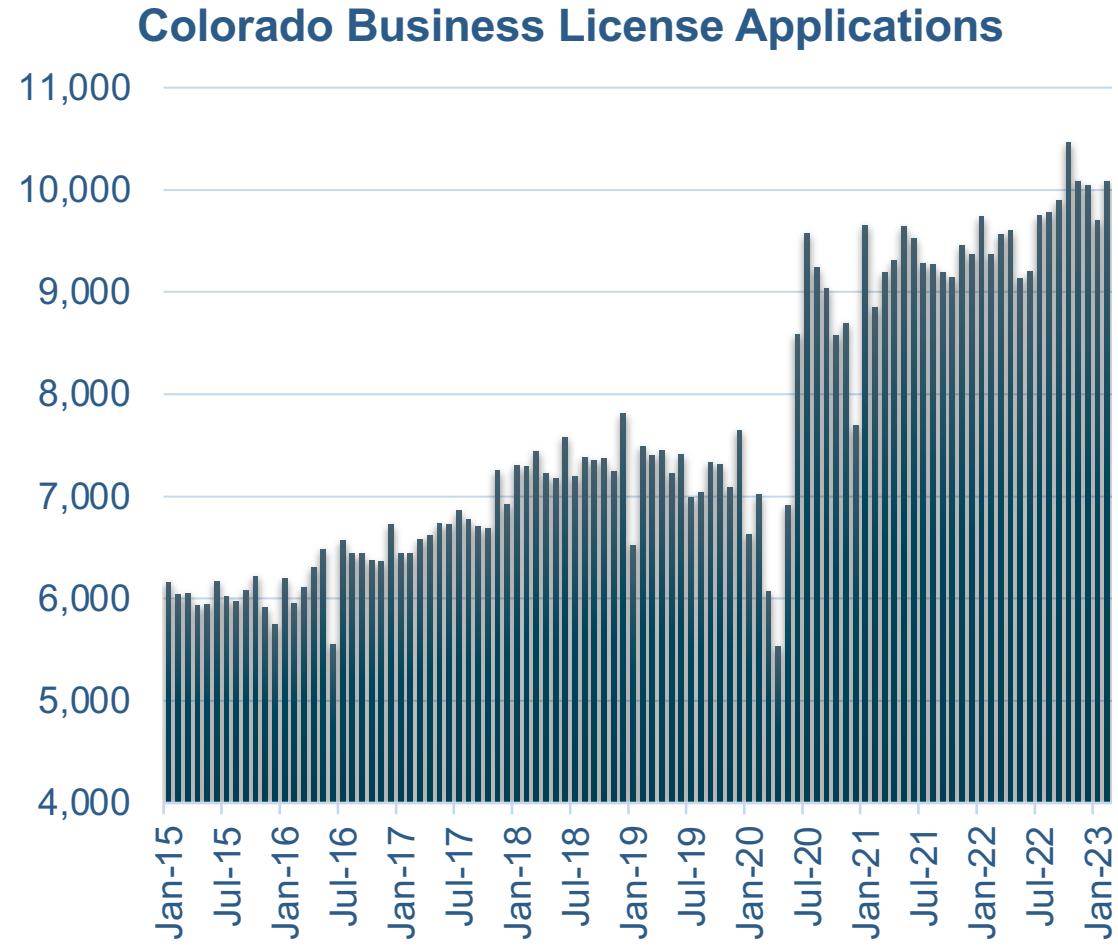
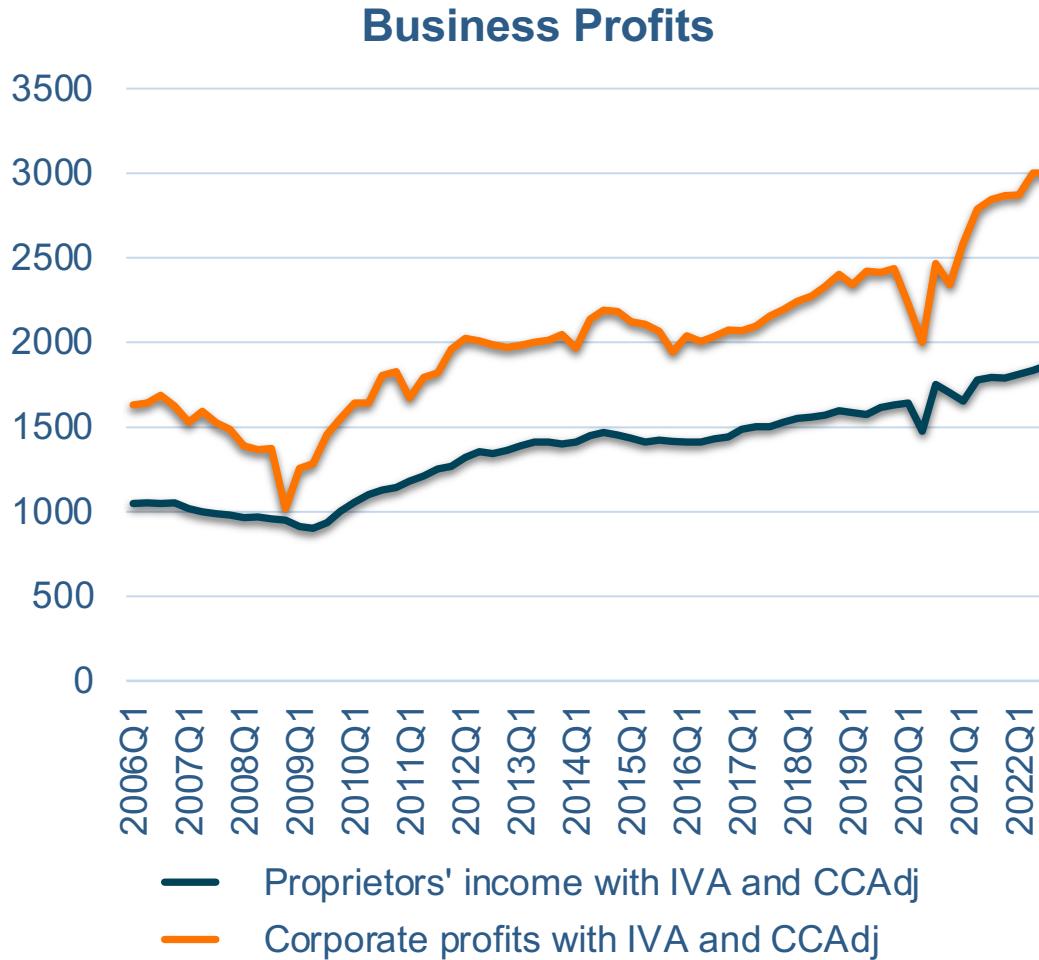
Increasing Standards on
Mortgage Loans





	2/19/20	Rate	7/27/22	Rate
	7/27/22		2/22/23	
Deposits	4,682,704	35.0%	(420,663)	-2.3%
Securities	1,900,520	49.2%	(278,847)	-4.8%
Loans	1,441,191	14.3%	572,938	5.0%

Business is managing as well...



Business's real issue...

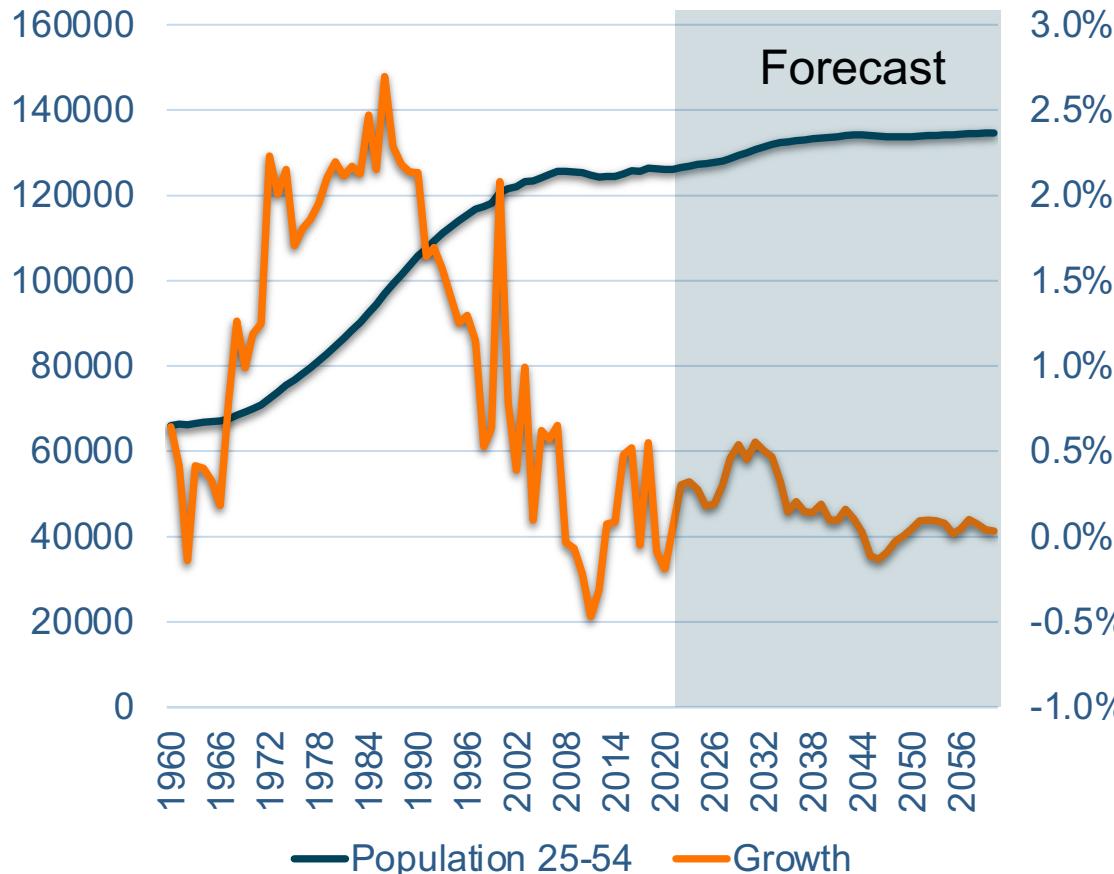


Job Openings Rate by Sector	Jul-19	Jul-22
Total private	4.2	7.7
Health care	2.8	9.3
Leisure hospitality	6.7	9.3
Professional	5.4	9.0
Logistics	3.9	8.0
Other services	3.7	7.5
Financial activities	2.6	7.0
Information	3.9	7.0
Retail trade	4.9	6.5
Manufacturing	2.5	6.2
Education	2.6	6.0
Mining and logging	3.7	5.7
Government	1.5	5.2
Wholesale trade	2.8	4.9
Local education	1.6	4.7
Construction	5.1	4.7

The Era of Labor Shortages is Here



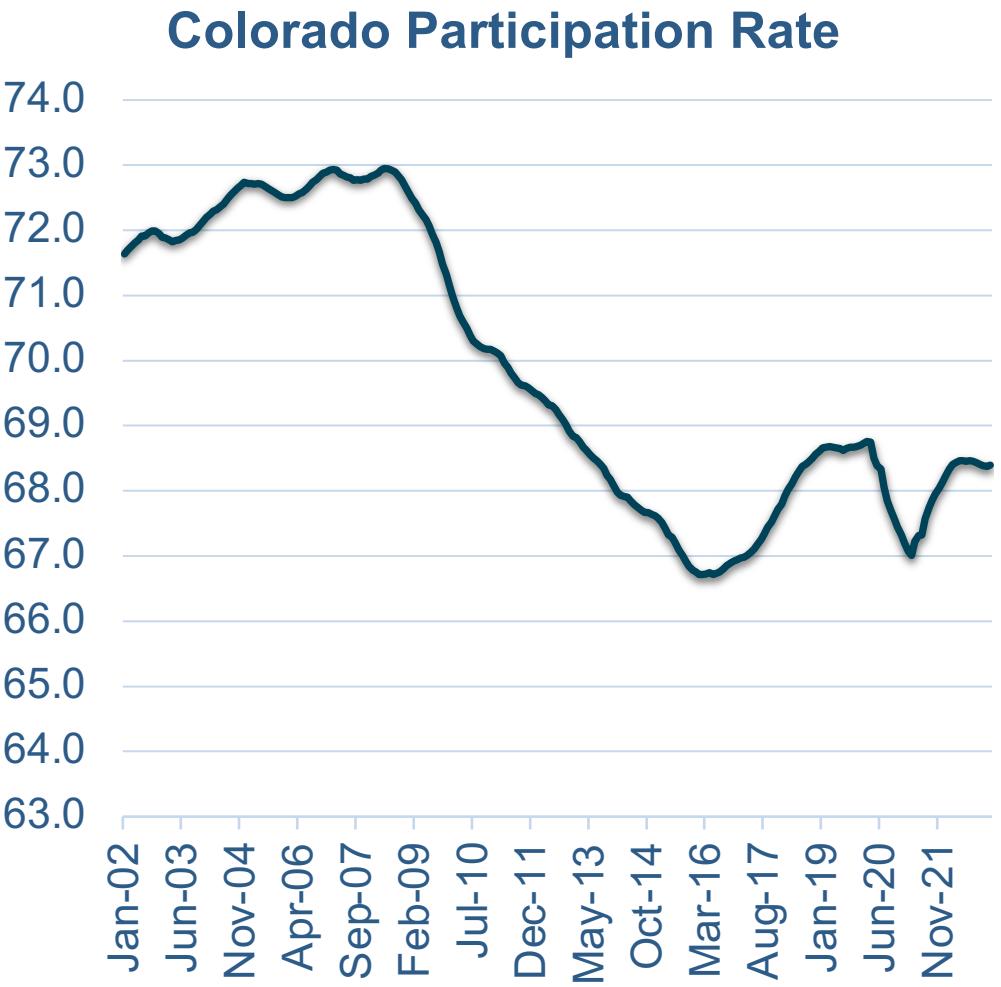
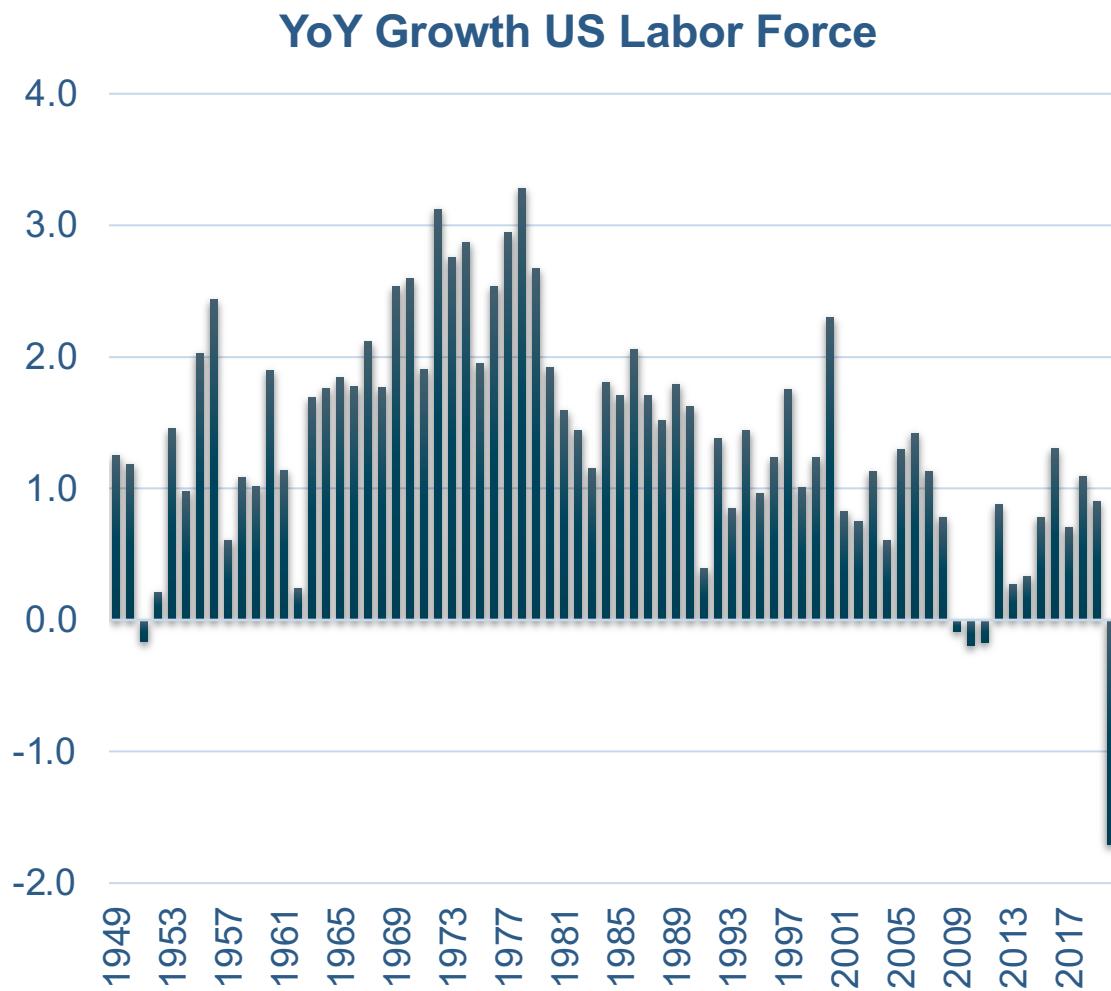
Prime Working Years Population Growth
(Census Forecasts)



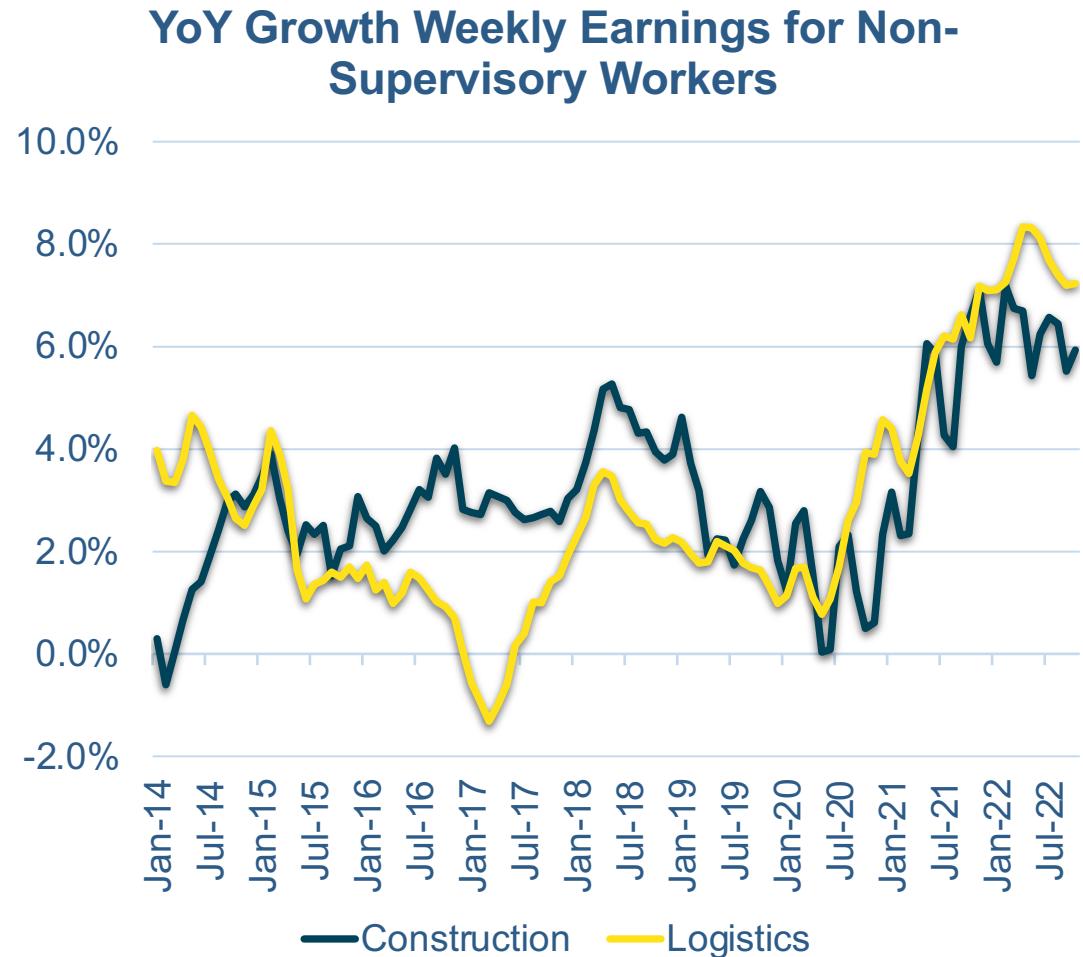
US Population Forecast

	0-24	25-64	65+
Current	104.5	169.4	49.2
2016-26	0.9	4.7	17.8
2026-36	2.0	6.2	11.9
2036-46	2.3	9.4	4.8
Total	5.3	20.3	34.5

Pandemic Influence



A 2-edged sword...





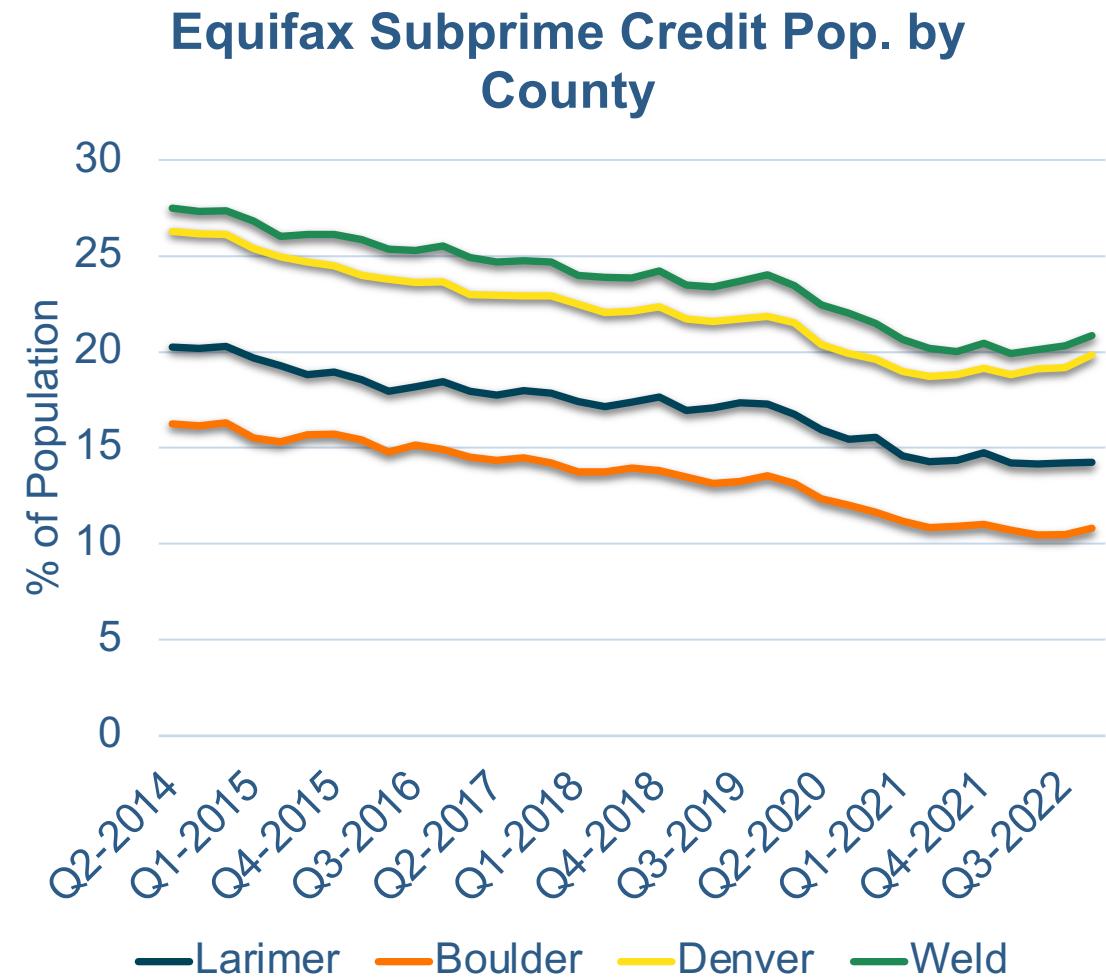
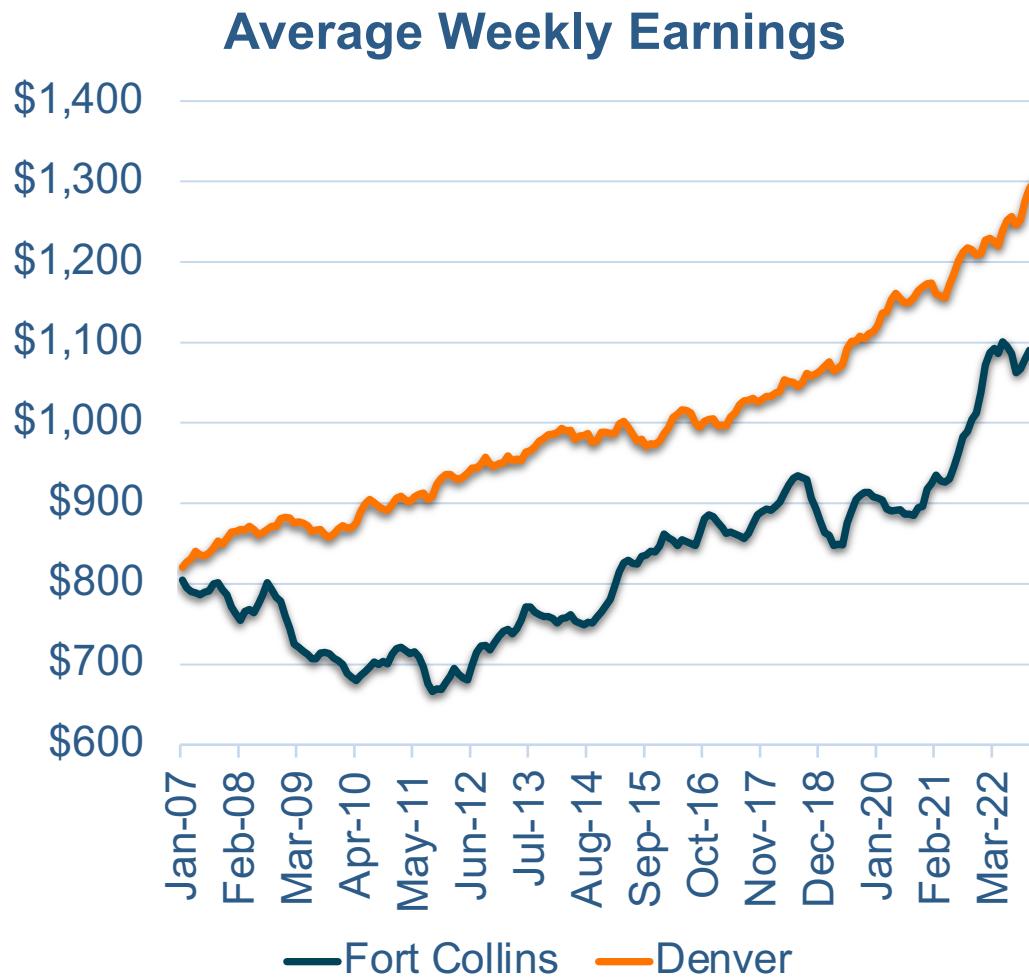
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Fed's Barr Calls Silicon Valley Bank a ‘Textbook Case of Mismanagement’

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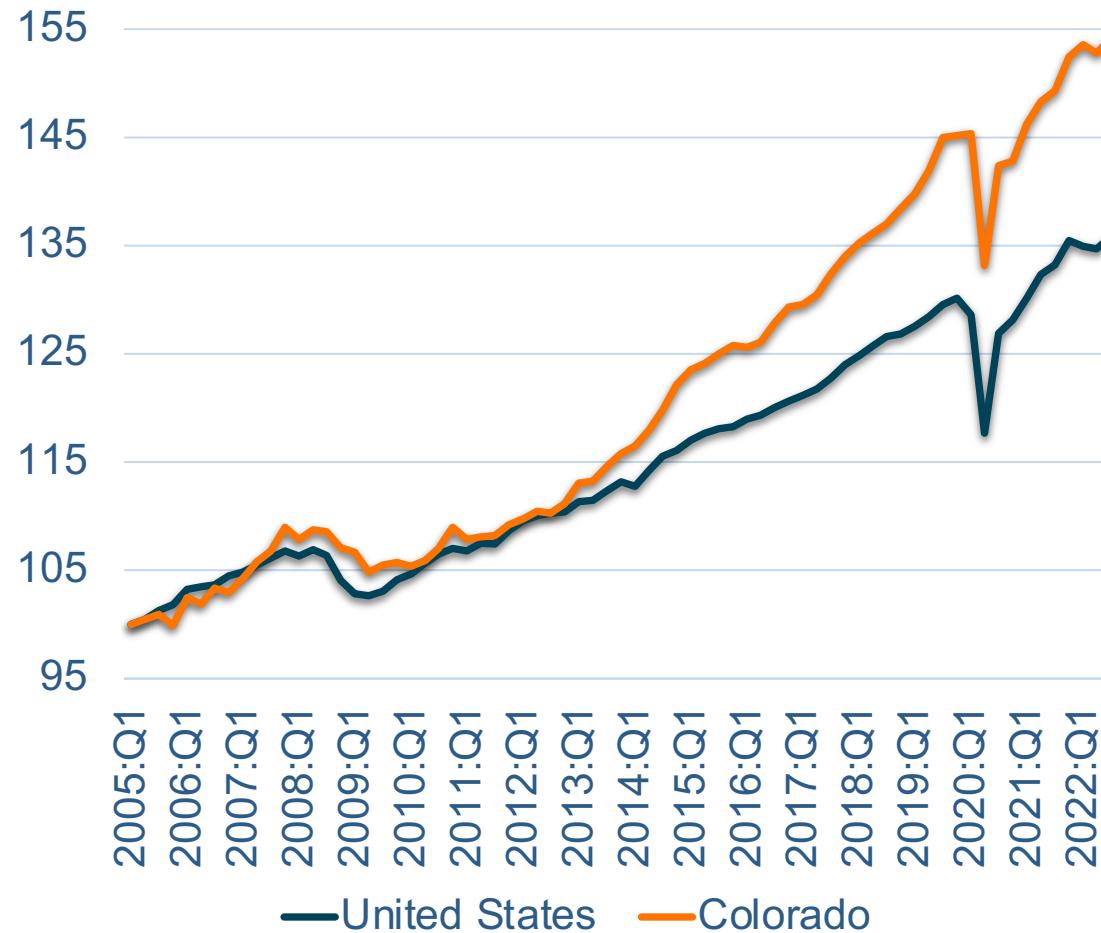
Local Earnings



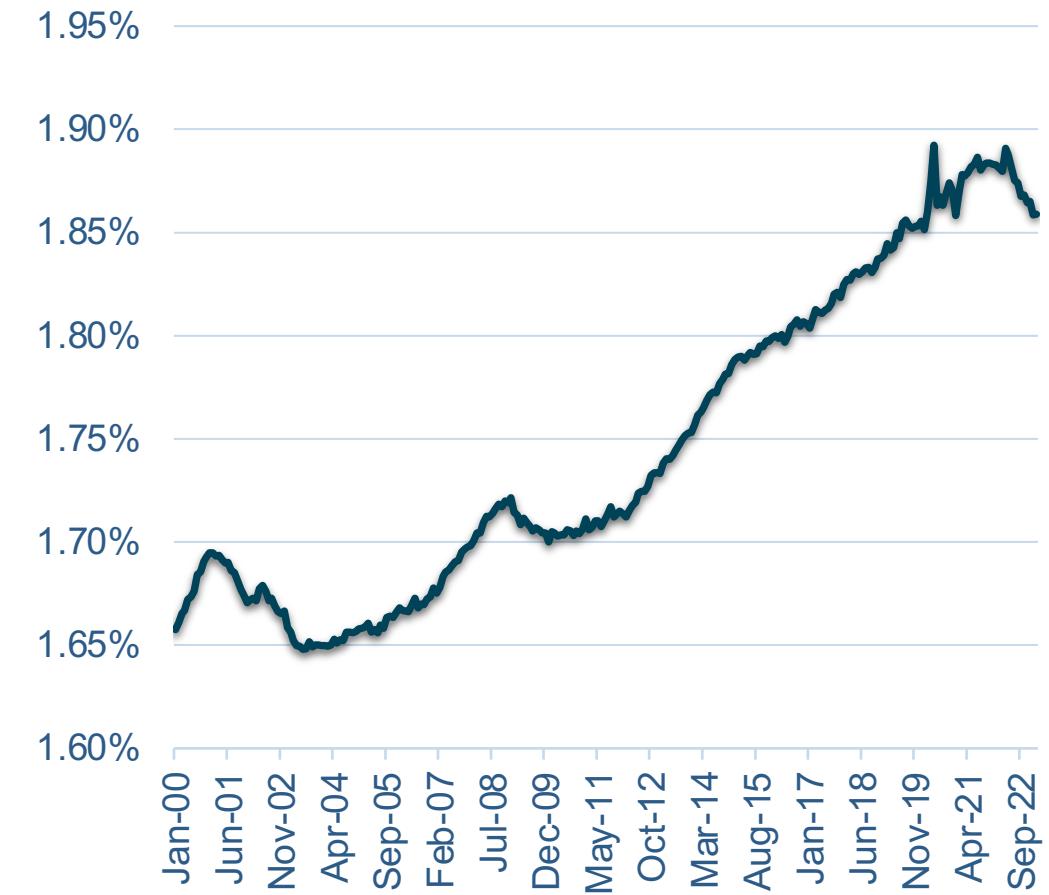
Colorado in Front



Index of Real GDP Growth



Colorado Share US Employment



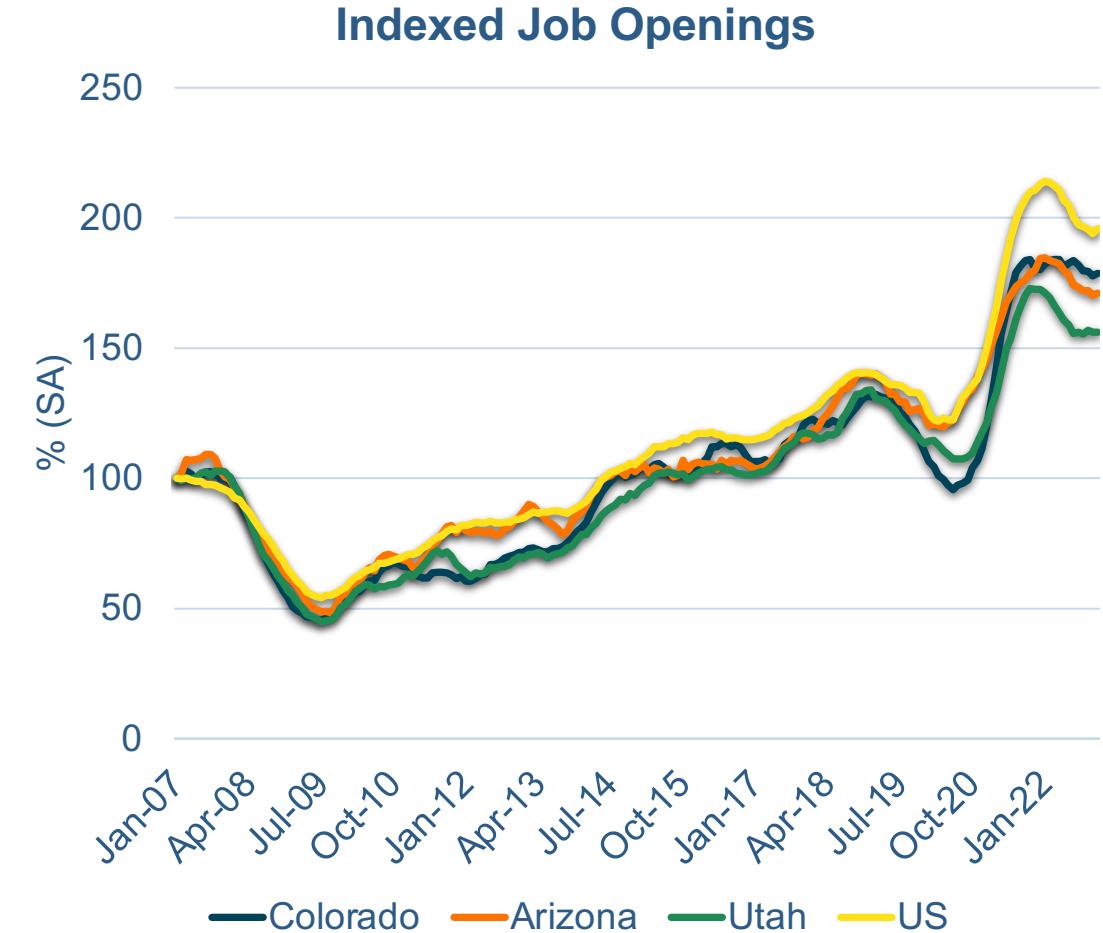
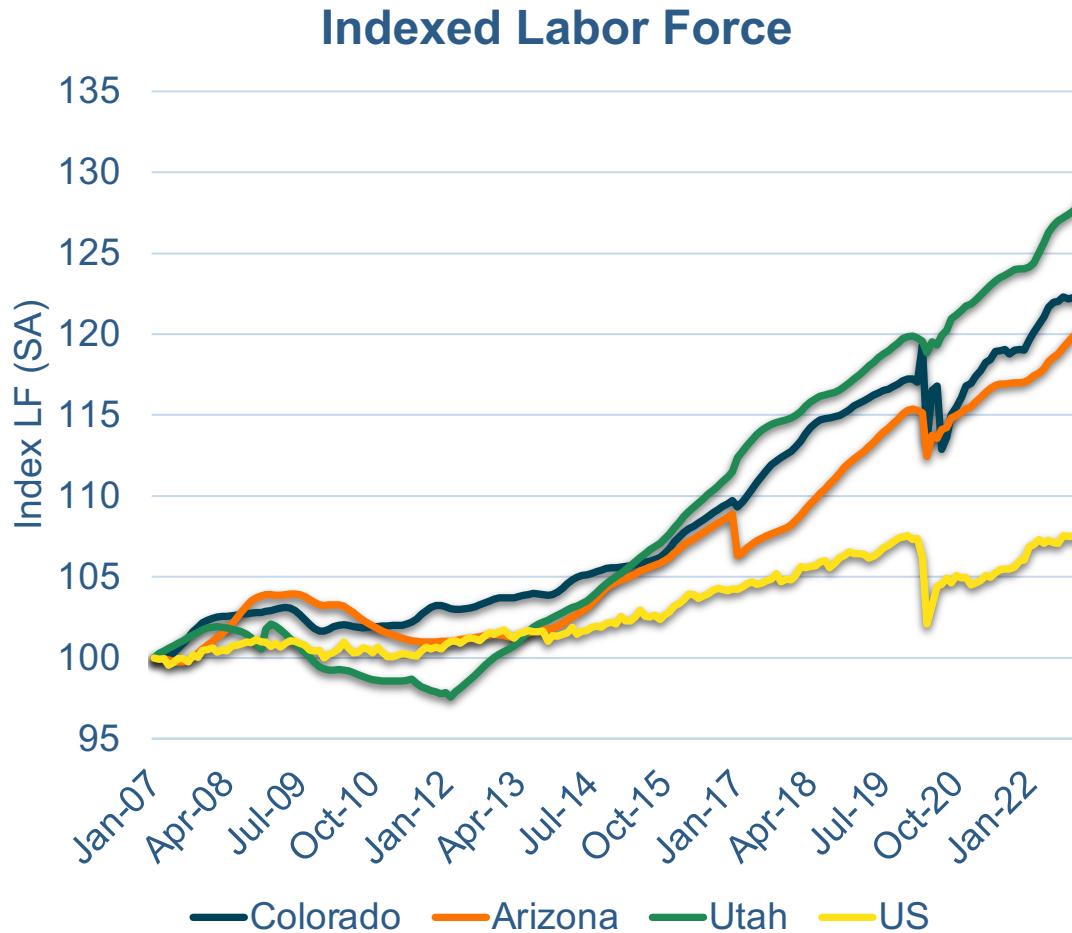
Regionally? Who is Ahead? Behind?



Current State Job Opening Rate, with change 19-22

Alaska	10.1	4.1	South Carolina	7.4	2.5	Nebraska	6.6	1.9
Kentucky	7.9	3.4	Iowa	6.9	2.4	Arizona	7.1	1.7
Georgia	7.9	3.1	Oklahoma	7.2	2.4	Wisconsin	6.7	1.7
Tennessee	7.6	2.9	Maine	7.0	2.4	Pennsylvania	5.9	1.6
Illinois	6.9	2.9	Hawaii	7.1	2.4	Florida	6.2	1.6
Massachusetts	7.2	2.8	Alabama	6.8	2.3	Utah	6.4	1.5
Delaware	7.3	2.8	Vermont	7.4	2.3	Indiana	6.5	1.5
Mississippi	7.3	2.7	Michigan	6.9	2.3	Arkansas	6.7	1.5
Montana	8.3	2.7	California	6.5	2.2	North Dakota	7.0	1.5
Louisiana	7.5	2.7	New Hampshire	6.7	2.2	New Jersey	5.7	1.4
Wyoming	8.4	2.7	Rhode Island	6.9	2.2	Kansas	6.4	1.4
Connecticut	6.5	2.7	South Dakota	7.1	2.1	New Mexico	7.4	1.3
Virginia	7.9	2.7	Maryland	7.0	2.1	Missouri	6.4	1.3
Minnesota	7.1	2.6	Colorado	7.4	2.1	Oregon	6.5	1.3
Texas	7.2	2.6	Ohio	6.8	2.1	New York	5.4	1.2
Nevada	6.8	2.6	Idaho	7.2	2.0	Washington	6.1	1.2
West Virginia	8.3	2.6	District of Columbia	5.9	1.9	North Carolina	7.0	1.1

Labor - Regional

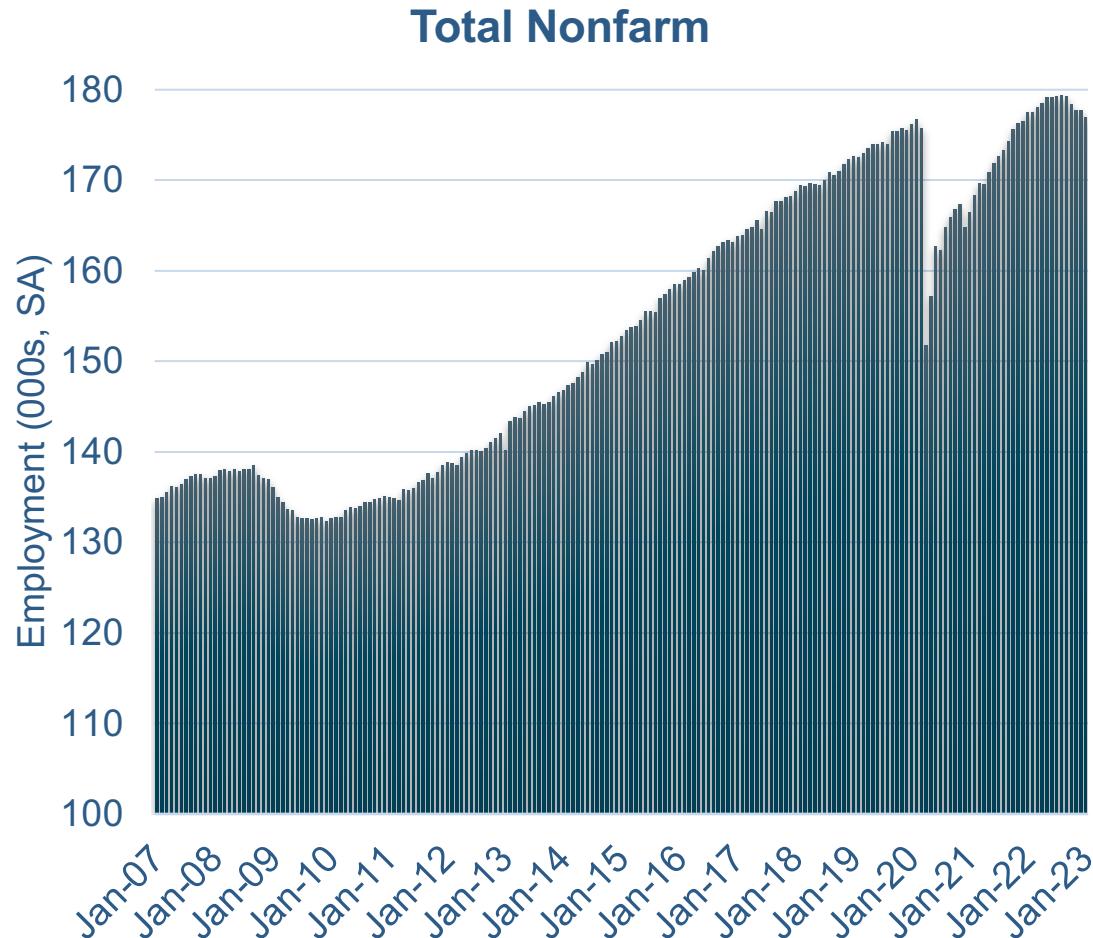


Local Labor Markets



MSA	Dec-22 Total Nonfarm (000s)	% Growth		Dec-22 Unemp. Rate (%)	Absolute Change (pp)	
		3-YR	5-YR		3-YR	5-YR
Colorado Springs	359.1	4.4	9.3	3.7	0.7	0.4
Boulder	198.4	4.0	8.5	2.7	0.5	0.2
Denver	1,686.8	3.7	8.4	3.3	0.8	0.5
Grand Junction	75.6	3.6	6.5	3.8	0.5	0.0
Fort Collins	207.4	3.4	7.9	2.9	0.6	0.5
Pueblo	75.0	2.5	5.3	5.2	1.5	0.9
Greeley	163.1	-1.6	4.8	3.6	1.1	1.0

Larimer County Employment

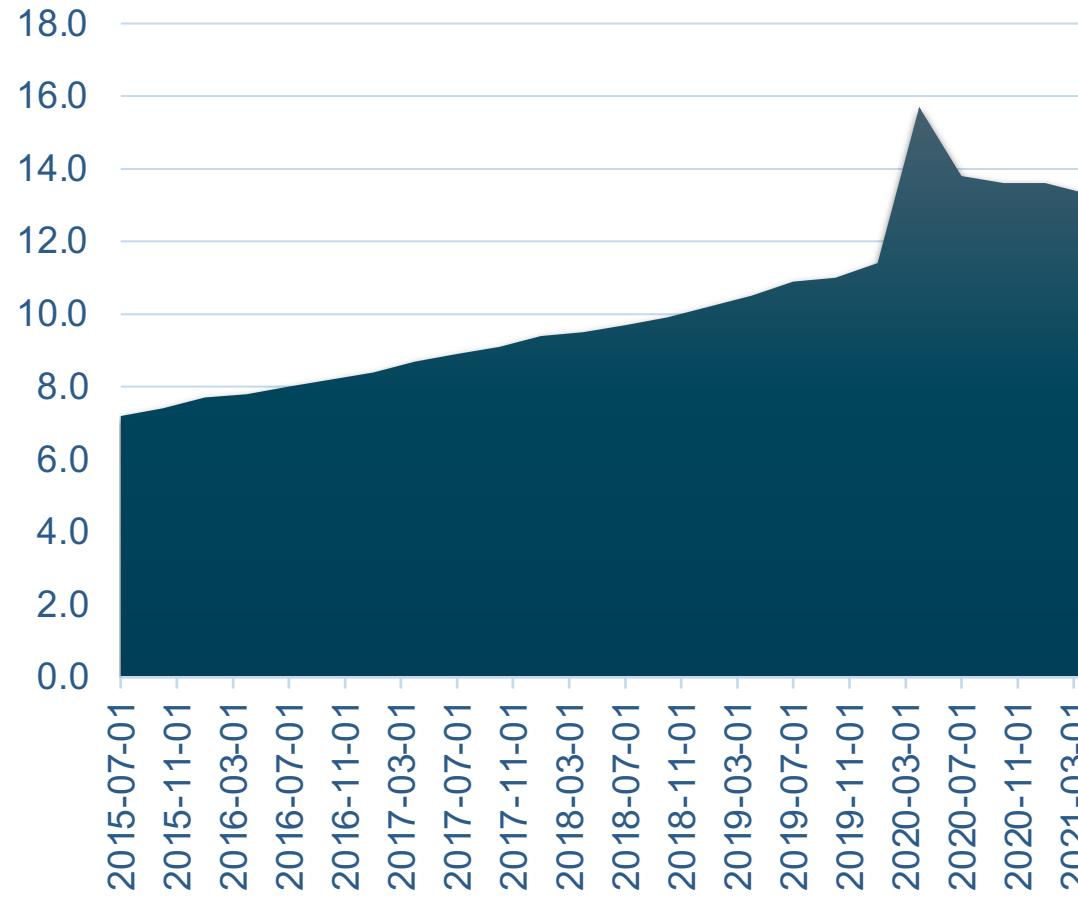


Private Industry	Q3-22 Private Emp. (000s)	3-YR	
		Diff. (000s)	% Growth
Total Private	137.0	3.3	2.4
Prof/Business	22.1	1.3	6.3
Logistics	29.5	1.7	6.2
Construction	12.1	0.6	4.9
Finance	6.9	0.3	4.6
Manufacturing	15.1	0.3	2.3
Other Services	5.3	0.1	2.2
Education/Health	18.9	0.3	1.8
Leisure/Hospitality	23.2	-0.4	-1.6
NR and Mining	1.4	-0.2	-14.3
Information	2.6	-0.8	-23.9

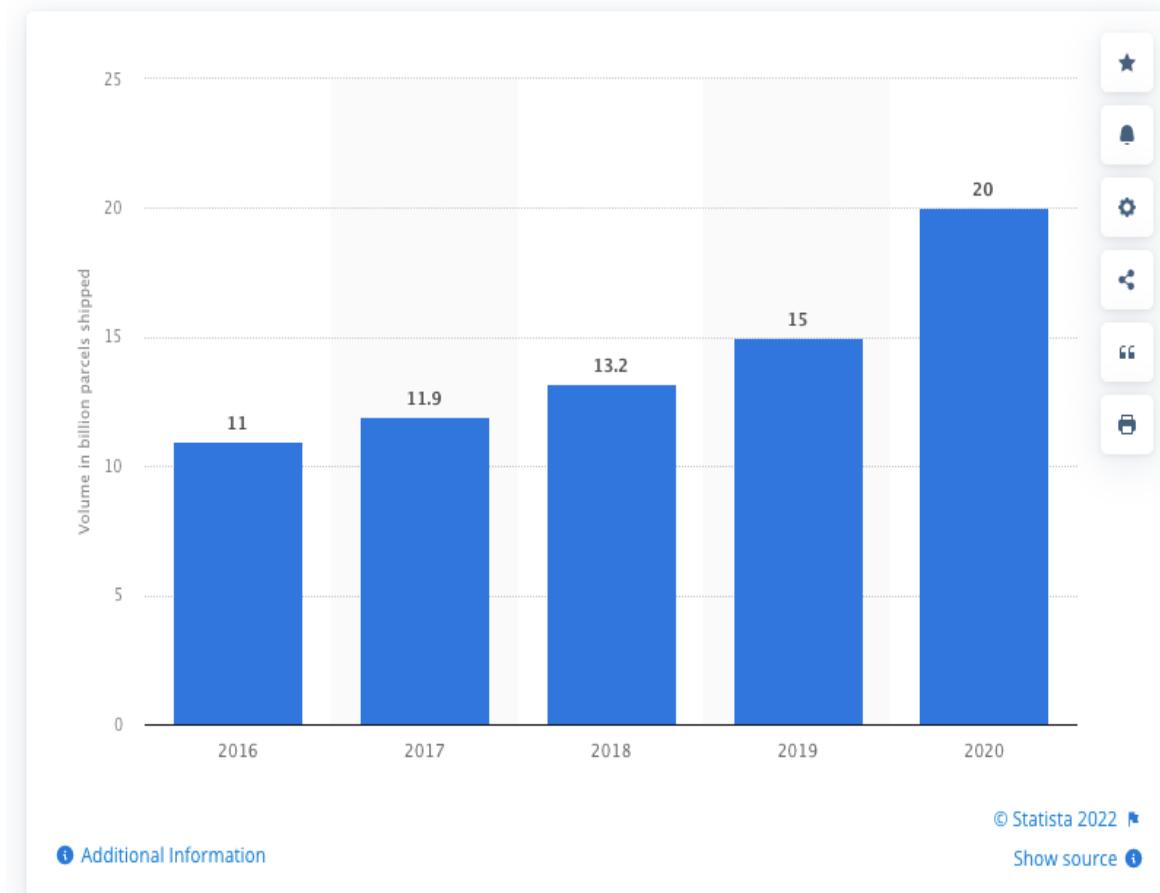
Retail / Industrial Supply Chains



E-Commerce Share of Retail



Pitney Bowes US Package Delivery





21.6bn parcels
in 2021



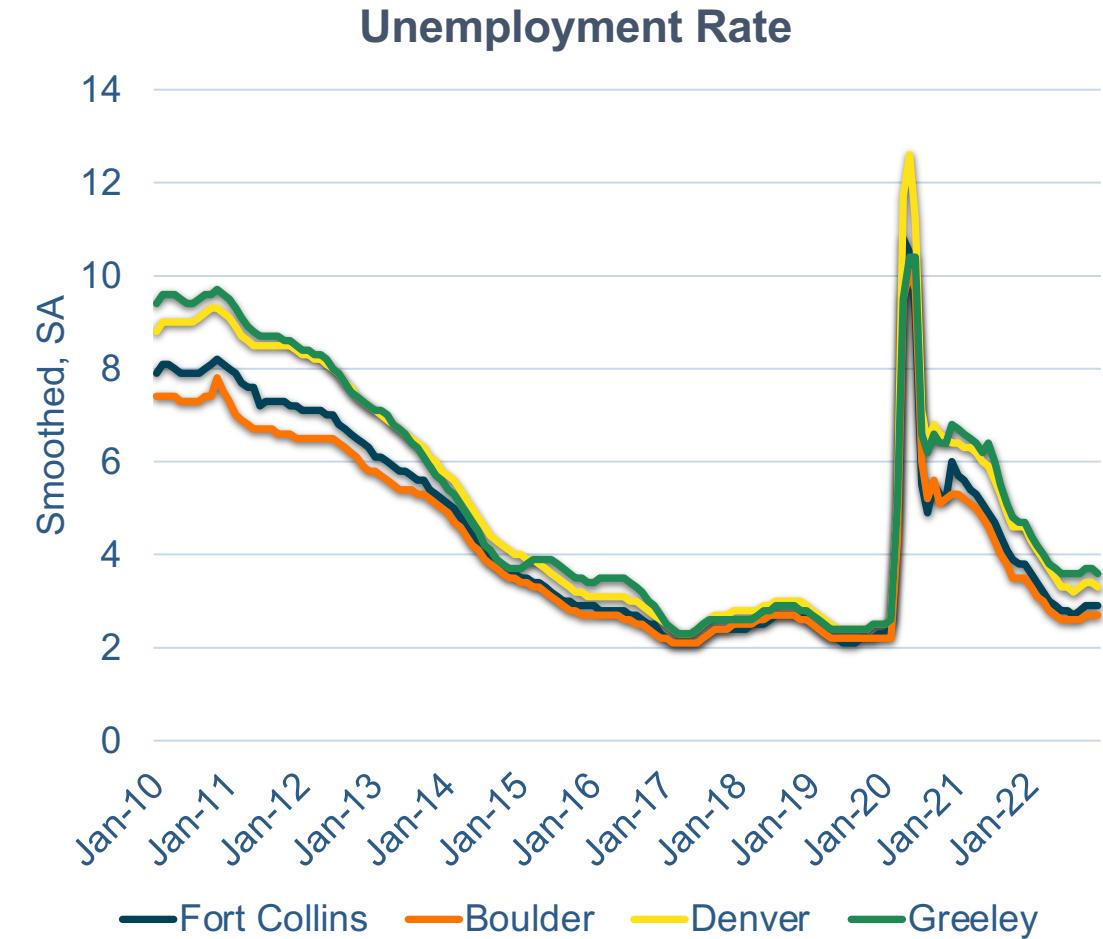
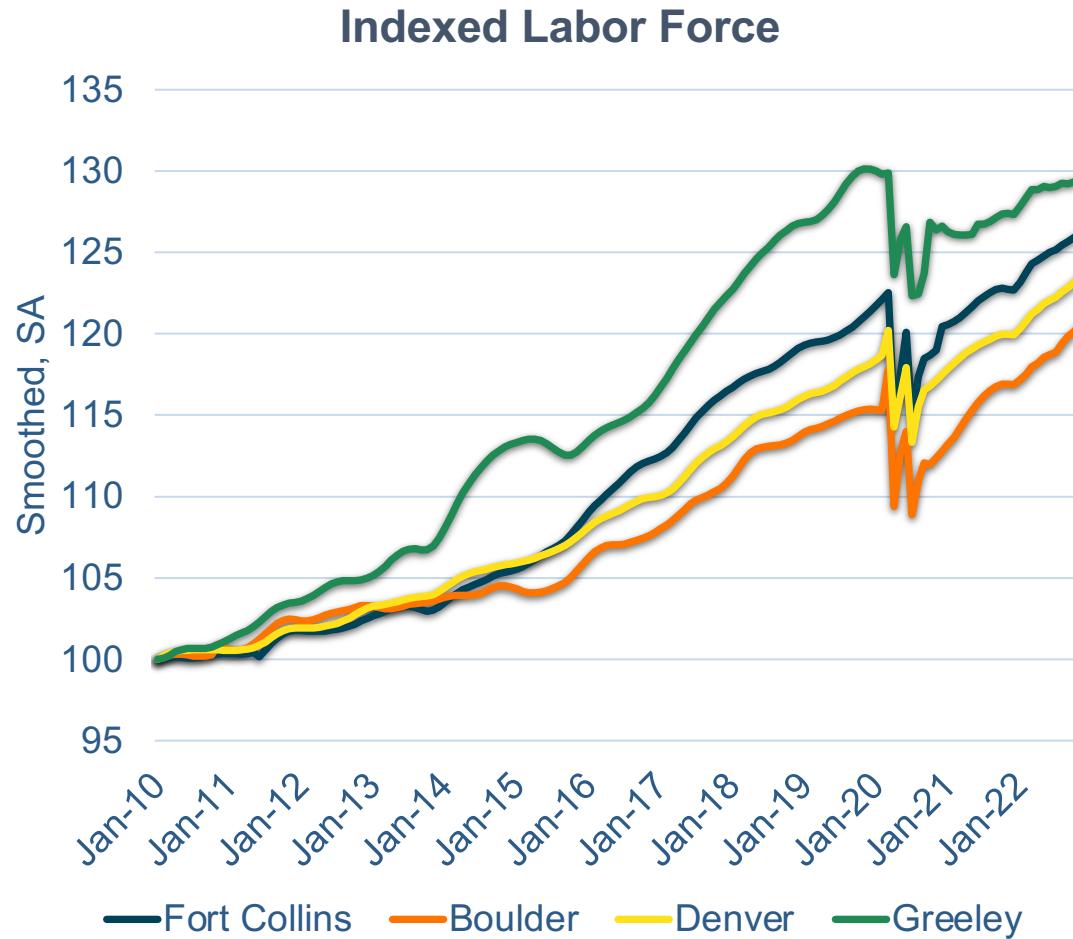
- Up from **20bn** in 2020
- Up **7%** year over year

683
parcels per second

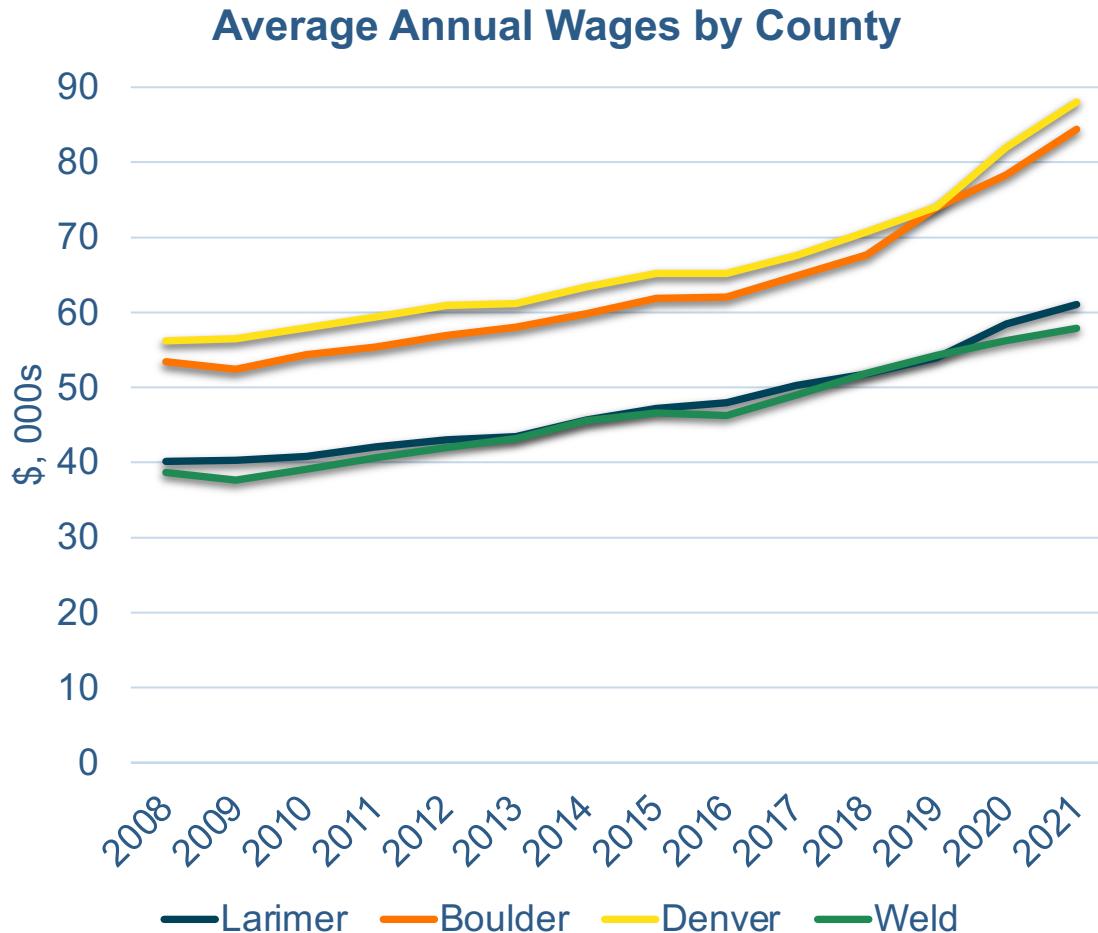
59m
parcels per day

65
parcels per person
166 parcels per household

Local Labor Markets – MSAs



Larimer County Wages



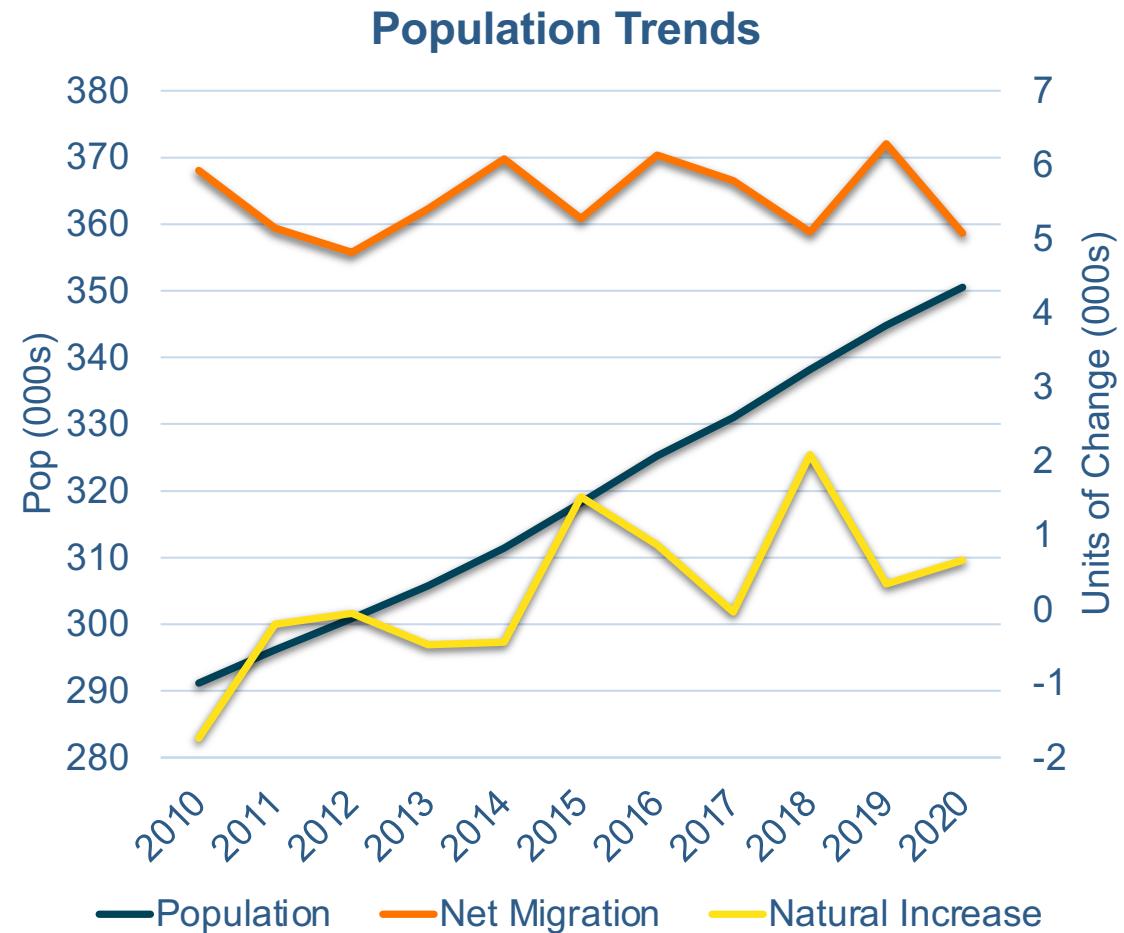
Private Industry	Larimer Avg. Ann. Wages	
	Q3-22	3-Yr % Gr
Total Private	\$63,240	23.4
Prof/Business	\$93,563	34.5
Other Services	\$47,964	24.9
Information	\$73,210	24.5
Leisure/Hospitality	\$27,783	24.1
Logistics	\$52,815	23.7
Education/Health	\$58,790	22.6
Construction	\$70,305	19.2
Finance	\$77,428	15.1
NR and Mining	\$53,131	12.5
Manufacturing	\$91,804	12.0

Policy and Labor Supply Constraints



■ Solutions

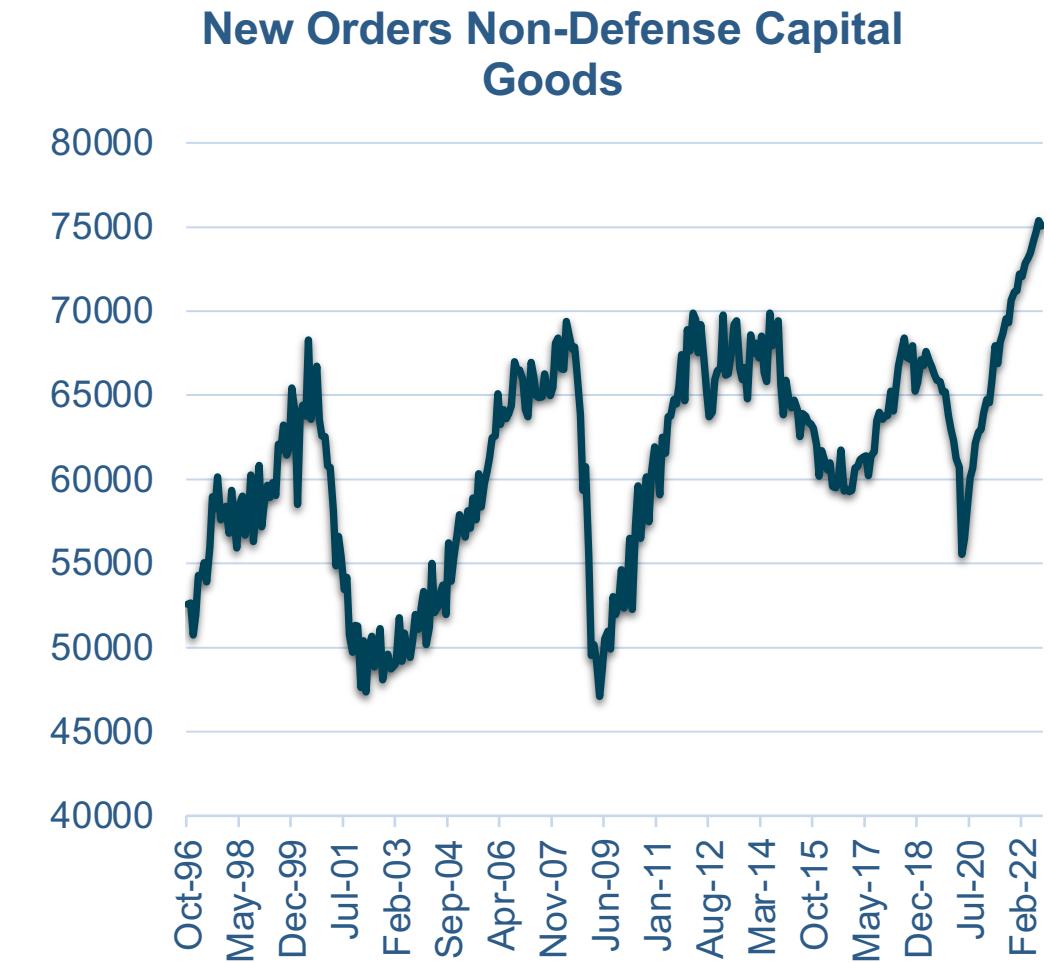
- Extensive: Increasing labor force through immigration (SR) or birthrates (LR)
- Intensive: Raising participation rates among the existing population
- Productivity enhancements: capital investments
- Productivity enhancements: worker skill training



Investment and the luddite narrative



Real Business Investment	2019	2022	
	Q3	Q3	
Private fixed investment	3437.0	3550.5	3.3%
Software	471.3	653.5	38.7%
Information processing eq	486.6	582.3	19.7%
Research and development	459.5	540.3	17.6%
Entertainment, literary	85.0	94.8	11.5%
Industrial equipment	248.7	258.9	4.1%
Manufacturing	63.3	59.8	-5.5%
Transportation equipment	270.8	249.1	-8.0%
Commercial and health care	172.0	136.5	-20.6%
Mining exploration	132.0	100.2	-24.1%
Power and communication	123.2	79.9	-35.1%





BUSINESS • COVID-19

Millions of Americans Have Lost Jobs in the Pandemic—And Robots and AI Are Replacing Them Faster Than Ever





Breaking News

Technology Alert

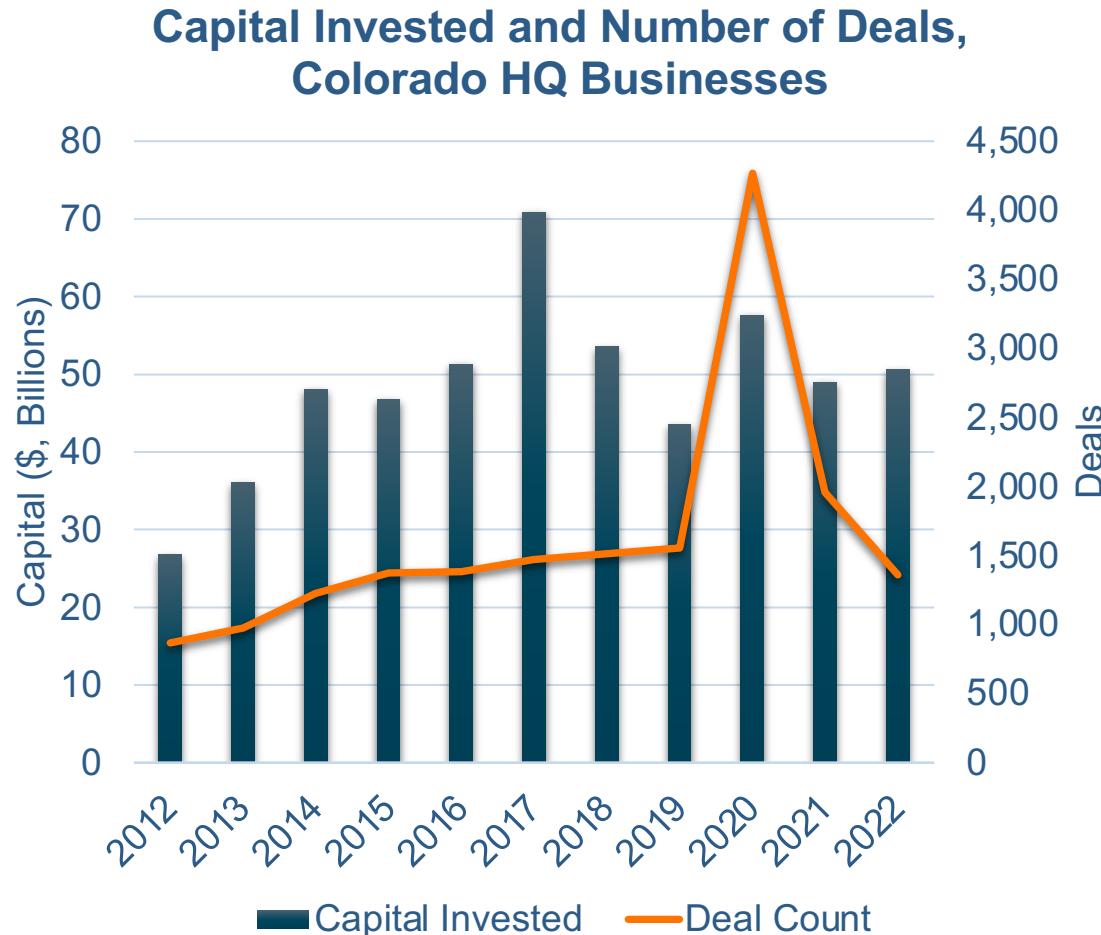
March 14, 11:18 a.m. EDT

Snapchat tried to make a safe AI for teens. But it can become inappropriate with advice on drugs and sex, our tech columnist finds.

In the latest sign that Big Tech is moving too fast with artificial intelligence, Snapchat's "My AI" veered between a responsible adult and a pot-smoking older brother. In our tech columnist's tests, it advised a purported 15-year-old user on masking the smell of pot at a party. In another test, it advised a purported 13-year-old user on "setting the mood" for sex with a 31-year-old.



Venture Capital – Colorado



10 Largest Colorado HQ VC Deals	Industry	Deal Value (\$B)
AT&T Broadband	Cable Service Providers	72.0
US West	Telecommunications	44.0
Adelphia Comms	Cable Service Providers	17.6
Level 3 Comms	Systems and Info Mngmt	17.3
Archstone-Smith	REITs	16.0
Archstone-Smith	REITs	13.6
Danone North America	Food Products	12.5
Qwest Comms Int'l	Telecommunications	12.3
Array BioPharma	Biotechnology	11.4
CoreSite Realty	Systems and Info Mngmt	9.4

Migration, State Comparisons



**Net Migration by Educational Attainment,
Population over 25 (Total from 2014-2017)**

Education	Arizona		Colorado		Nevada	
	201,700		71,500		91,600	
Less Than HS	8,900	4.4%	2,600	3.6%	12,400	13.5%
HS Grad	52,400	26.0%	9,650	13.5%	27,300	29.8%
Some College	71,600	35.5%	5,600	7.8%	28,000	30.6%
BA	51,700	25.6%	38,000	53.1%	19,000	20.7%
Grad	17,000	8.4%	15,700	22.0%	4,700	5.1%

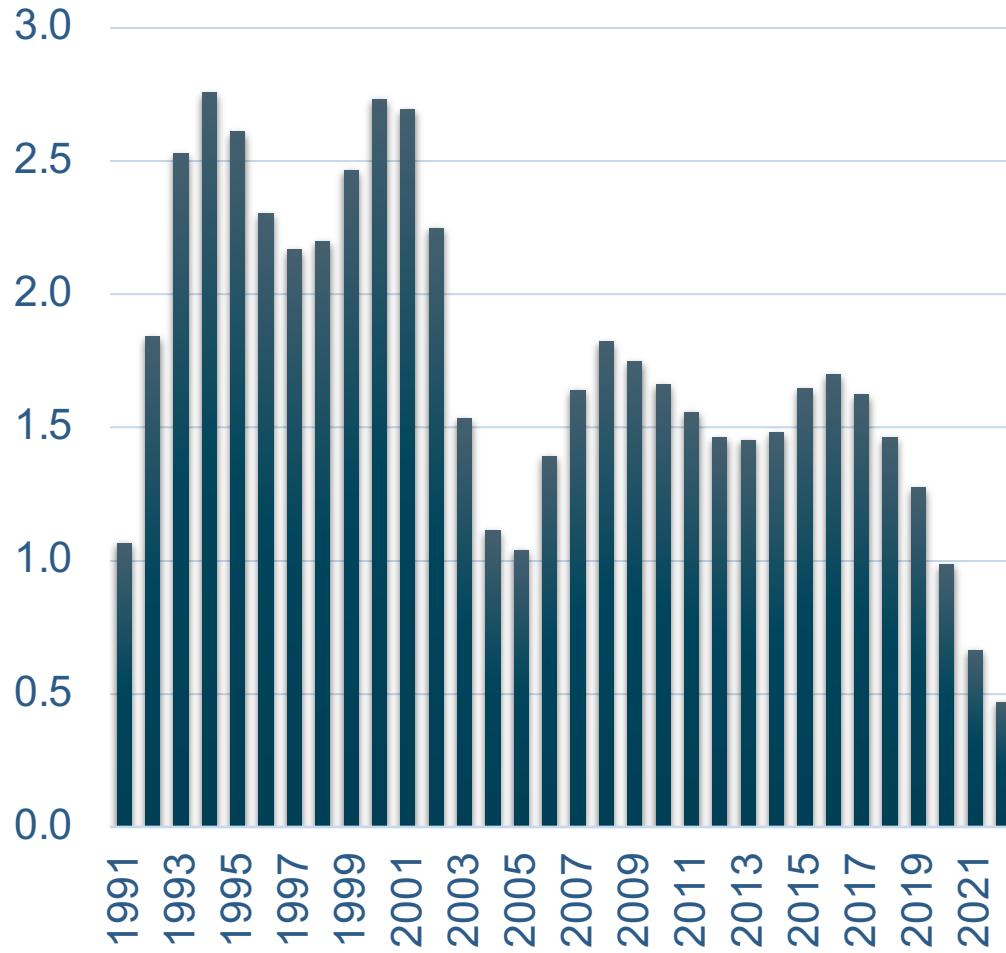
Net Migration by Age (Total from 2014-2017)

Age	Arizona		Colorado		Nevada	
	251,400		114,200		130,300	
Under 18	43,200	17.2%	13,000	11.4%	22,600	17.3%
18 to 25	9,400	3.7%	34,400	30.1%	22,300	17.1%
26 to 40	36,200	14.4%	68,700	60.2%	29,600	22.7%
41 to 50	26,600	10.6%	4,800	4.2%	20,300	15.6%
51 to 65	72,000	28.6%	2,300	2.0%	25,100	19.3%
Over 65	63,900	25.4%	-9,000	-7.9%	10,400	8.0%

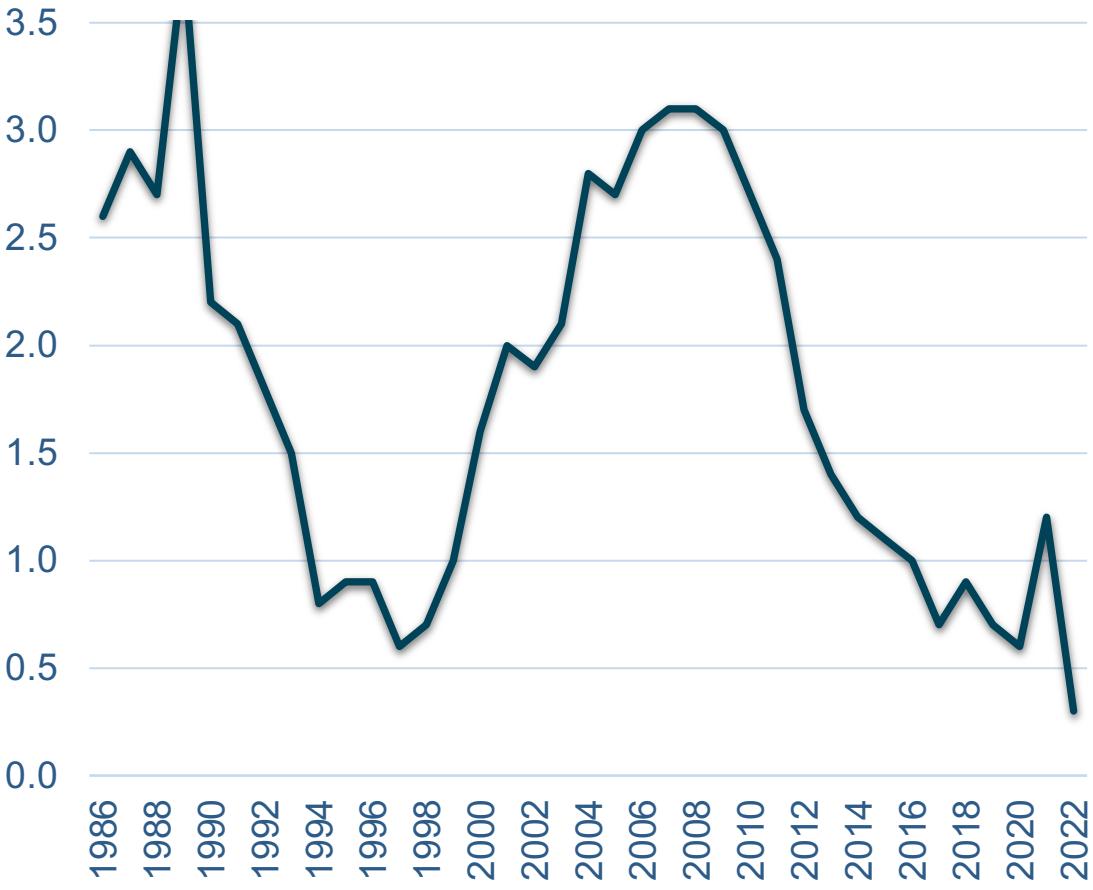
Colorado Population Trends



CO Pop Growth



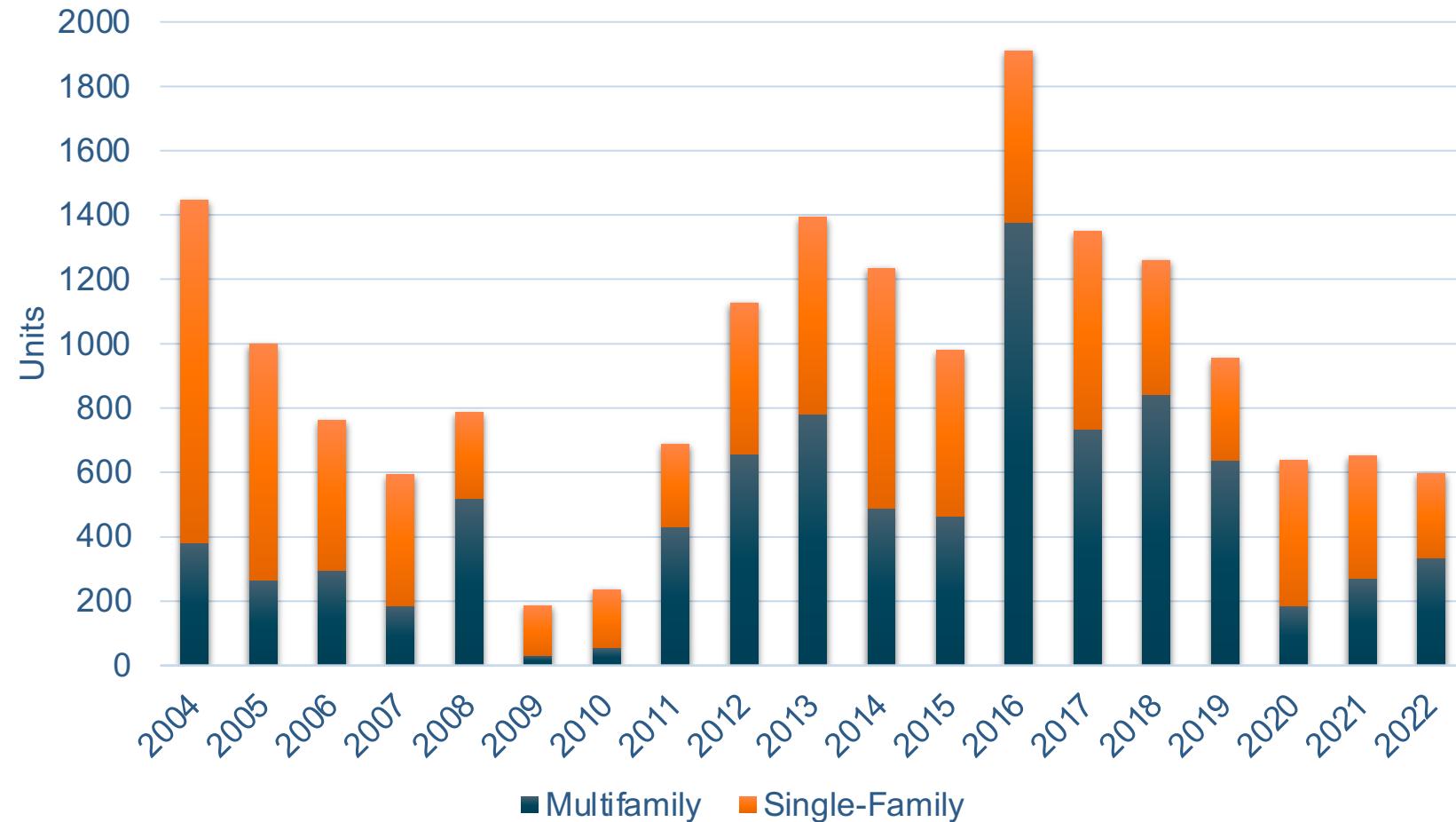
Colorado Housing Vacancy



Residential Housing Permits



Larimer County MF and SF Permits



The Housing Market



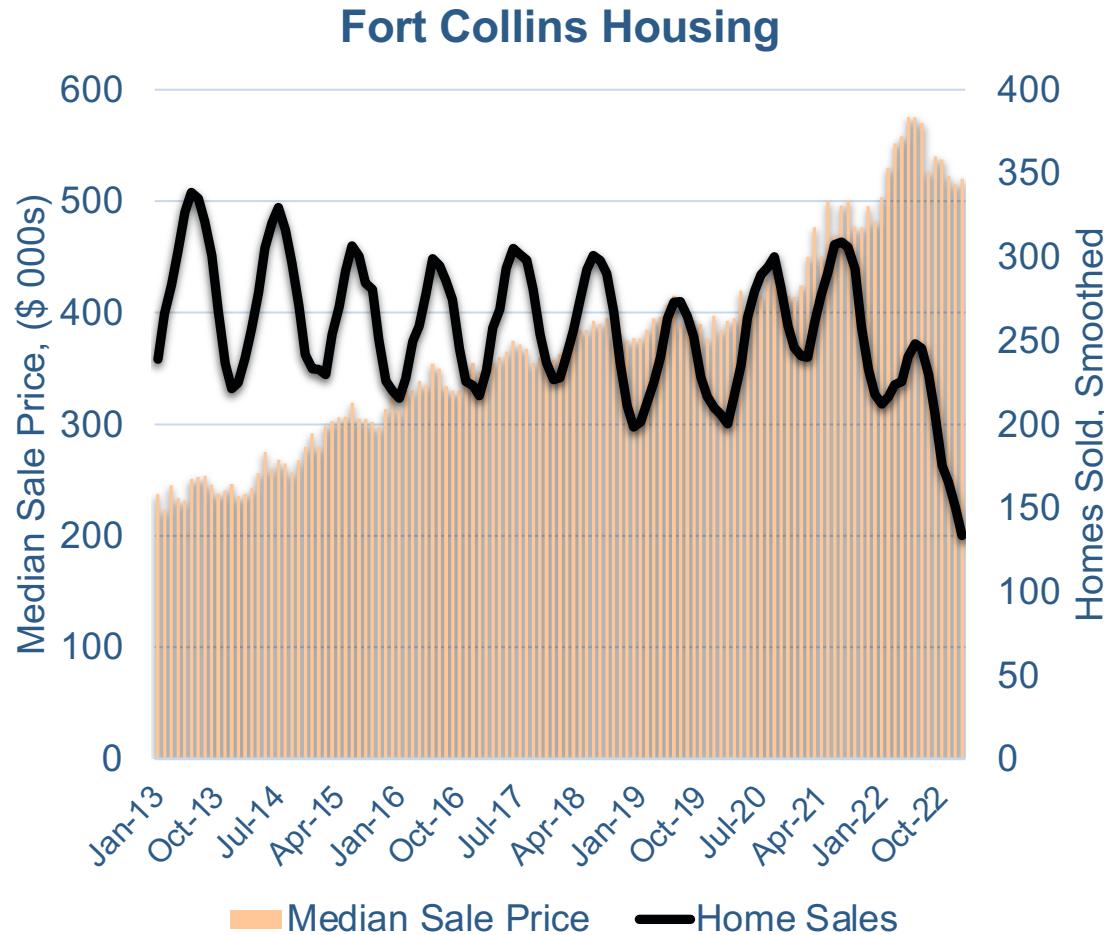
Existing Home Sales SAAR (NAR)



Case Shiller Monthly Price Change



Housing Market



City	Median Prices		Sales	
	Jan-23	1-Yr % Gr	Jan-23	1-Yr % Gr
Fort Collins	\$520,000	3.2	97	-28.7
Denver	\$535,000	1.5	529	-32.5
Loveland	\$468,935	1.5	76	-21.6
Boulder	\$775,000	-1.3	56	-30.0
Greeley	\$397,000	-1.4	78	-38.1
Lafayette	\$586,250	-2.3	18	-48.6
Longmont	\$535,000	-3.8	66	-26.7

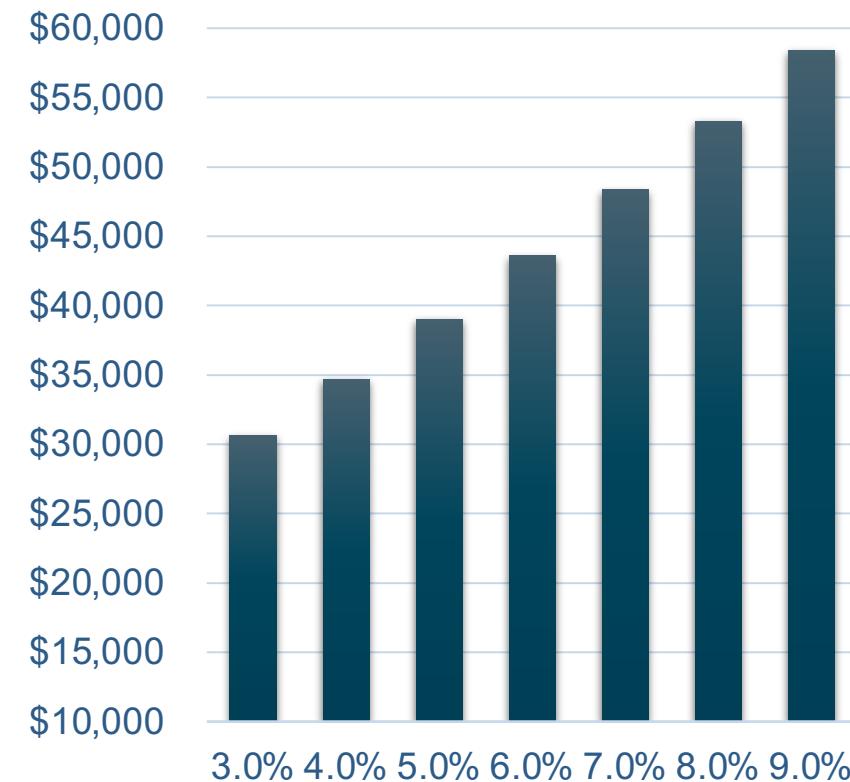
A Rate Driven Sticker Shock



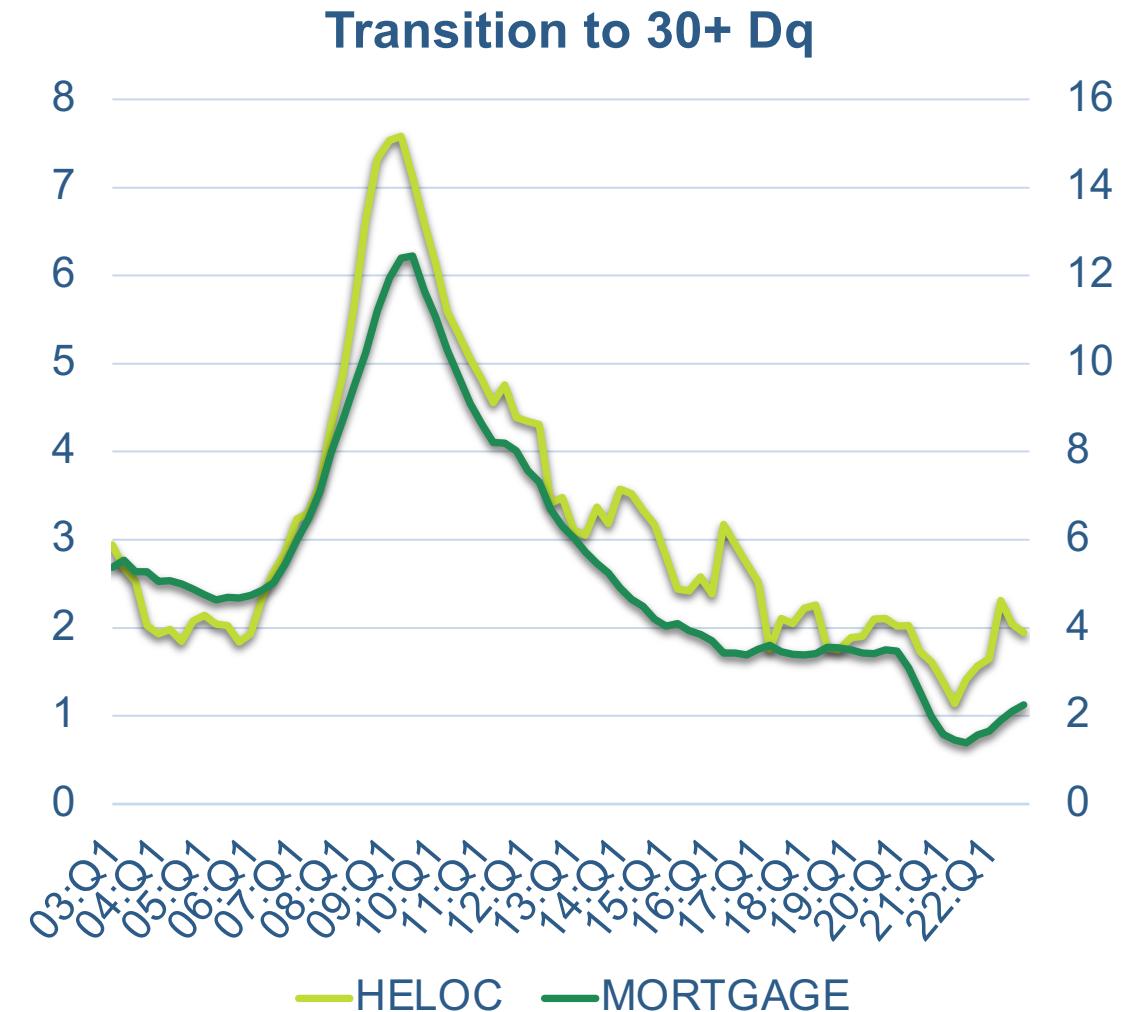
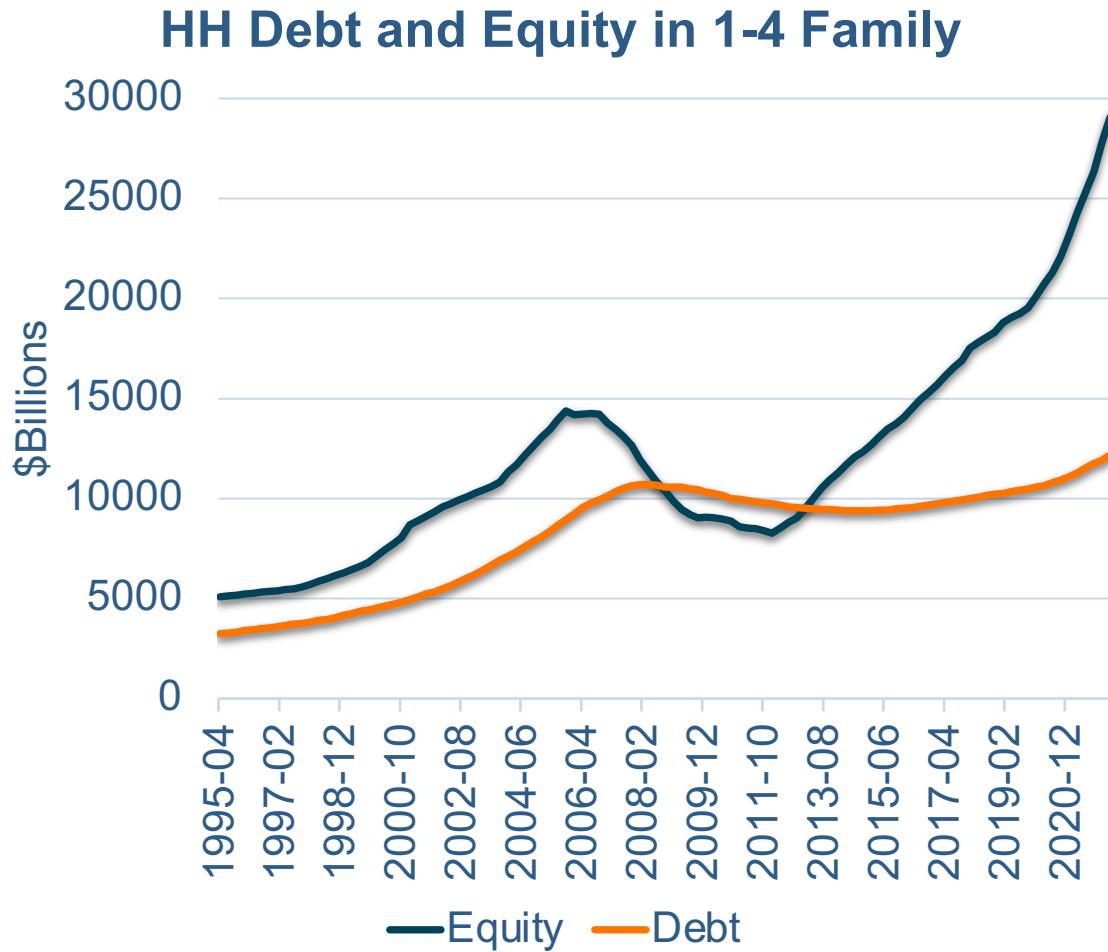
Case Shiller HPA
July 20 – July 22

Tampa	64.0%	Los Angeles	37.9%
Phoenix	62.0%	SF	35.1%
Miami	61.4%	New York	34.9%
Dallas	54.2%	Boston	34.6%
Charlotte	49.5%	Portland	33.6%
LV	49.2%	Cleveland	30.9%
SD	49.1%	Detroit	29.4%
Atlanta	45.8%	Chicago	27.4%
Seattle	43.9%	DC	26.0%
Denver	40.3%	Minneapolis	24.6%

Annual Payment on a \$600,000 Mortgage



Market Collapse? Not a chance...



Collapse of Filtering, not Fundamentals



**Months Supply
Existing Homes**



**Vacant For Sale Units
(000s)**



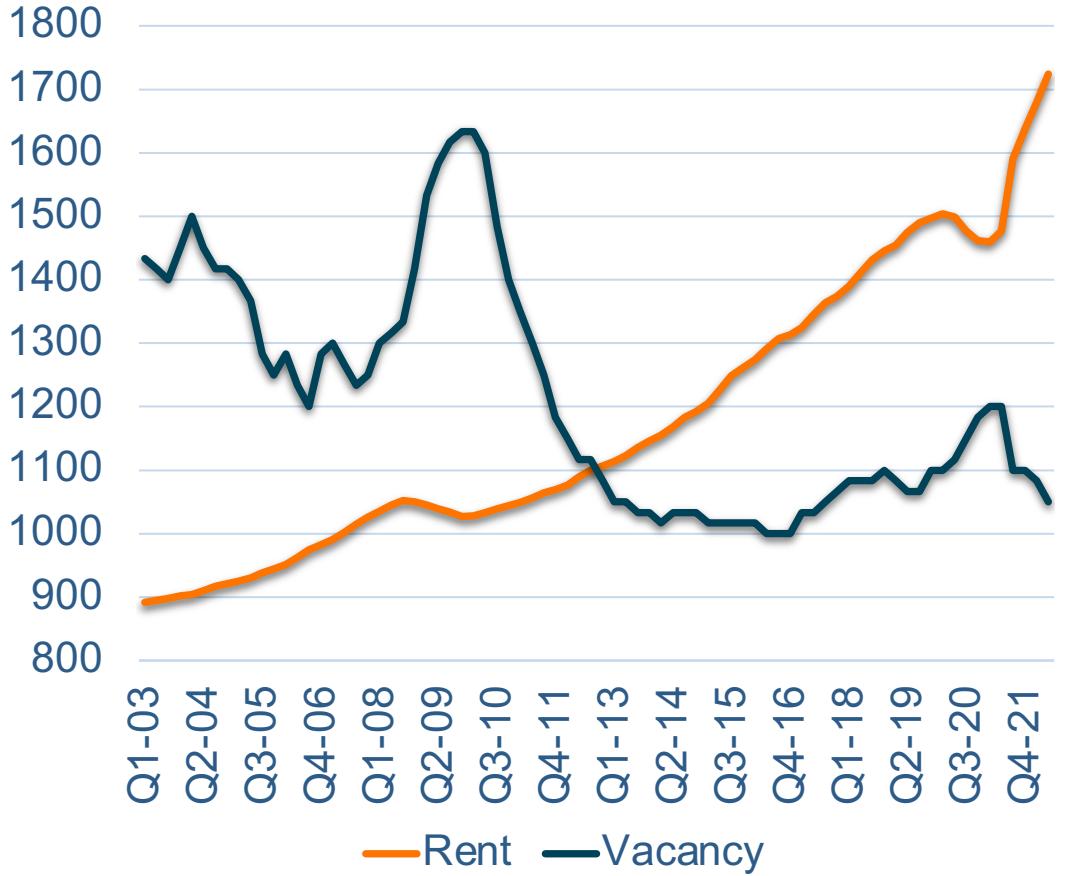
Overall Housing Vacancy

	Northeast	Midwest	South	West
Vacant Year Round 2022	7.6%	7.4%	9.6%	6.6%
For Sale / Rent	2.0%	2.4%	2.7%	2.0%
Vacant Year Round 2012	8.9%	9.9%	12.6%	9.0%
For Sale / Rent	3.3%	4.0%	4.7%	3.5%
Vacant Year Round 2008	8.6%	9.8%	12.3%	8.4%
For Sale / Rent	3.6%	4.9%	5.3%	3.6%

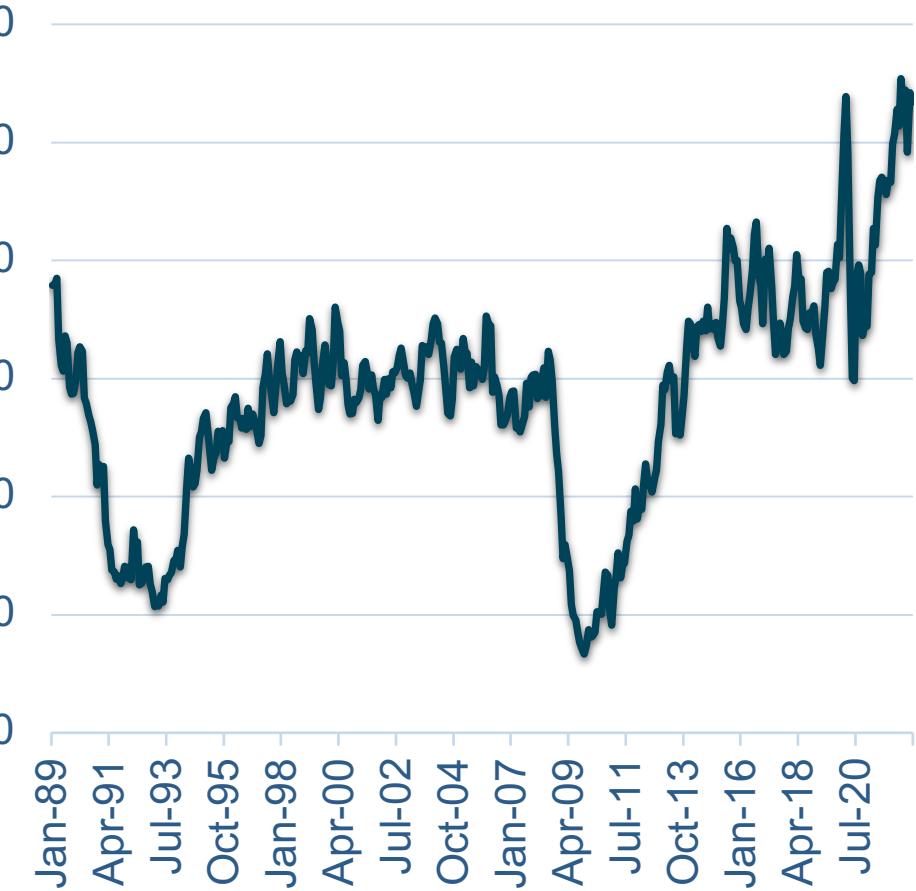
Market Driver: Housing Demand



US Apartment Markets



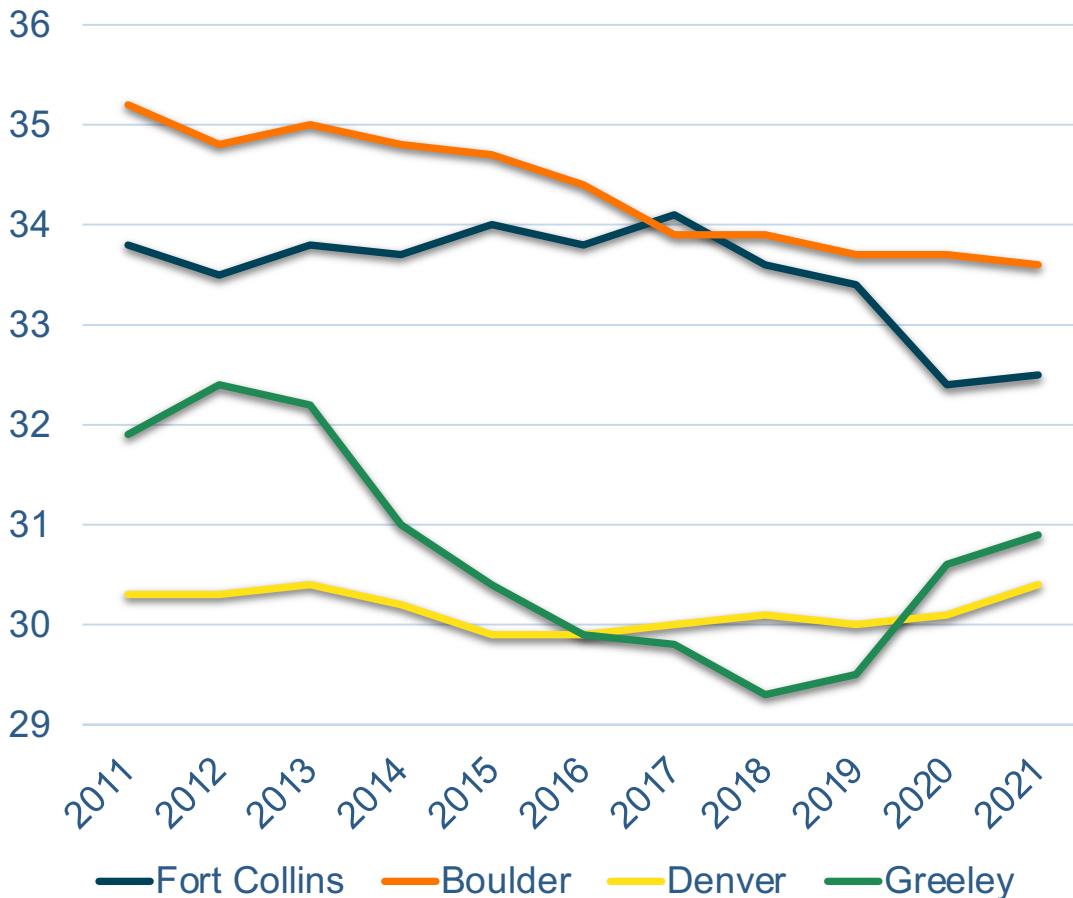
Starts 5+ Unit Buildings



Household Characteristics



Median Rent as % of Household Income



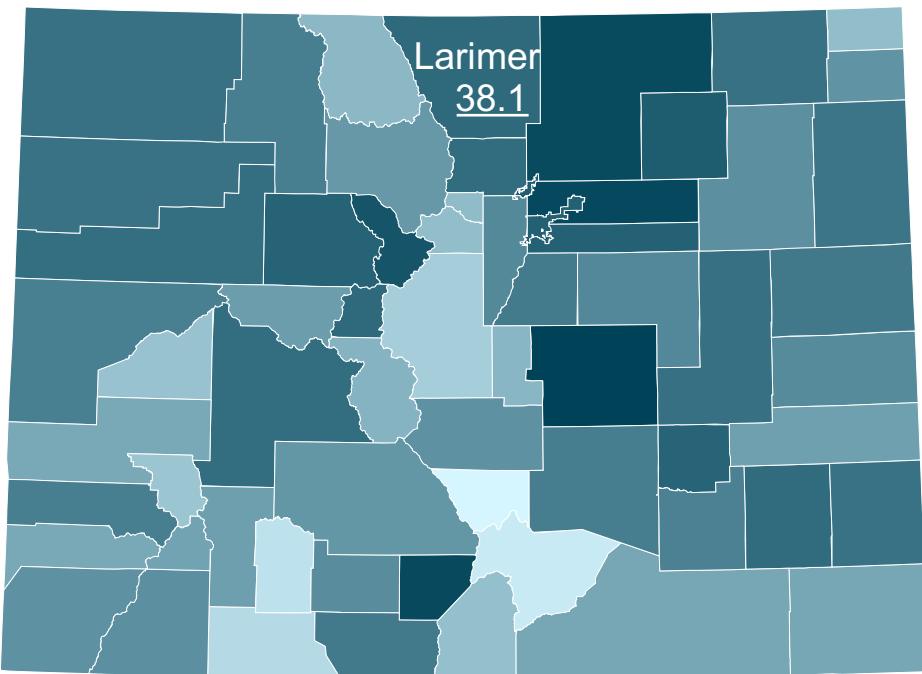
Share Housing Cost Constrained Households

	Owners		Renters	
	2017	2021	2017	2021
United States	20.7%	21.0%	40.4%	41.9%
Miami	31.7%	34.0%	53.0%	54.0%
Las Vegas	23.3%	25.4%	40.5%	49.2%
Los Angeles	33.7%	33.7%	47.9%	49.0%
Denver	19.2%	20.6%	41.0%	43.3%
Philadelphia	20.3%	19.8%	41.9%	42.8%
Dallas	17.8%	21.3%	36.6%	42.5%
Chicago	22.8%	21.7%	40.3%	40.7%
Seattle	21.0%	21.5%	37.7%	39.6%
Indianapolis	13.9%	14.1%	37.4%	36.1%

Demographics



Median Age, 2022



Median Age
54.1
33.7

Housing Cost Burdened (>=30% HH Income)

City	Renters		Owners	
	2021 Share (%)	2-YR Abs. Dif	2021 Share (%)	2-YR Abs. Dif
Fort Collins	55.1%	-2.5%	20.2%	0.5%
Greeley	52.0%	2.3%	24.1%	1.9%
Loveland	48.3%	0.8%	23.2%	2.7%
Boulder	61.4%	0.6%	22.8%	-0.1%
Longmont	52.2%	-0.4%	20.9%	0.9%
Denver	44.7%	-0.5%	23.8%	-0.2%
Cheyenne, WY	41.6%	-5.1%	19.7%	1.5%

Reality vs Narrative



- The Economy is fine, it's the narrative that is broken
 - Fundamentals of consumer demand can balance rate shock
 - Asset values still too high, yet fundamentals should remain high
 - Colorado's ability to attract young skilled workers is driving the economy
- Looking Ahead
 - Fed tradeoff choices will dictate future path of banking / growth
 - Labor shortages to continue to trouble business
 - Fiscal tightness coming – be aware
 - Local growth will depend on workforce development
- The Narrative Issue...
 - Don't blame politics... social media, ubiquitous data, the meme generation
 - Business needs to proactively tell the true story to be able to influence policy

The Problem of Narratives...



It's easier **to fool people
than to convince them
that they **have been fooled**.**

– Mark Twain



BEACON
ECONOMICS

- Economic Outlooks
- Revenue Forecasts
- Cost Projections
- Regional Development
- Housing Studies

Thank You



- Impact Reports
- CEDS Analysis
- Policy Studies
- Industry Studies
- Labor Markets

Chris@BeaconEcon.com | beaconecon.com