Huge Demand, But….
Where's the Supply?

LAI

February 15, 2022

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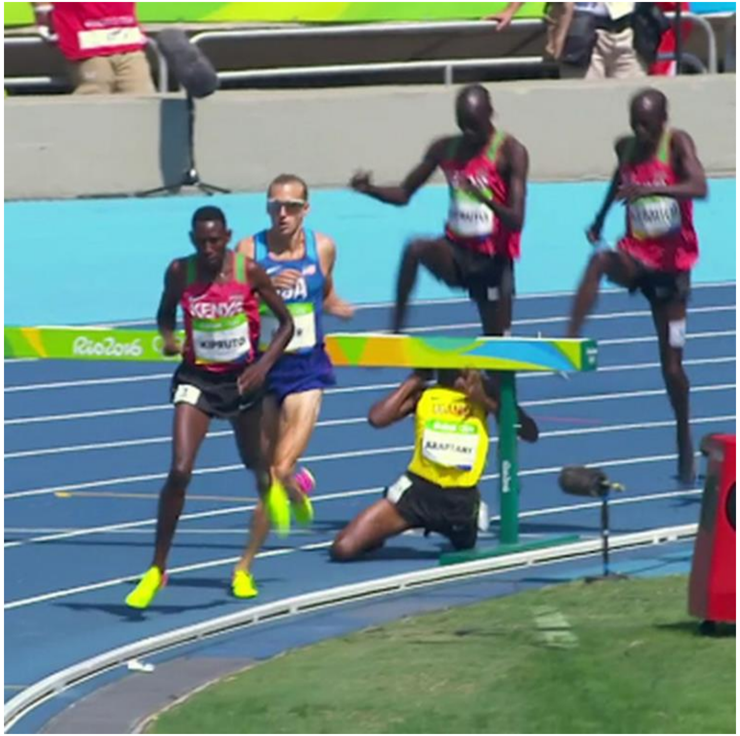
The economy continues to recover at a well above average rate….


INEOS

but the rate will be erratic.


KENYA
Rio2016

And there will be some glitches along the way.

Biggest Risks

- Supply Chain Issues
- Lack of Labor
- Inflation
- Higher Interest Rates
- Bad Government Policy
- Effect of All of These On Housing Affordability
- Current and Future Variants
- Black Swan Event

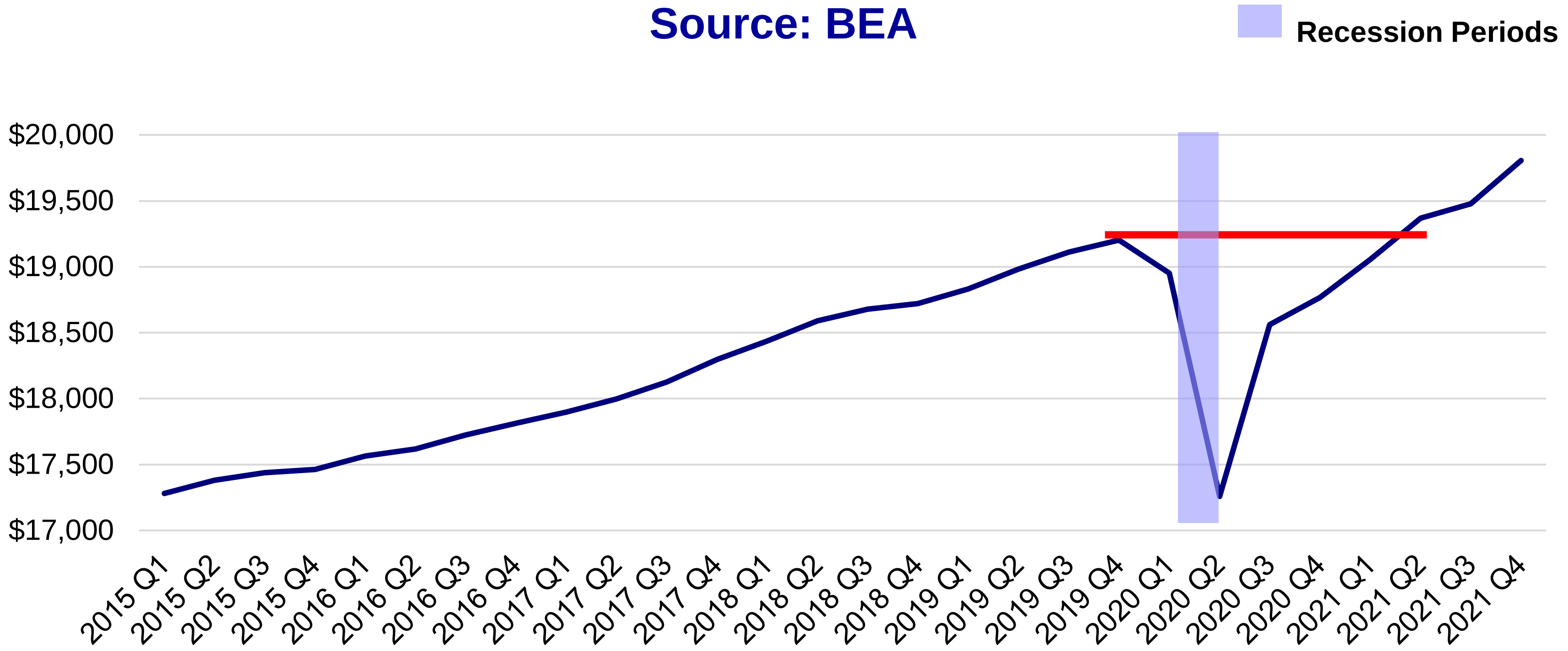

WRONG
WAY

Yet, the outlook is still positive.

Don’t panic!

Real GDP (billions)

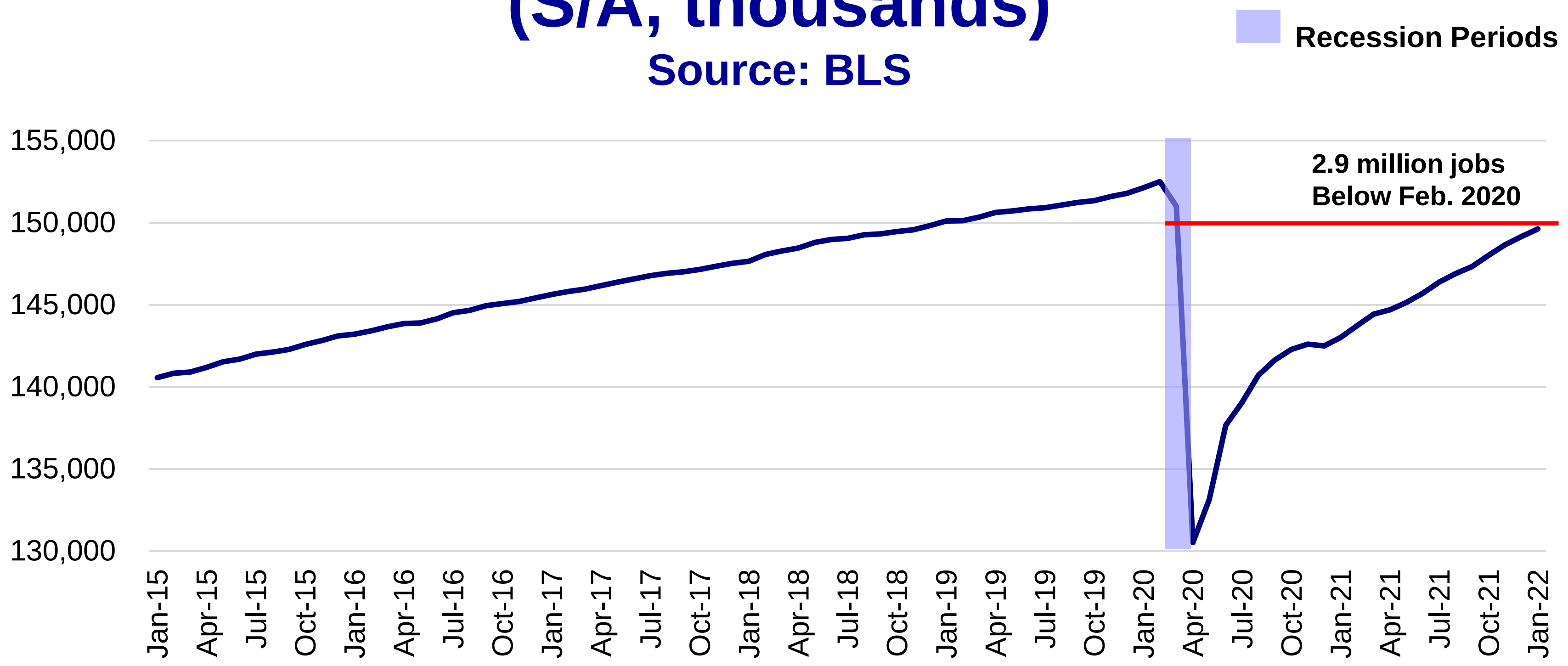
Source: BEA



Total Non-farm Jobs

(S/A, thousands)

Source: BLS



The Economic Outlook Remains Excellent!

- This is not a typical business cycle.
- The COVID recession was caused by the government forcing large parts of the economy to close.
- Don’t look at other cycles! This is not the same!

Real GDP Forecast

Year	2022	2023
The Conference Board	3.5%	2.9%
S&P	3.9%	2.7%
Blue Chip	3.9%	2.6%

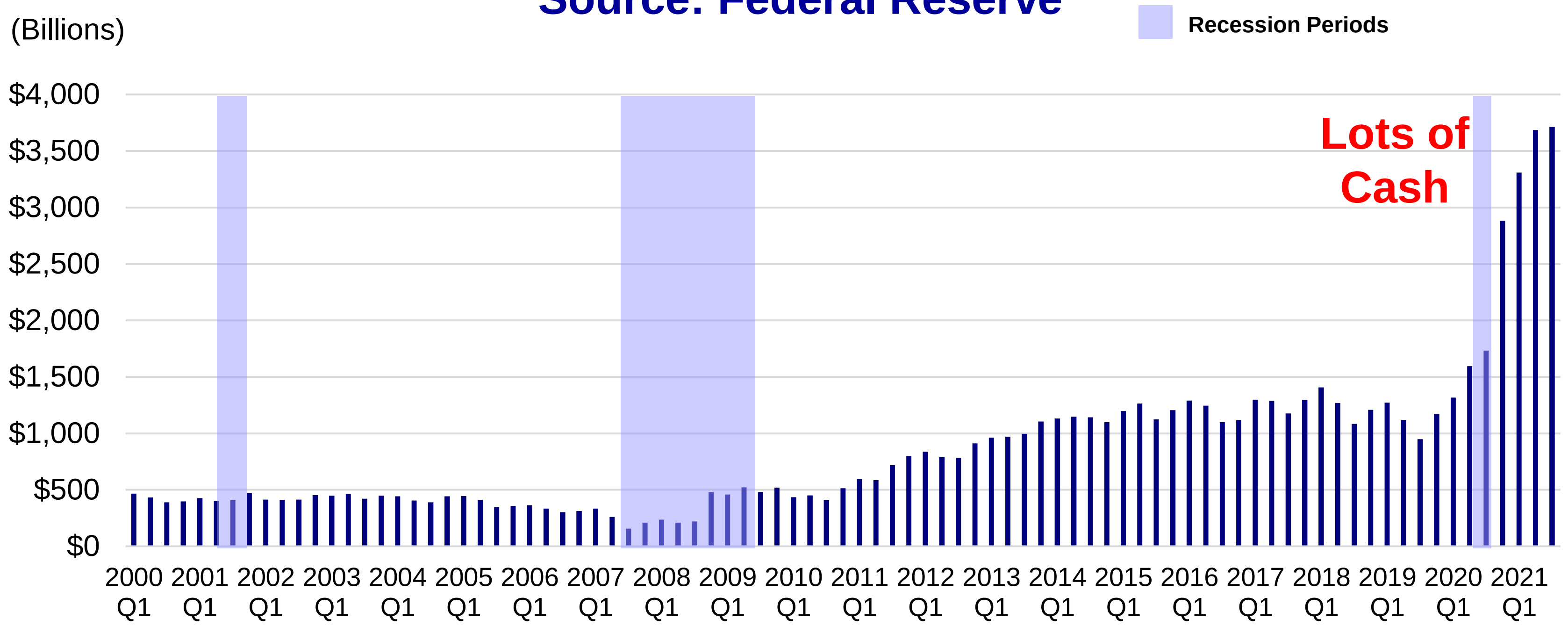
The average annual growth rate between 2010-2019 was 2.3%

The Consumer Outlook

- Most consumers are in great financial shape
  - Lots of cash
  - Debt levels remain low
  - Jobs are plentiful
  - Positive wealth effect
  - Significant pent-up demand

Checkable Deposits and Currency of Households and Nonprofit Organizations

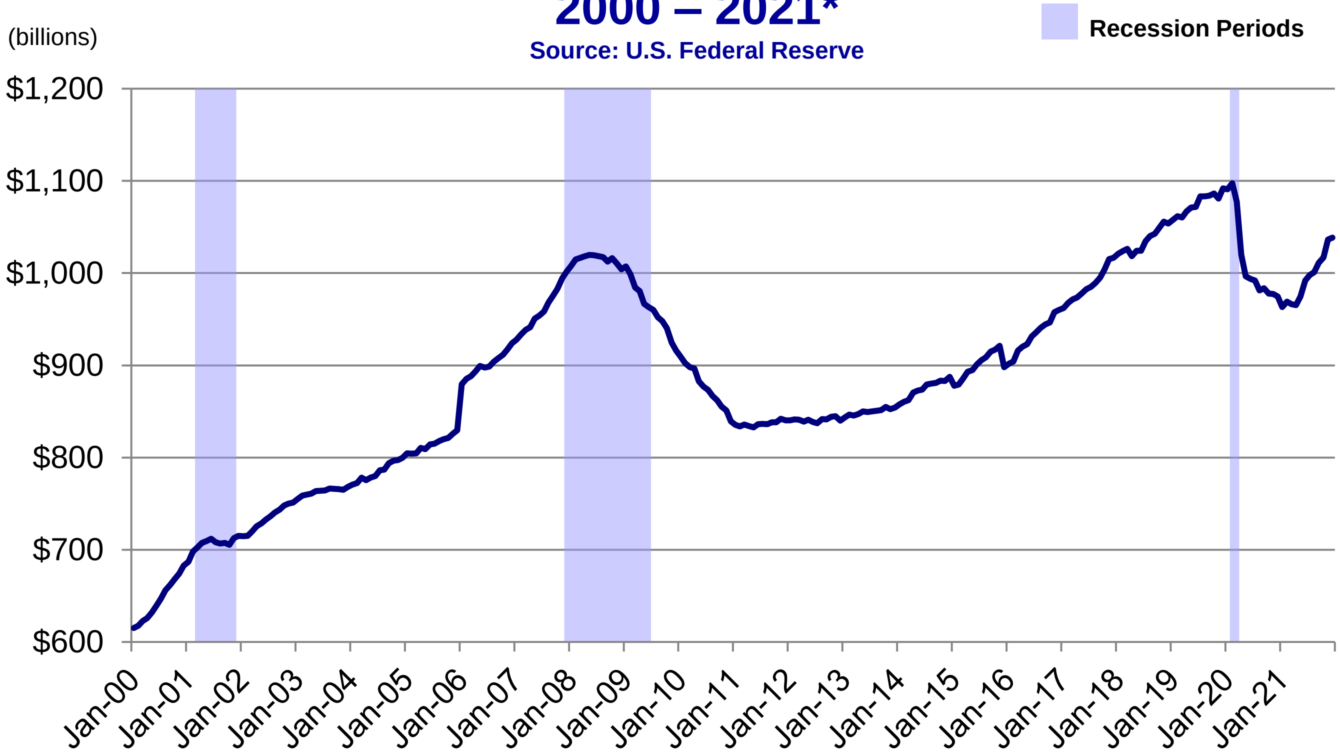
Source: Federal Reserve



Households are an estimated 94% of total

U.S. Consumer Credit
Total Revolving Credit Outstanding
2000 – 2021*

Source: U.S. Federal Reserve



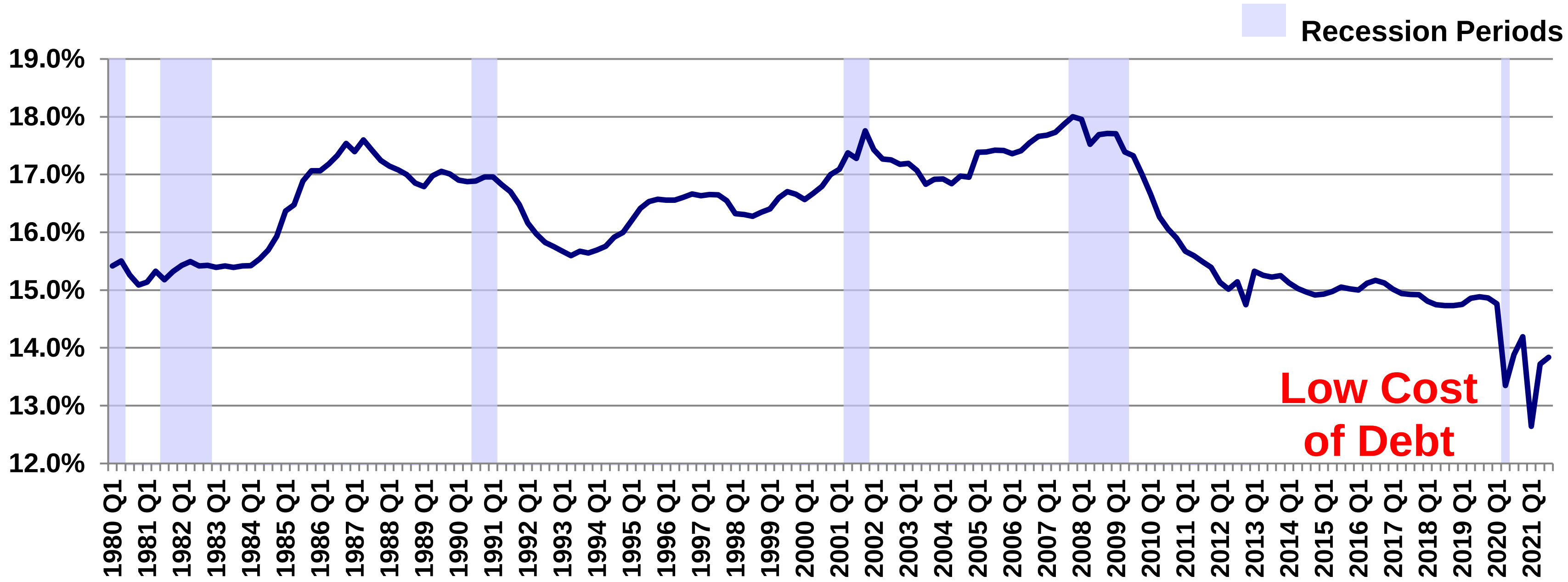
Low Levels of Debt

Revolving Credit Plans – may be unsecured or secured by collateral and allow a consumer to borrow up to a prearranged limit and repay the debt in one or more installments.

*Data through December 2021

Financial Obligation's Ratio*
1980 – 2021**

Source: Federal Reserve



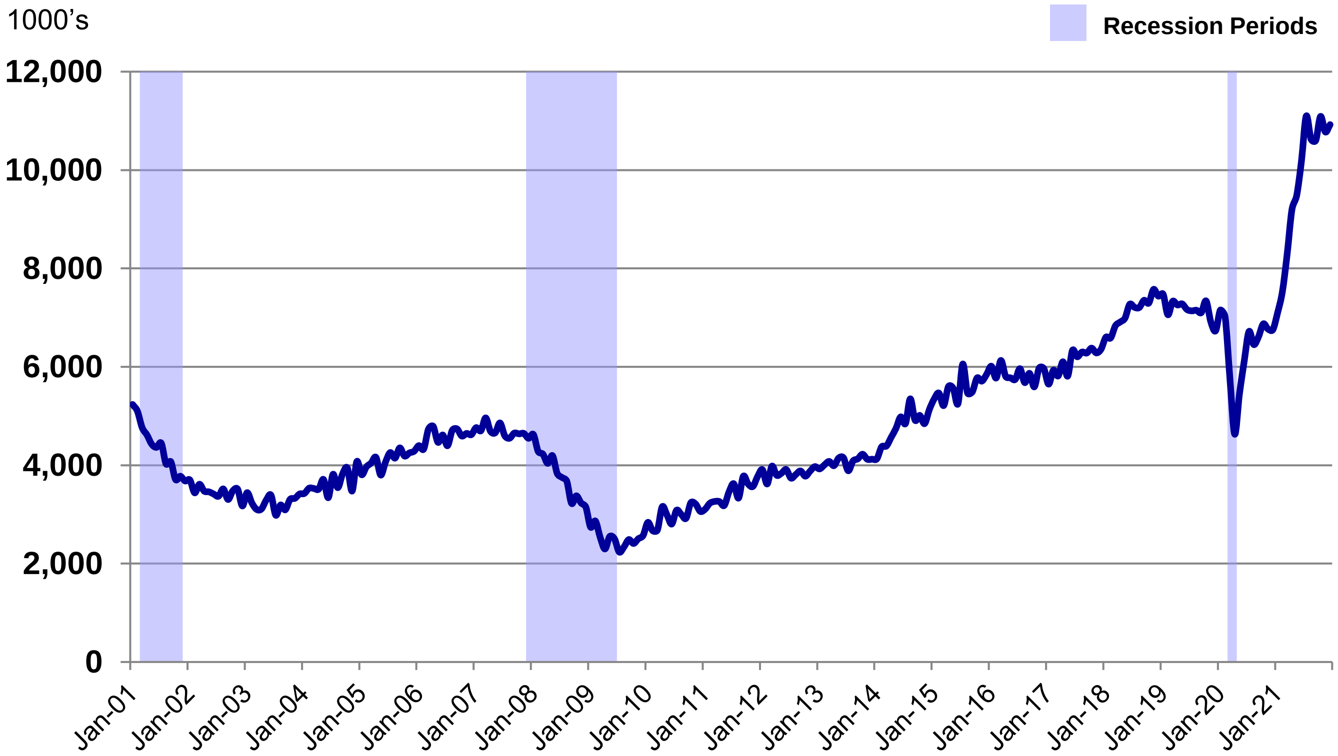
* of mortgage and consumer debt (including auto, rent and tax payments) to disposable income.

**Data through the third quarter 2021

Job Openings

2001 – 2021*

Source: U.S. Bureau of Labor Statistics



Lots of Jobs

6,513,000 unemployed people in January 2022

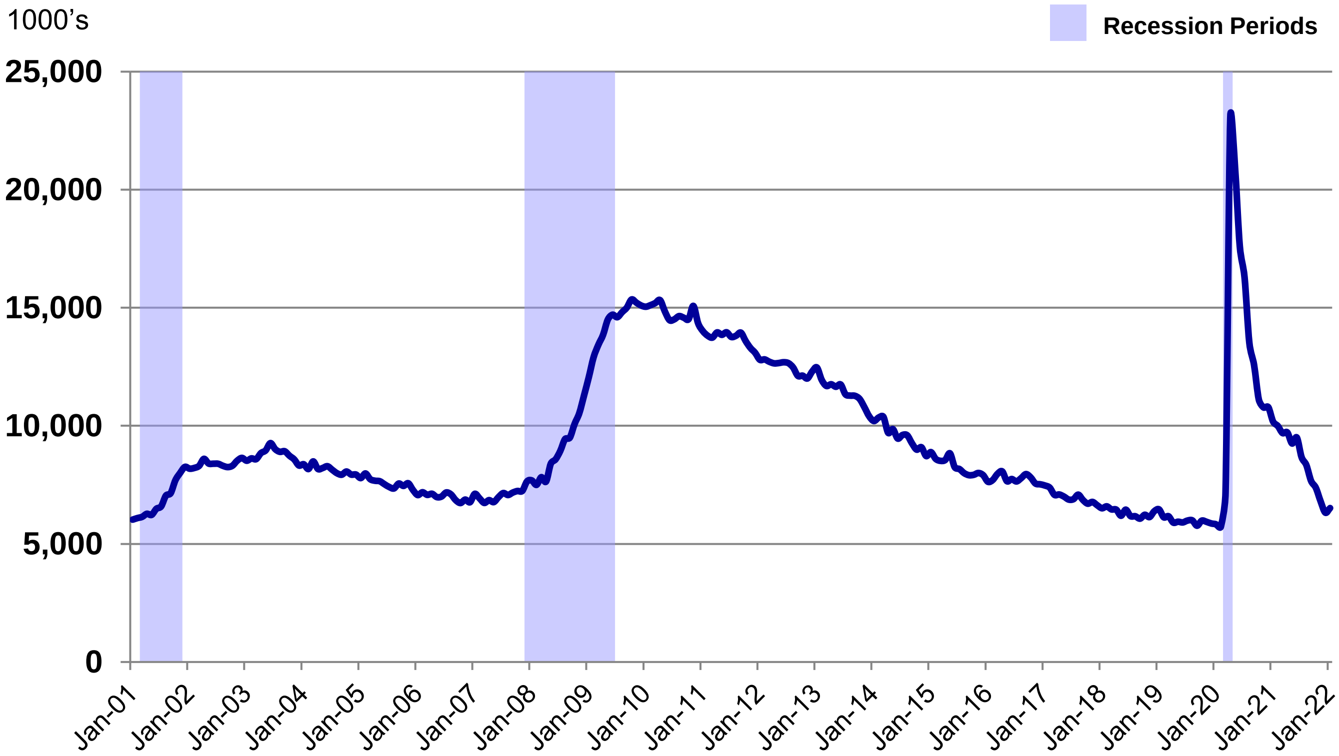
*Data through December 2021.


Perfect 10
MEN'S CLUB
Cabaret • Nightclub • Restaurant
NOW
HIRING
8's

Number of People Unemployment (U-3)

2001 – 2022*

Source: U.S. Bureau of Labor Statistics



More Jobs Available than people unemployed

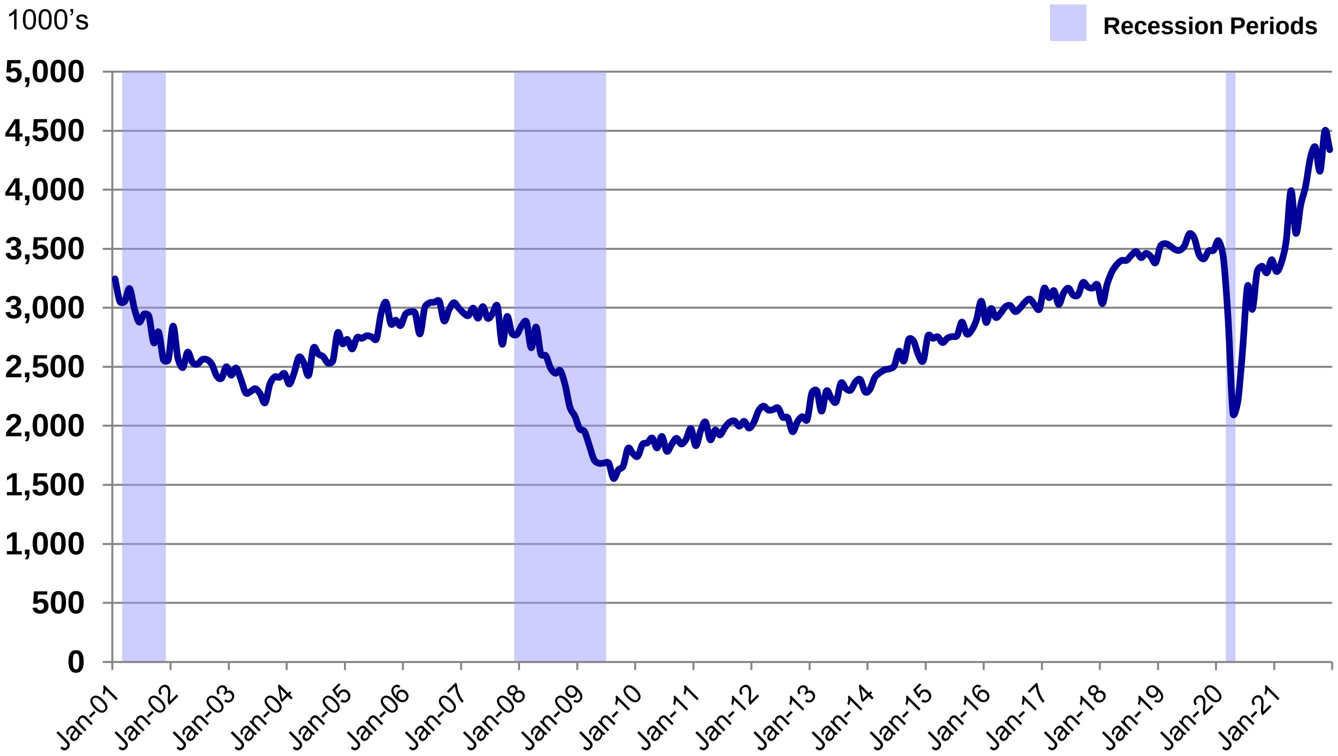
6,513,000 unemployed people in January 2022

*Data through January 2022.

Quits

2001 – 2021*

Source: U.S. Bureau of Labor Statistics



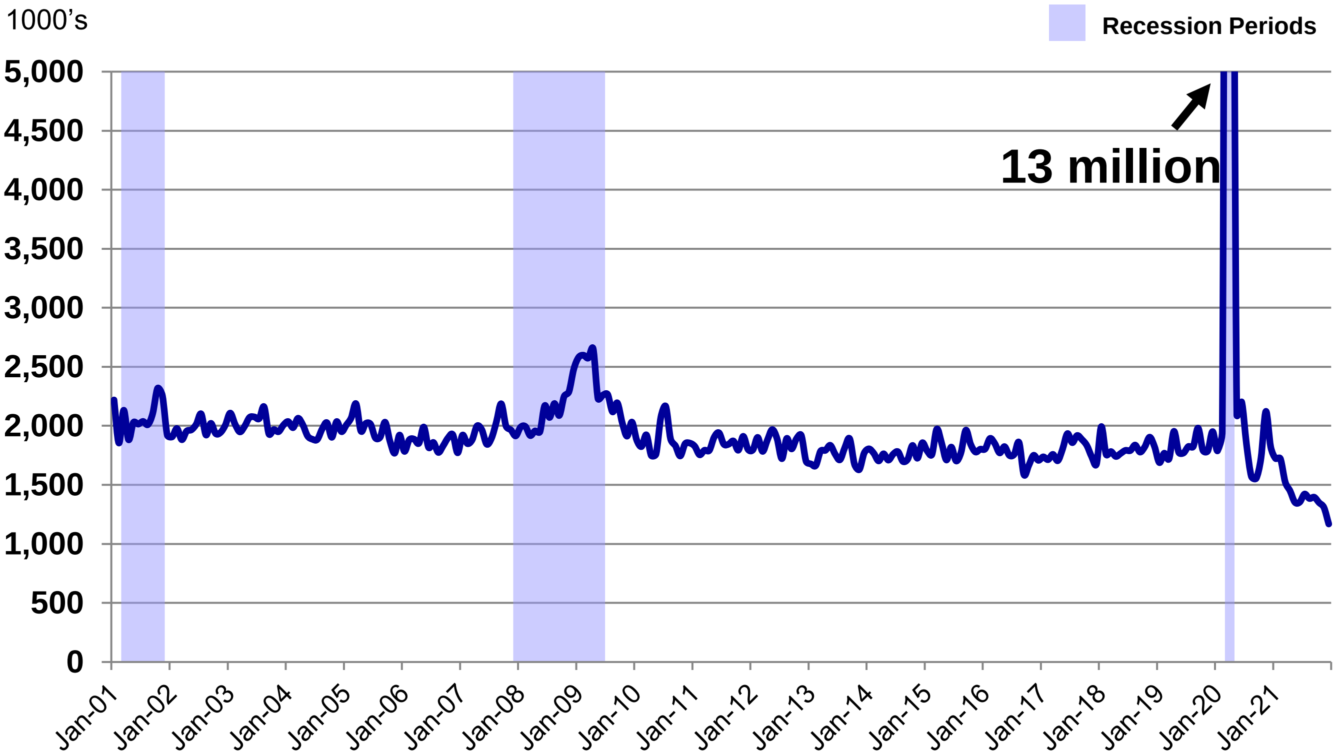
People Changing Jobs at Will

6,513,000 unemployed people in January 2022

*Data through December 2021.


WE ALL QUIT
SORRY FOR THE
INCONVENIENCE

Layoffs
2001 – 2021*
Source: U.S. Bureau of Labor Statistics



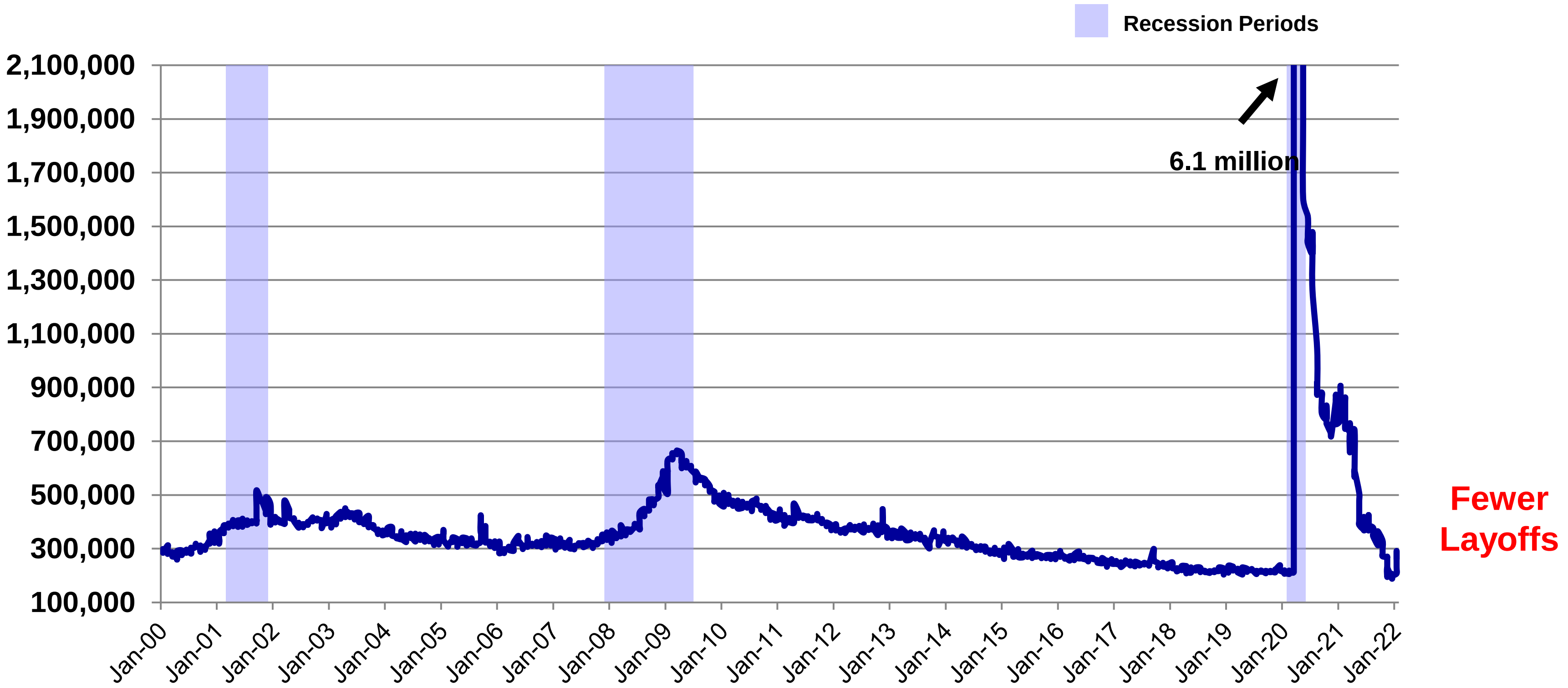
6,513,000 unemployed people in January 2022

*Data through December 2021.

U.S. Initial Unemployment Insurance Claims

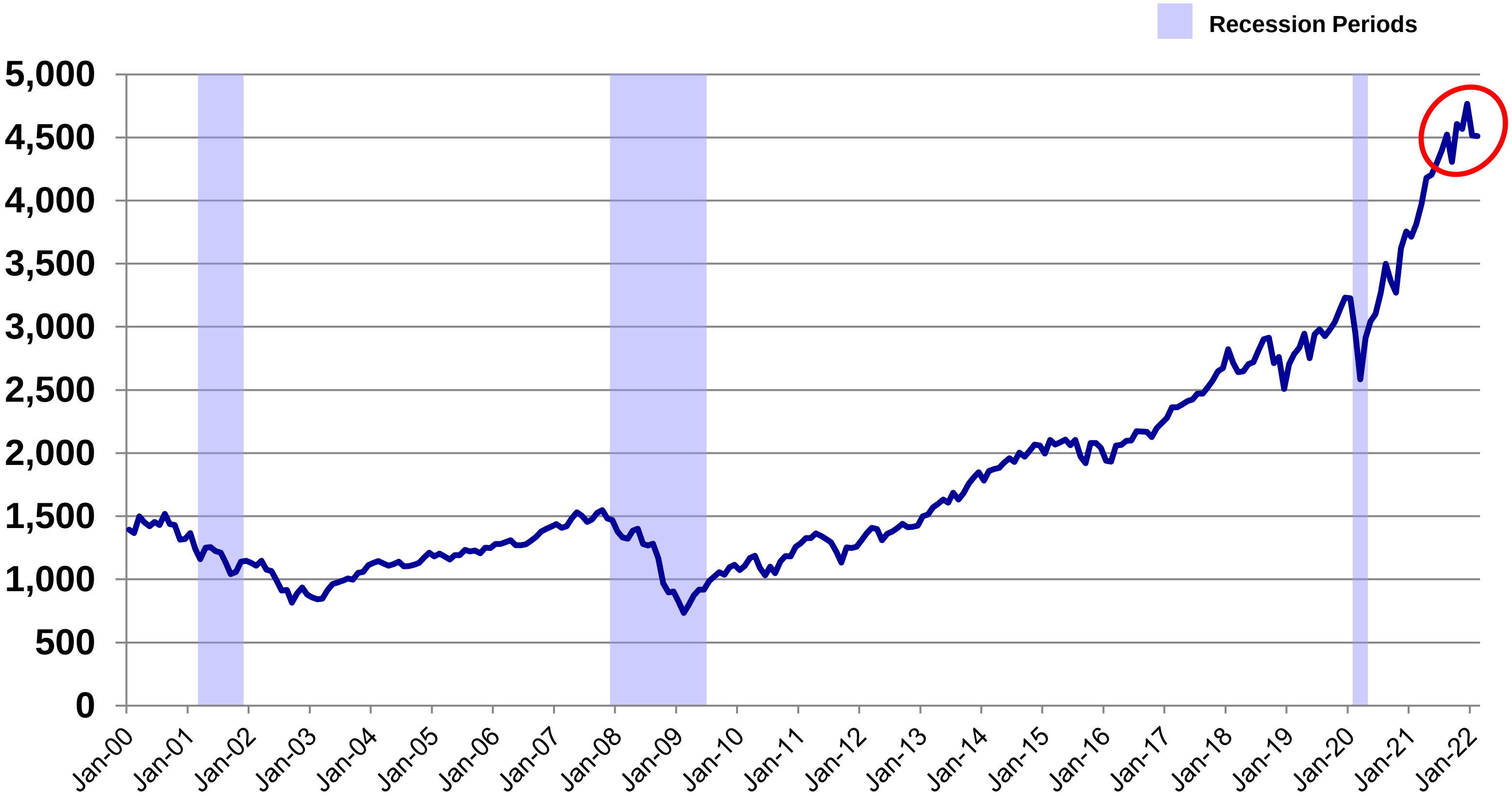
2000 – 2022*

Source: U.S. Employment and Training Administration



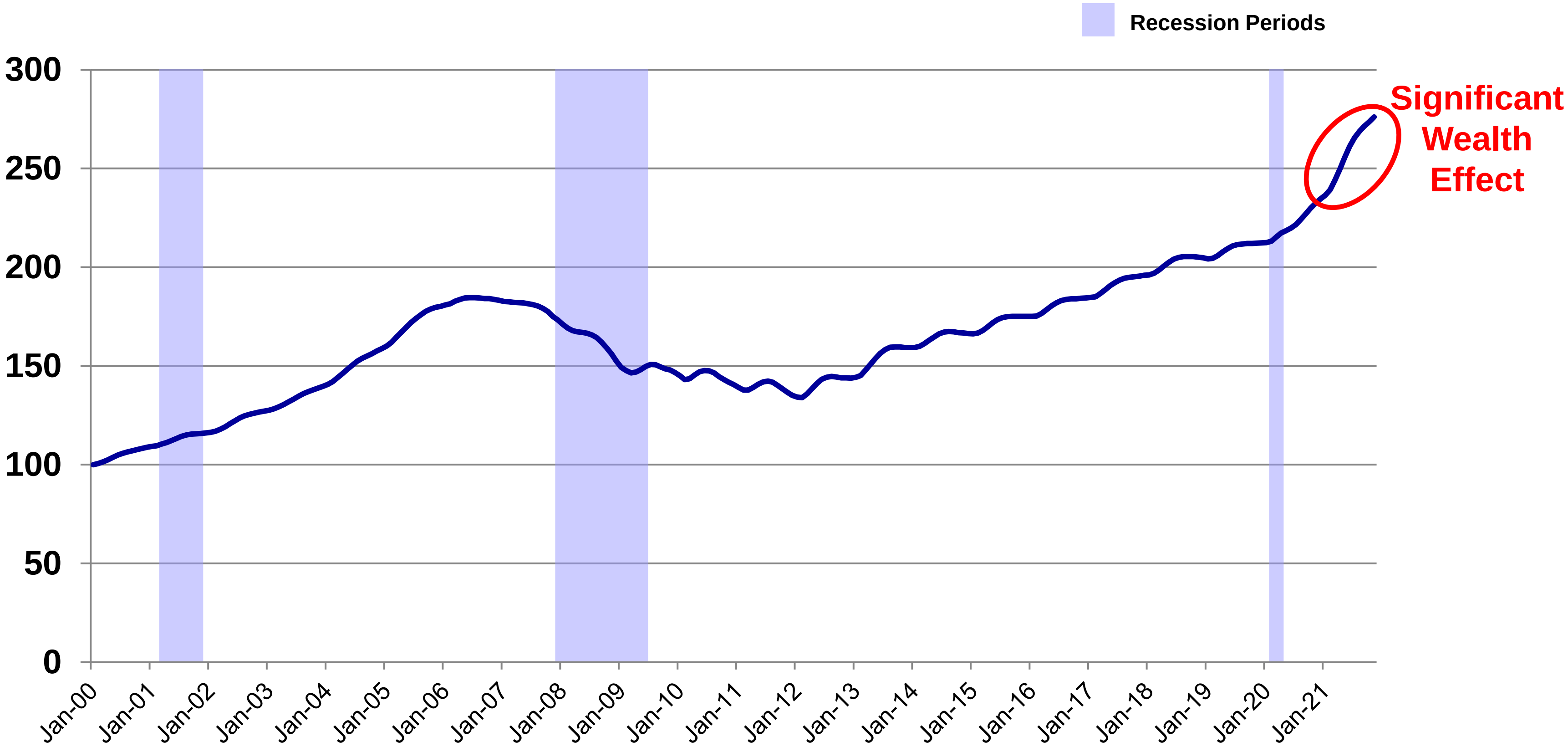
*Seasonally adjusted data through the week of January 22nd, 2022.

S&P 500
2000 – 2022*



*Data through February 2022

U.S. S&P/Case-Shiller Home Price Indices
2000 – 2021*

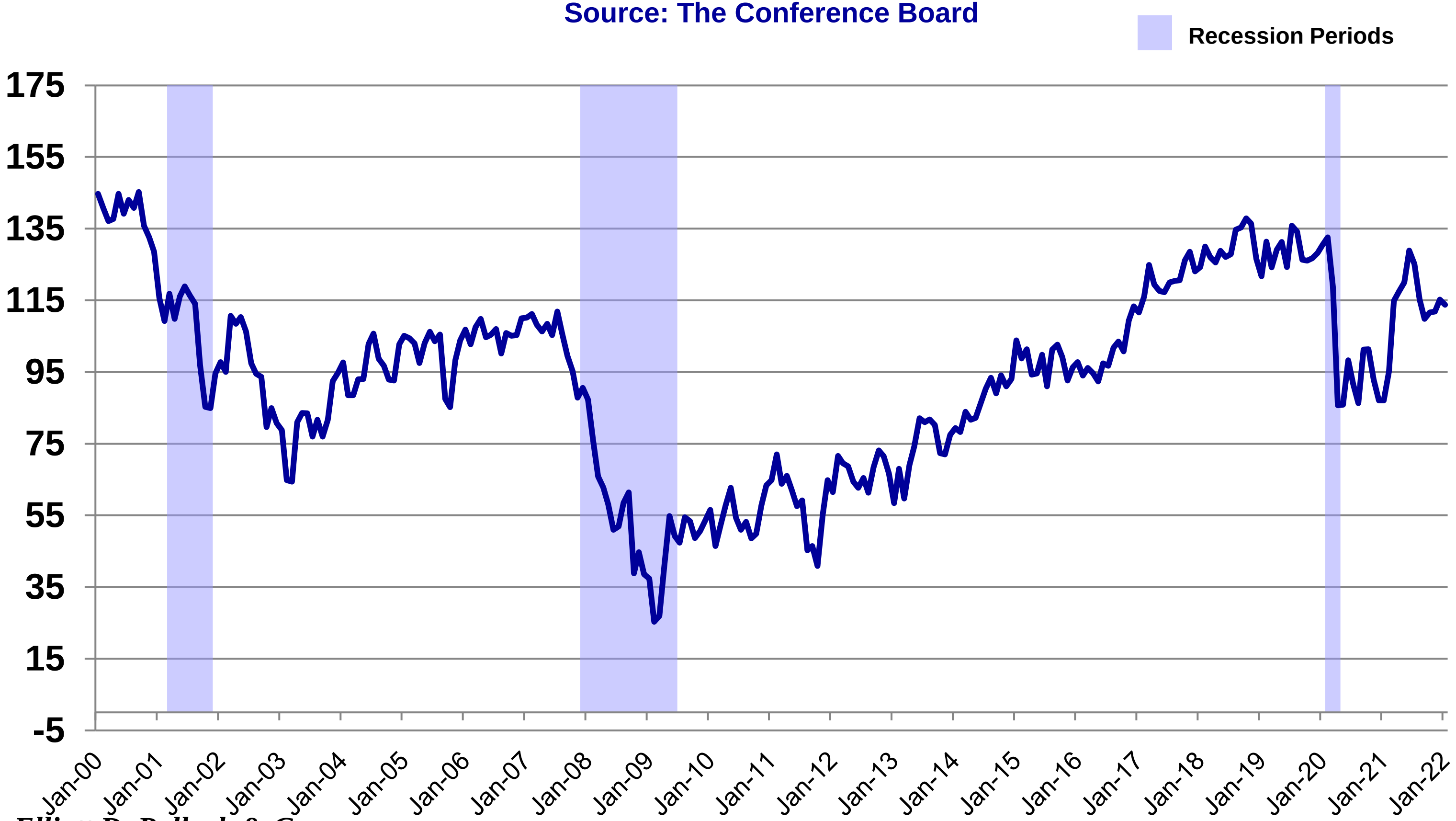


*Data through October 2021

U.S. Consumer Confidence Index

2000 – 2022*

Source: The Conference Board

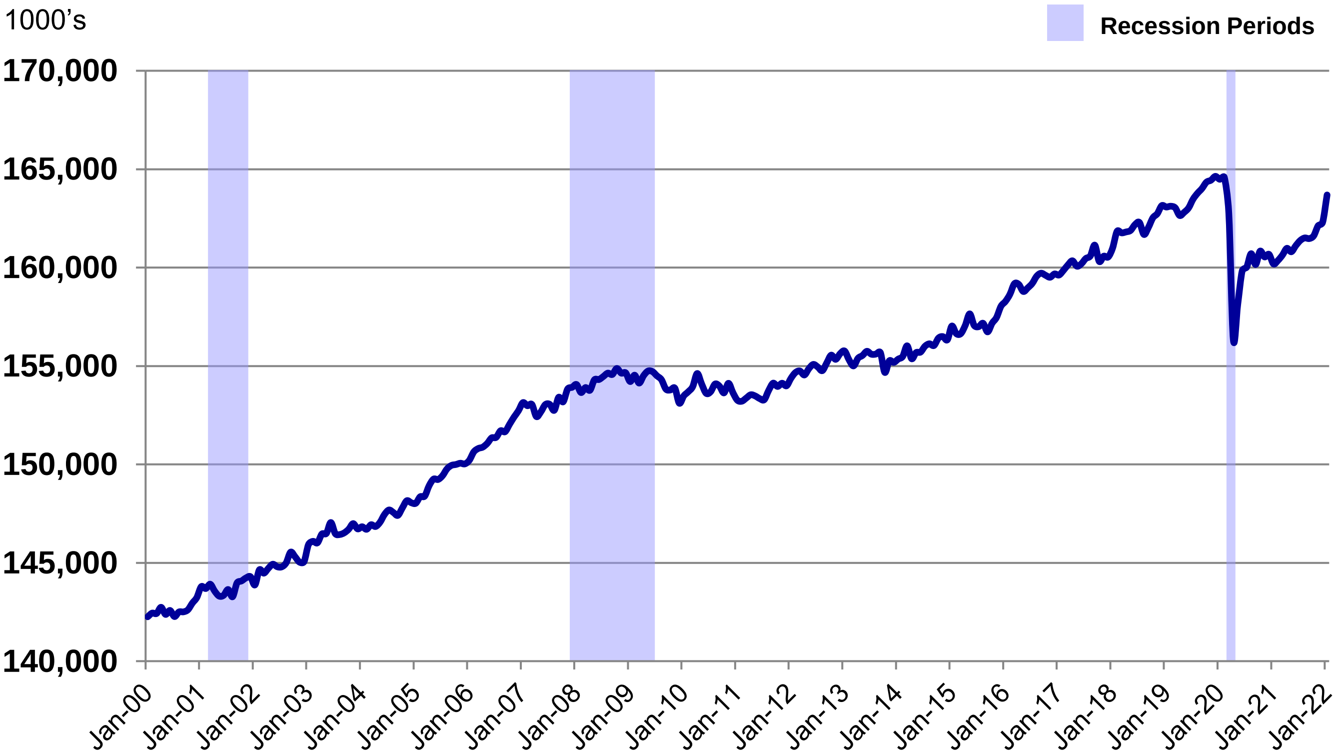


*Data through January 2022

Labor Force (S/A)

2000 – 2022*

Source: U.S. Bureau of Labor Statistics



Where Did The Workers Go?

*Data through January 2022.

NFIB January's Result

- 47% of owners reported job openings that could not be filled. The number of unfilled job openings far exceeds the 48-year historical average of 23 percent.

Headwinds For Labor Market

- The participation rate has dropped fastest among women, workers without a college degree and those in low paying service industries such as hotels, restaurants and childcare.
- As a group, those over 55 are better prepared for retirement (growth in their 401k and other retirement savings as well as home prices). Acceleration of retirement is a long-term shift that is likely to continue.
- Those whose skills have eroded during COVID my not return.
- Women with childcare issues or parent care issues, especially those in lower wage jobs, may not return to work.

Headwinds For Labor Market

- Some people won’t return to the labor force until COVID is completely under control.
- Even with the expiration of enhanced unemployment benefits, many have saved so much money from various stimulus programs that they don’t need to return to work yet.
- Beware of incentives not to work in the proposed Bring Back Better Act and its follow up.

All of this spells higher wages and price increases.

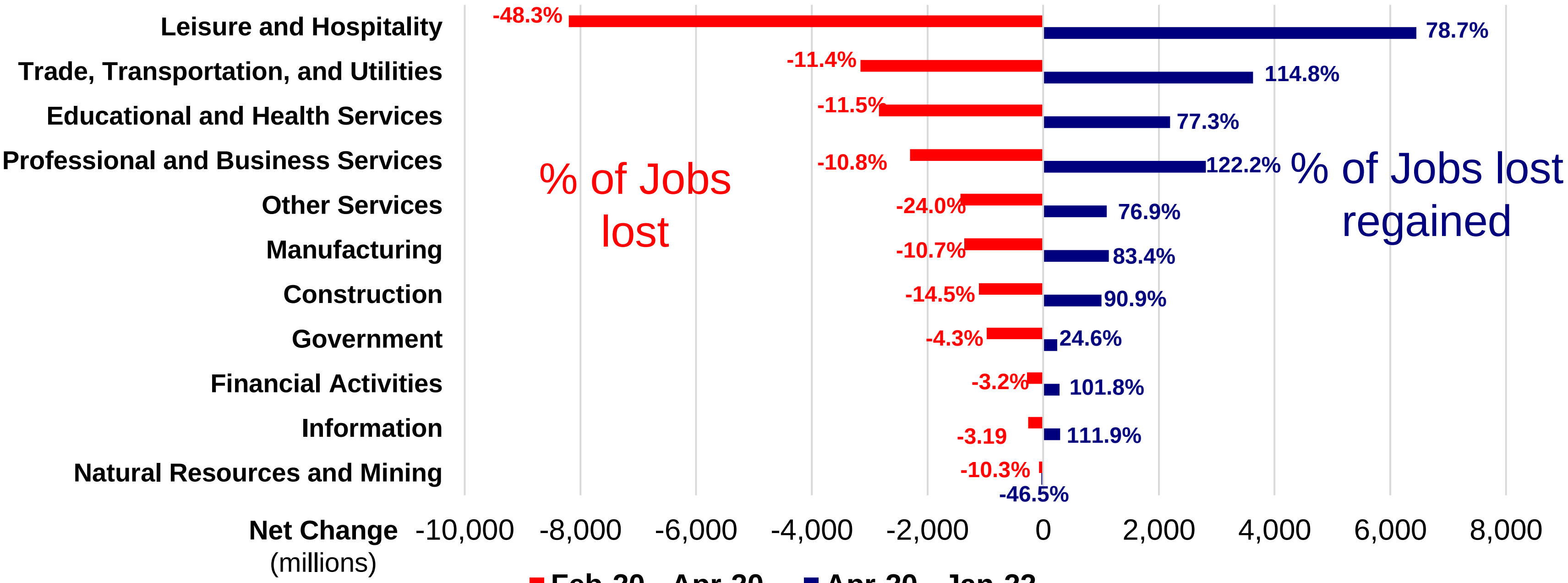
Not Everything Goes According to Plan

But, consumer have rarely been in this good a financial shape.

U.S.

Job Losses (Feb-20 to Apr-20)
Jobs Regained/Lost (Apr-20 to Jan-22)

Source: BLS



Jobs lost 22.0 million **Jobs gained 19.1 million**

86.9% of Jobs have been recovered.

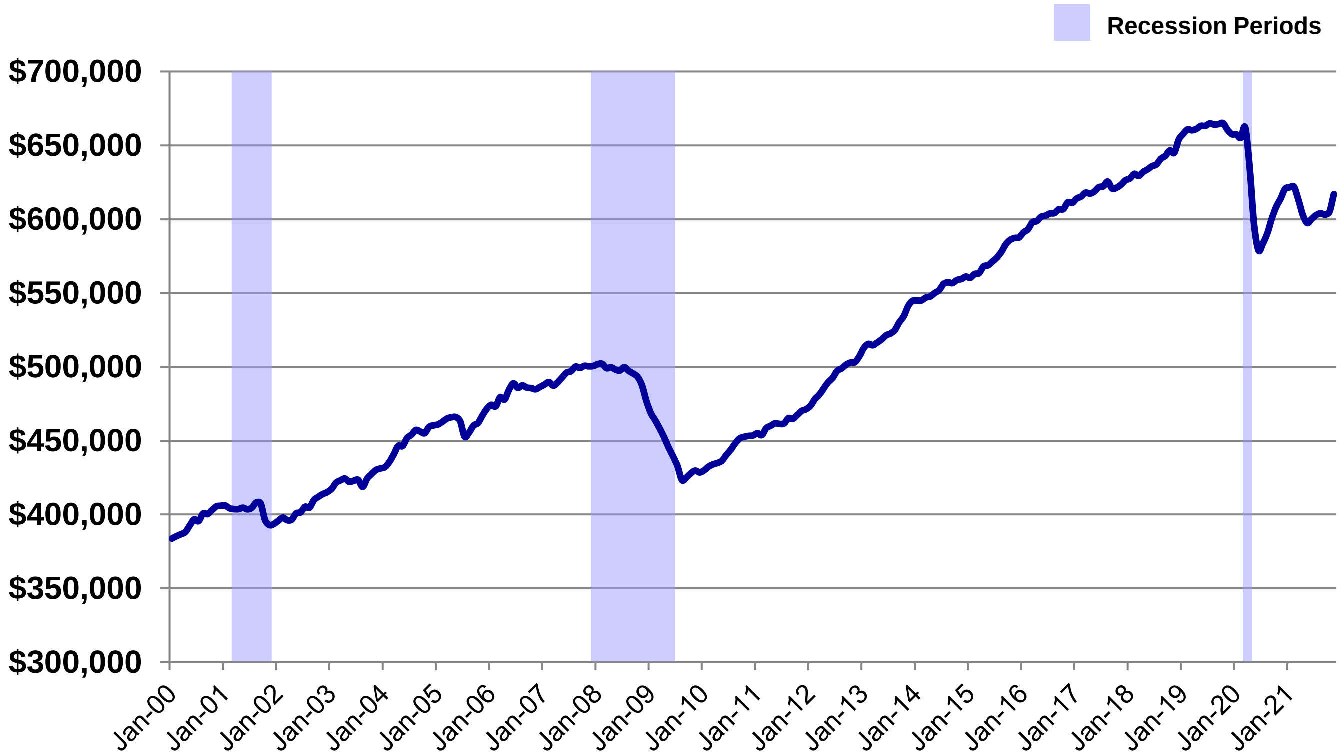
Overall, Consumers are in Good Shape

Business Outlook

Business is in Good Shape

- Strong consumer demand.
- Need to replenish inventories.
- Significantly disrupted supply chain will take a while to fix.
- Lack of workers is a significant issue.
- The last mile issue (dock workers, truck drivers and trucks).

Retailers Inventories (millions)
2000 – 2021*
Source: U.S. Census Bureau



*Data through November 2021


IF IT'S IN STOCK
WE HAVE IT !

Supply Chain Issues

- Global supply chains feed one another.
- Shortages of one product or component create supply shortages and price swings of other products or components.
- To fix this, lockdowns and other things that affect the ability of a plant to run effectively and get its products delivered at normal rates have to end. This is a worldwide issue.
- **We are not there yet.**

Supply Chain Issues

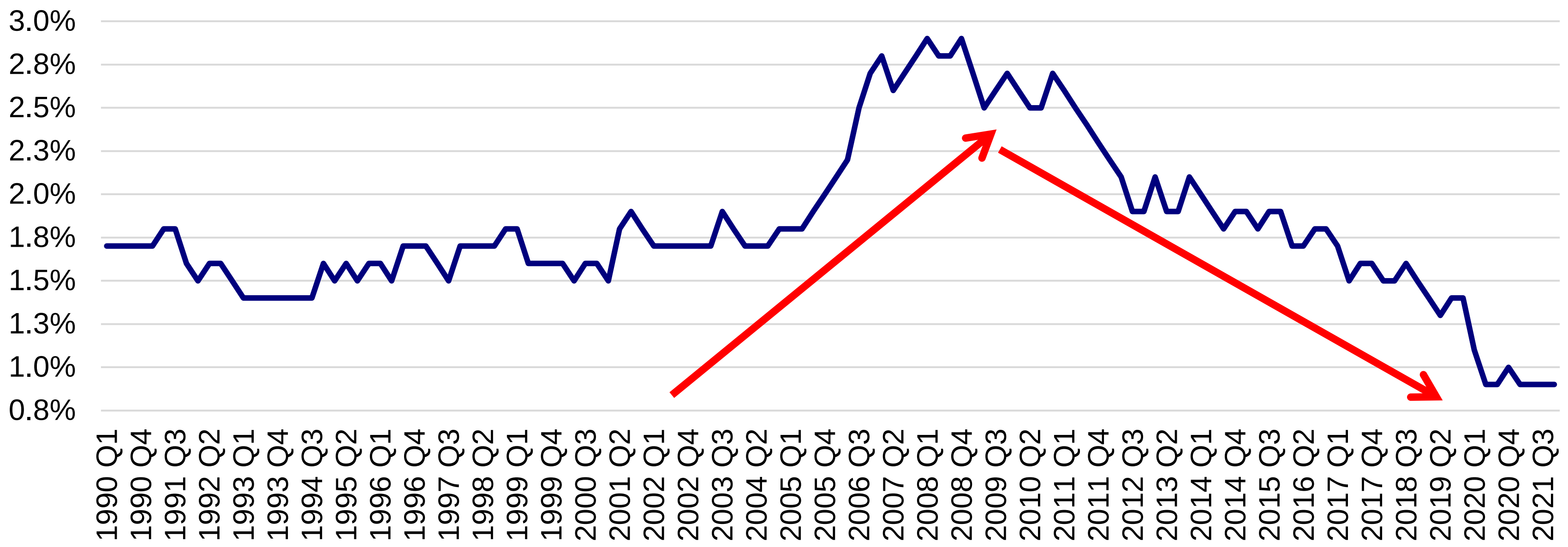
- This will slow GDP growth now but will speed up GDP growth later.
- This has created upward pressure on prices now. But, prices will fall once capacity comes back online. But, the price declines will not erase all of the price increases.
- **<u>The timing of this is uncertain.</u>**

Housing Outlook

'We hope to buy the first one and then object to the other 199 being built'

U.S. Homeowner Vacancy Rate

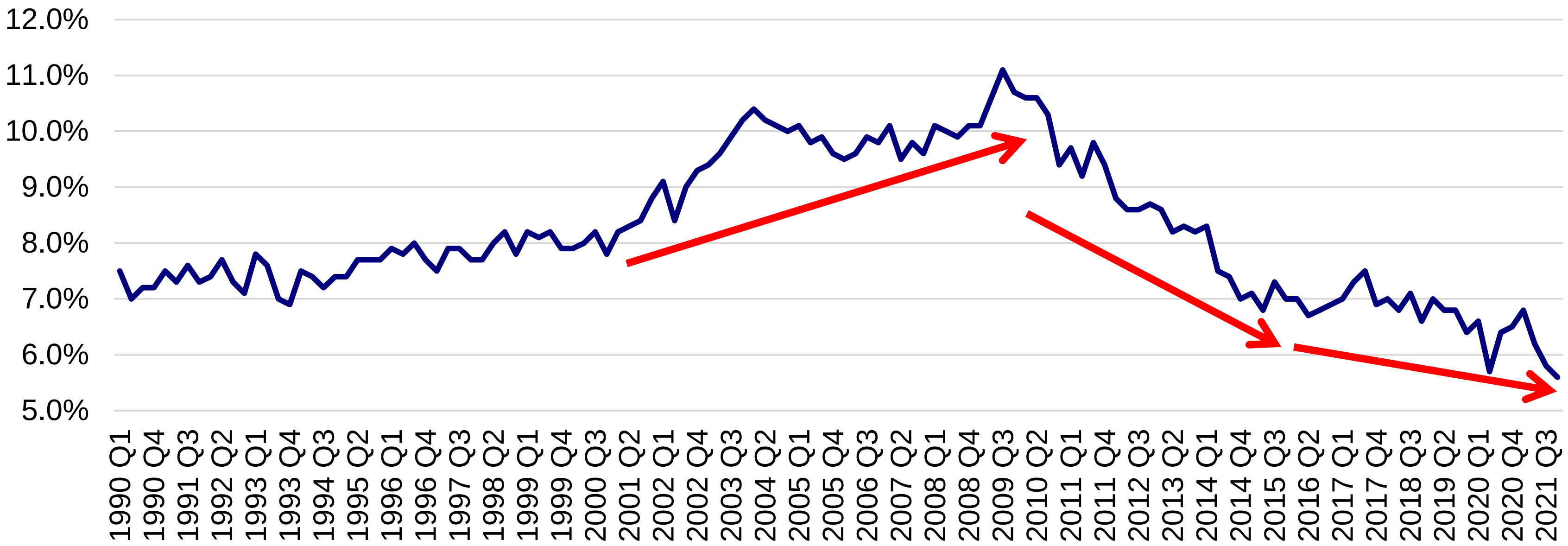
Source: U.S. Census Bureau



The homeowner vacancy rate is calculated as the ratio of vacant year-round units for sale to the sum of owner-occupied units, vacant year-round units sold but awaiting occupancy, and vacant year-round units for sale.

U.S. Rental Vacancy Rate

Source: U.S. Census Bureau



The rental vacancy rate is calculated as the ratio of vacant year-round units for rent to the sum of renter- occupied units, vacant year-round units rented but awaiting occupancy, and vacant year-round units for rent.

The 2000's were a decade of building excess inventory.

The 2010's were a decade of absorbing that inventory.

We are now <u>short of inventory.</u>

Not only is demand near a record high but we have a big hole (shortage) to fill because vacancies are so low.

There is annual demand for 1.4 million housing units in 2022. This is in addition to the shortage that already exists.

The national housing shortage is estimated between 3.8 to 5.2 million units.

Unless you are building more than the annual demand you are not eating into the shortage.

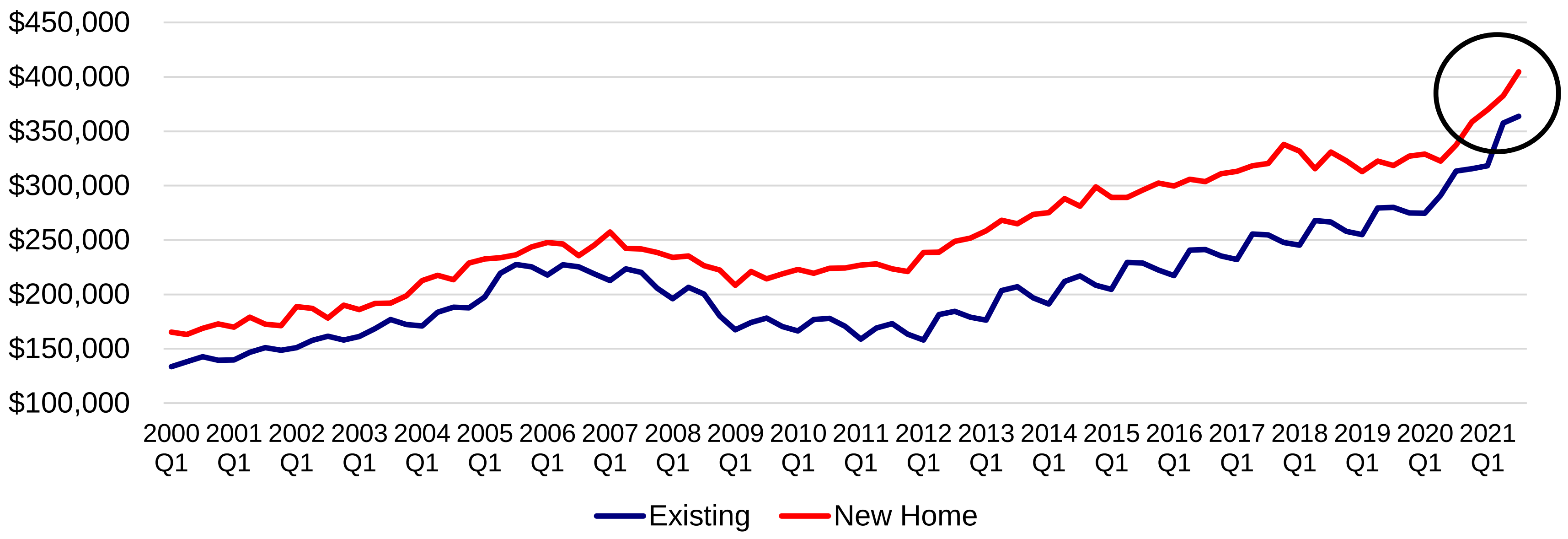
Source: Realtor.com; Freddie Mac

There is a Big Hole to Fill

Median New and Resale Home Prices

2000 – 2021*

Source: NAR; U.S. Census Bureau



YoY Growth:
New 19.9%
Resale 16.0%

In the U.S.

Source: NAR; Redfin

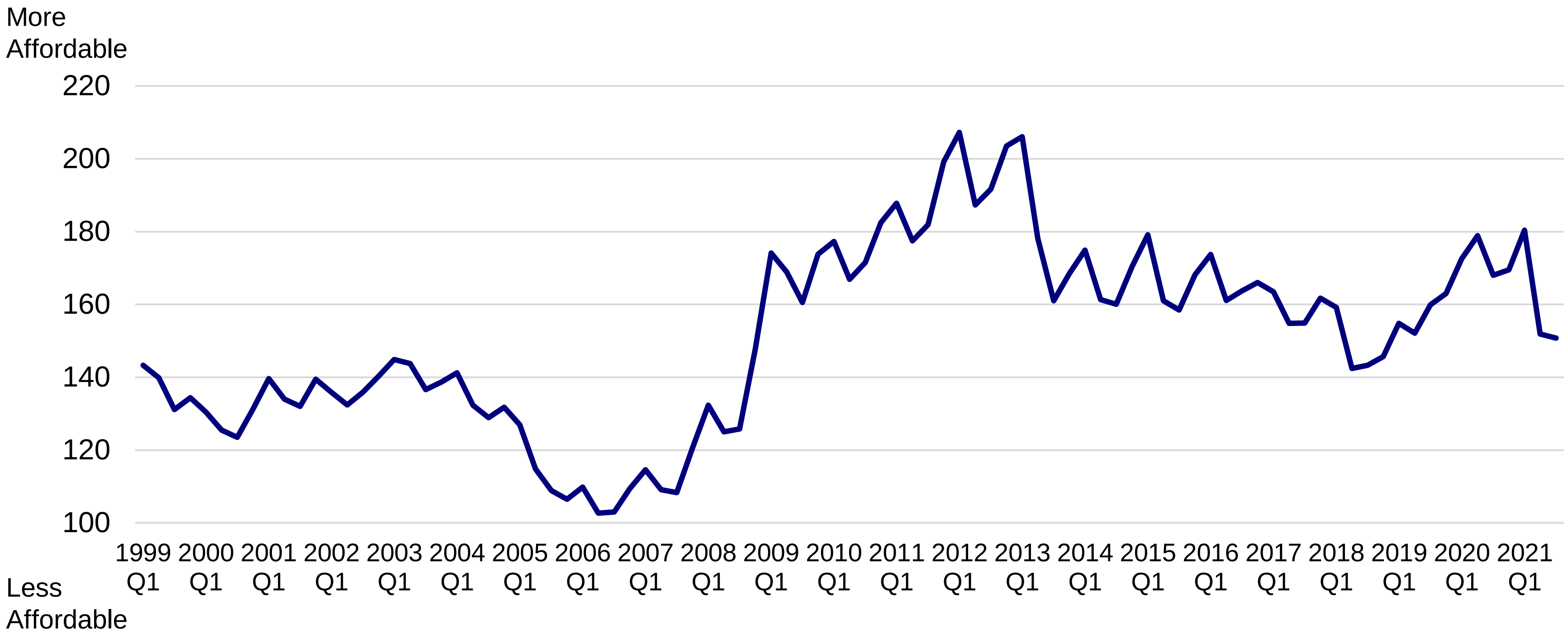
- Months of Supply:
  - December 2015 –3.9
  - December 2019 – 3.0
  - December 2021 – 1.8
- Number of Homes for Sale:
  - December 2015 – 1,606,561
  - December 2019 – 1,269,791
  - December 2021 – 548,856


SOLD OVER ASKING
FOR SALE

It’s all about Affordability and Demographics

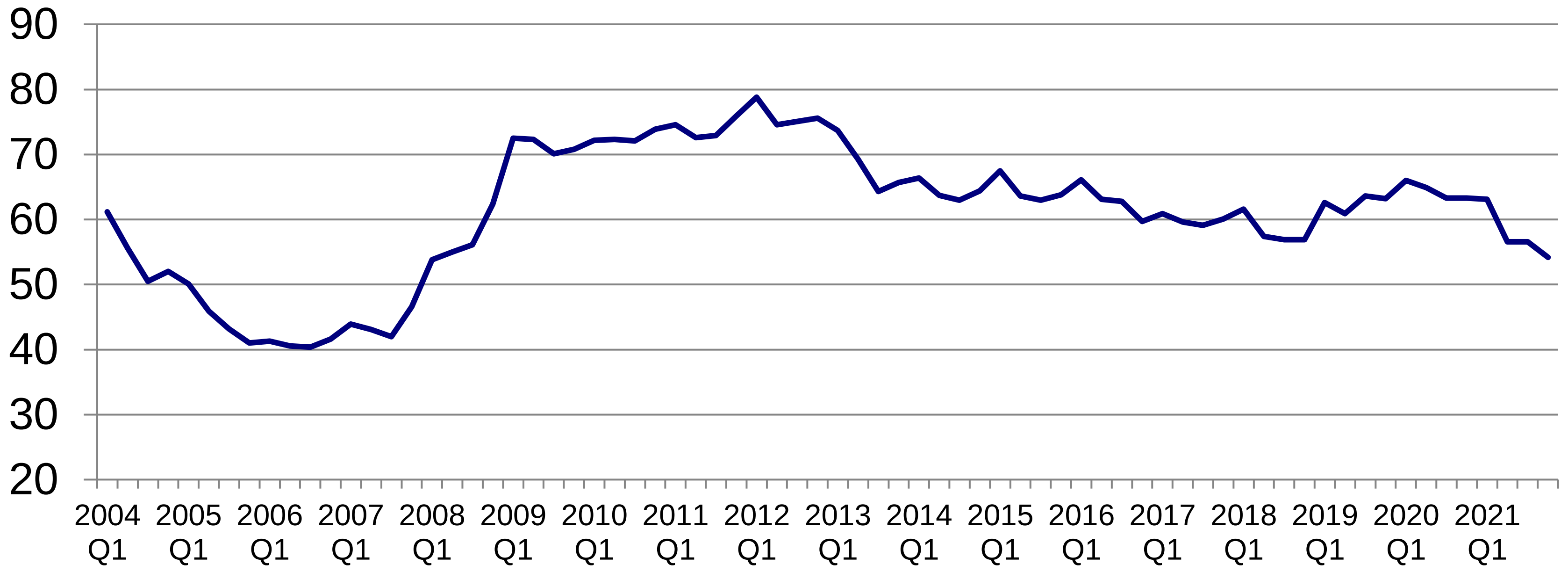
U.S. Existing Housing Affordability Index

Source: National Association of Realtors



Housing Opportunity Index
2004-2021

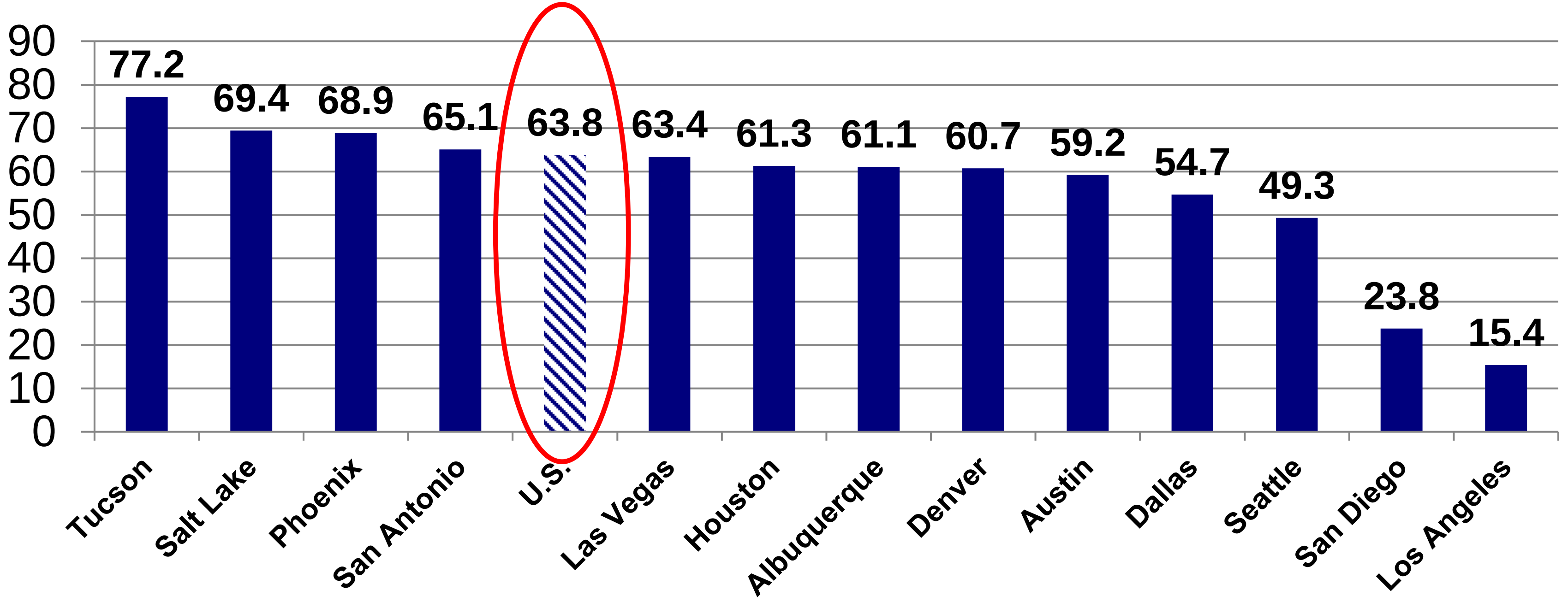
Source: NAHB/Wells Fargo



Housing Opportunity Index

2015 Q4

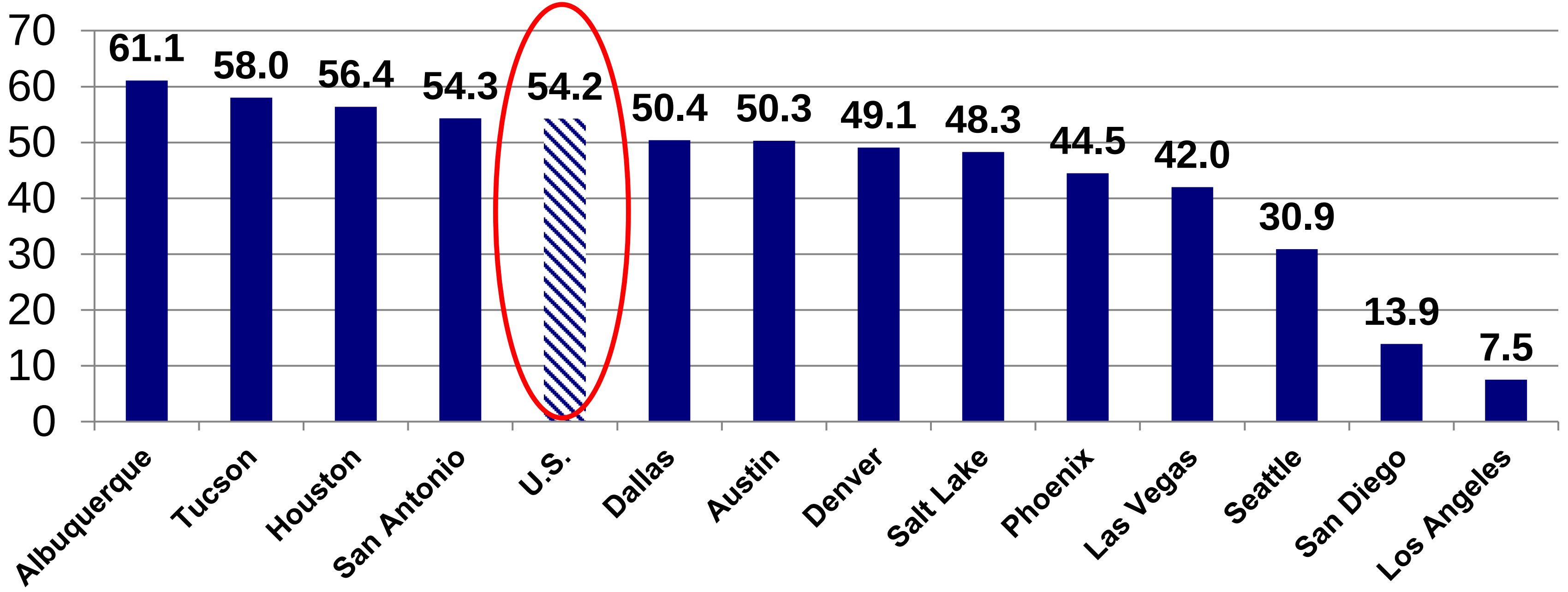
Source: NAHB/Wells Fargo



Housing Opportunity Index

2021 Q4

Source: NAHB/Wells Fargo



What Will Happen if Prices Continue to Rise?

Affordability Ratio w/ Interest Rate 3.5%

Source: Zonda

Metro	Current Affordability Ratio	5%	10%	15%	20%
Austin	63.2%	59.0%	57.0%	55.0%	53.2%
Houston	58.1%	53.9%	52.0%	50.1%	48.2%
San Antonio	58.1%	53.4%	51.3%	49.3%	47.3%
Dallas	55.6%	49.1%	46.7%	45.9%	43.9%
Phoenix	53.9%	49.1%	46.7%	44.7%	42.9%
Denver	46.8%	41.6%	39.3%	37.0%	34.7%
Tucson	31.7%	26.8%	24.5%	22.9%	21.3%

What Will Happen if Prices Continue to Rise?

Affordability Ratio w/ Interest Rate 4.0%

Source: Zonda

Metro	Current Affordability Ratio	5%	10%	15%	20%
Austin	63.2%	56.9%	54.7%	52.9%	51.1%
Houston	58.1%	51.9%	49.8%	47.8%	46.1%
San Antonio	58.1%	51.1%	49.0%	46.9%	44.8%
Dallas	55.6%	48.2%	46.3%	44.3%	42.4%
Phoenix	53.9%	46.5%	44.5%	42.5%	40.6%
Denver	46.8%	39.1%	36.7%	34.3%	31.9%
Tucson	31.7%	24.4%	22.7%	21.1%	19.4%

Diminishing Housing Affordability in Greater Phoenix

Source: RL Brown, NAHB, Wells Fargo

	Q4	2022 (15%)	2023 (12%)	2024 (10%)	2025 (10%)
Income (5% Growth)	$79,000	$82,950	$87,098	$91,452	$96,025
28% of Income	$1,843	$1,936	$2,032	$2,134	$2,241
Taxes & Insurance	$270	$270	$270	$270	$270
Payment (Principal & Interest)	$1,573	$1,666	$1,762	$1,864	$1,971
Affordable Home	**$406,795**	**$430,625**	**$455,647**	**$481,920**	**$509,506**
% Affordable	**47.1%**	**35.6%**	**29.0%**	**25.2%**	**21.4%**

This analysis uses 3.15% mortgage rate

U.S. Home Affordability

Year	Cost	Interest Rate	Monthly Payment	Annual Household Income Needed	Medium Income	HOI
2000	$151,000	**8.05%**	$1,115	$47,793	$50,200	**59.3%**
2005	$254,000	**6.21%**	$1,592	$68,232	$58,000	**41.0%**
2010	$175,000	**4.59%**	$938	$40,188	$64,400	**73.9%**
2015	$226,000	**3.68%**	$1,103	$48,781	$65,800	**63.8%**
2020	$320,000	**3.85%**	$1,590	$61,331	$78,500	**63.3%**
2021	$360,000	**3.16%**	$1,664	$68,772	$79,900	**54.2%**
% Change	**138.4%**	**-60.7%**	**43.9%**	**43.9%**	**59.2%**	**-8.6%**

Total Payment: Principal, Interest, Property Tax and Insurance; LTV 90%

*Source: Freddie Mac, NAHAB

The primary reason housing remains affordable is interests rates.

What happens if interest rates go up?

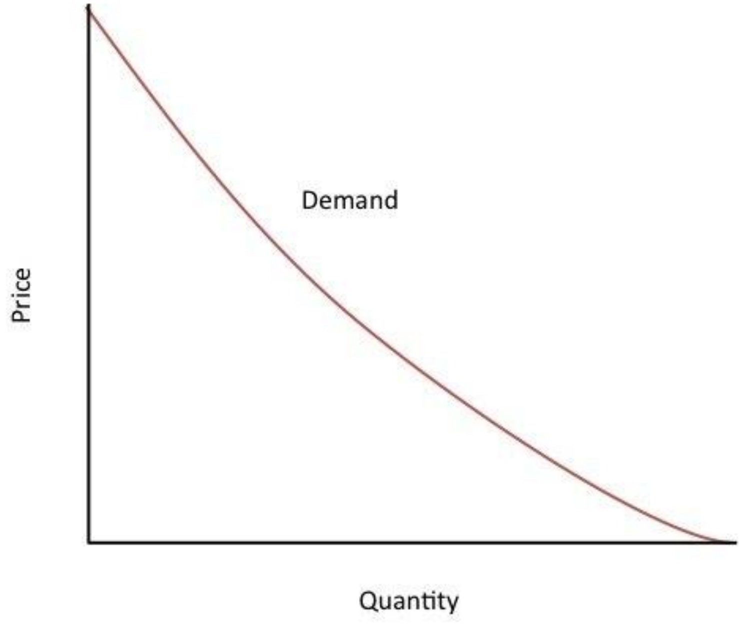
Affordability –
Lots of Demand and Lack of Supply

- Affordability is not a terminal issue now, but it could become significant very soon.
- But if interest rates increase, then we will have a housing market where fewer local households will be able to afford the median price home.
- There is a shortage of all types of housing and it will take time to cure.

Supply and Demand
Residential Real Estate Market

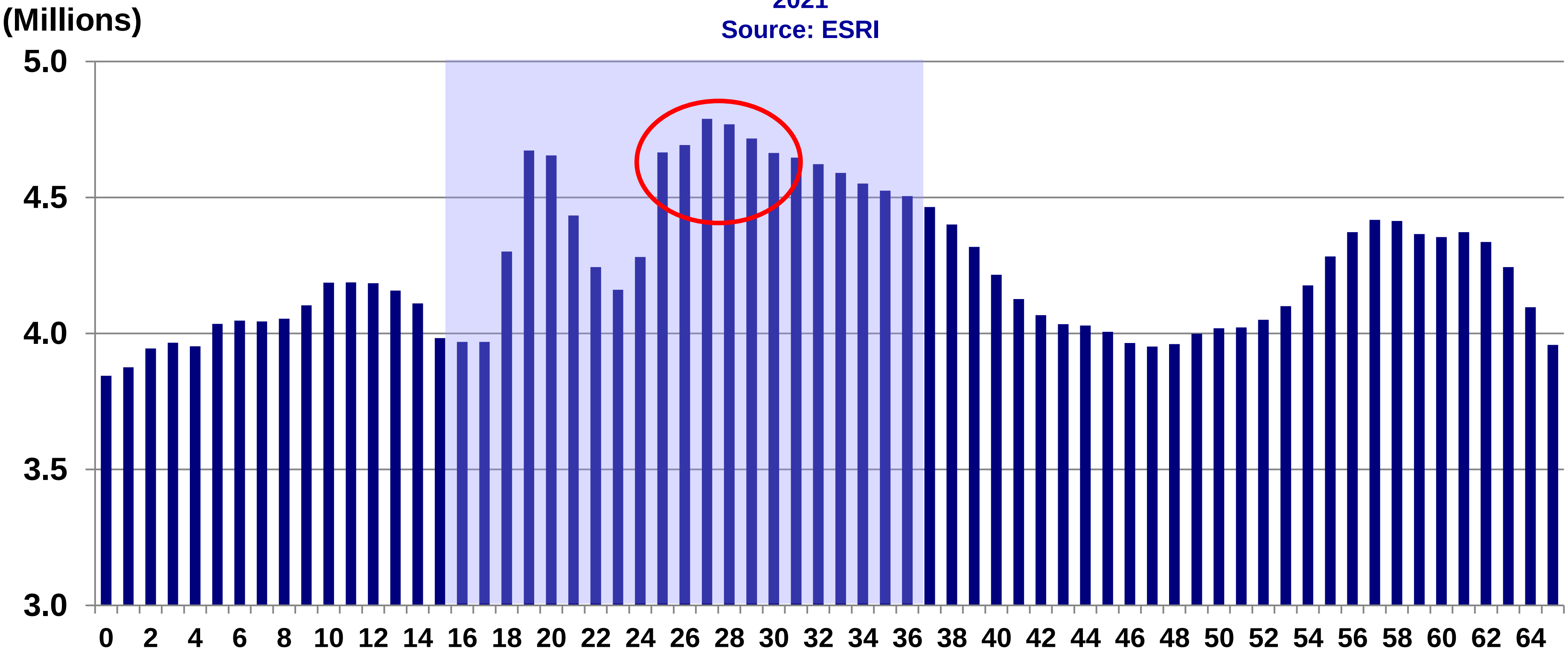
- We are under supplied in existing homes, new homes and apartments.
- This is driving people to the new home market.
- Higher pricing of for sale housing is forcing some of the market to rentals.

Demand



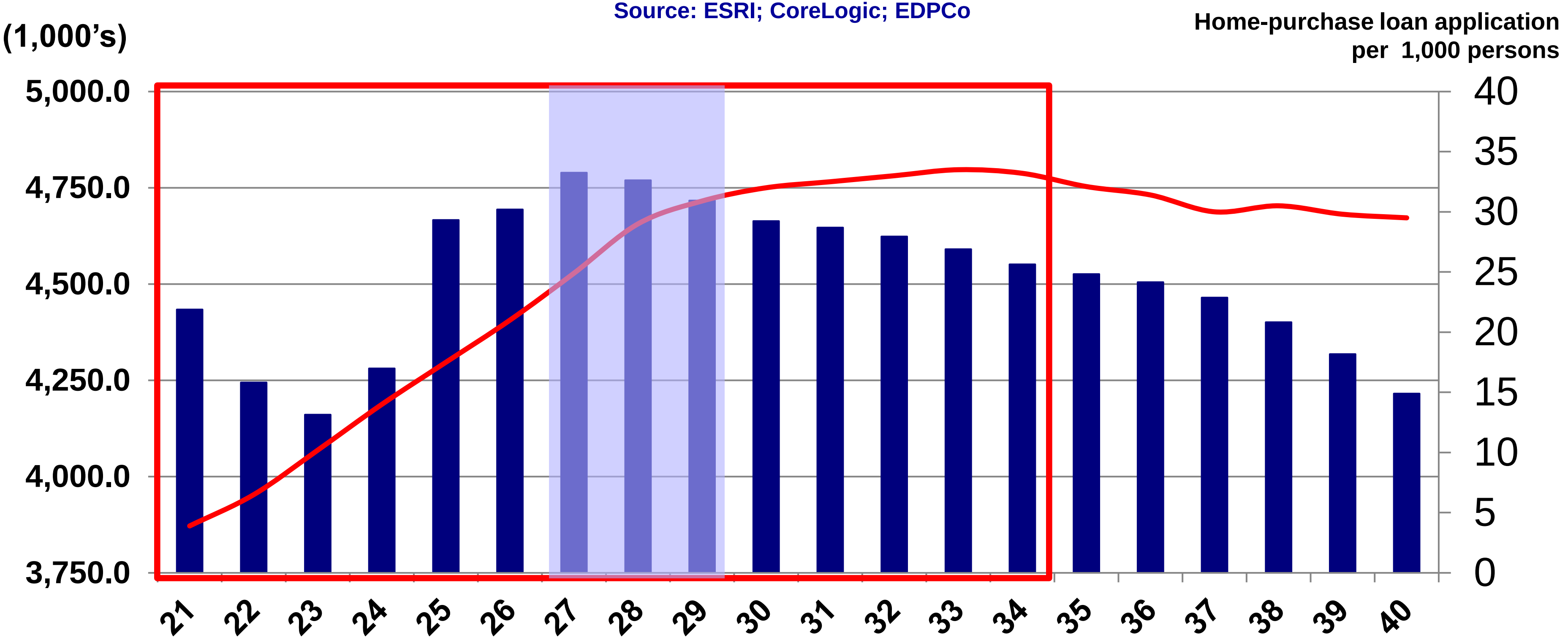
Population by Age
(0-65)

2021
Source: ESRI



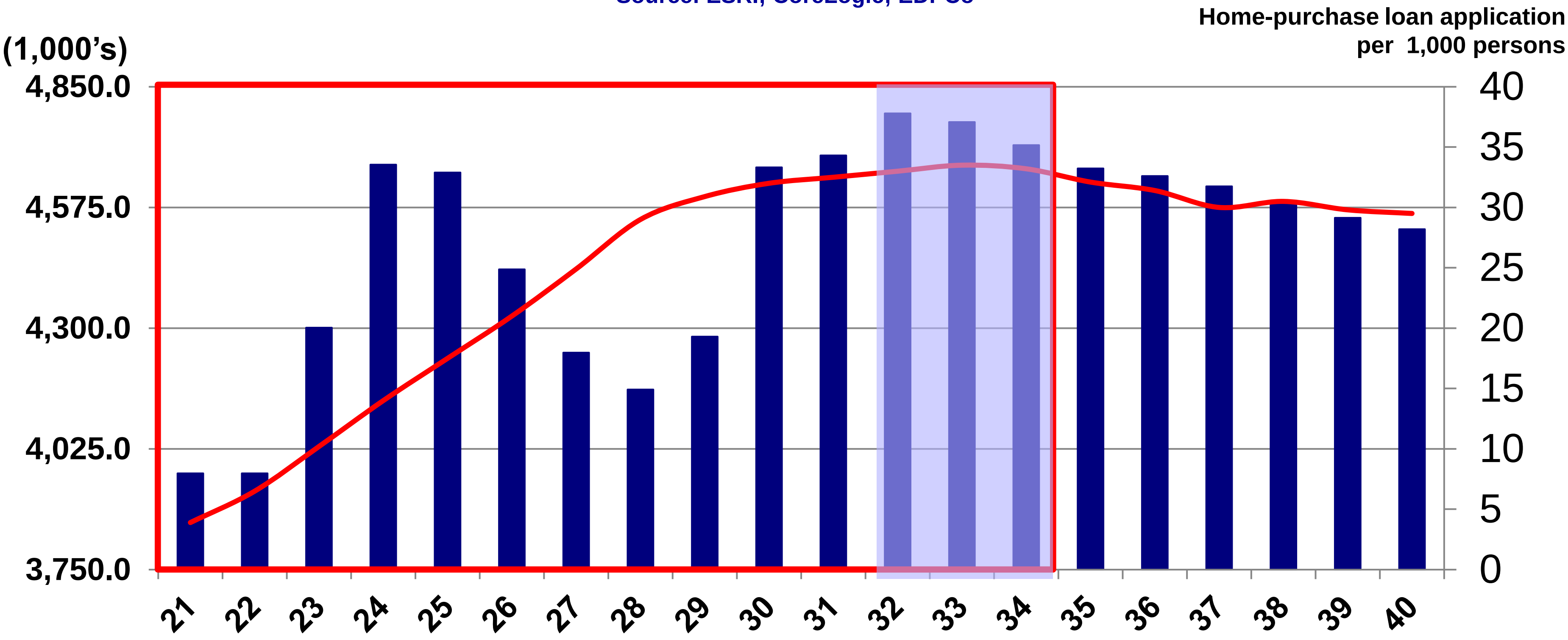
Number of Persons vs. Home-Purchase Loan Applications 2021

Source: ESRI; CoreLogic; EDPCo



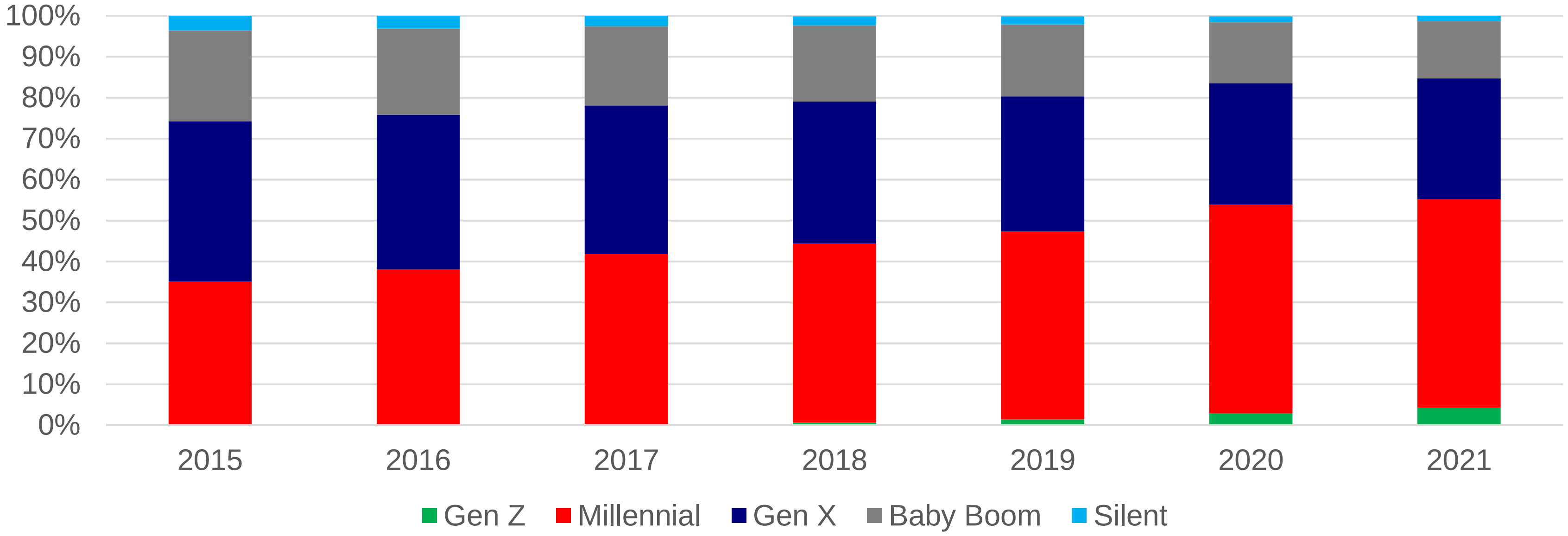
Number of Persons vs. Home-Purchase Loan Applications 2026

Source: ESRI; CoreLogic; EDPCo



Share of home-Purchase Loan Application by Generation

Source: CoreLogic



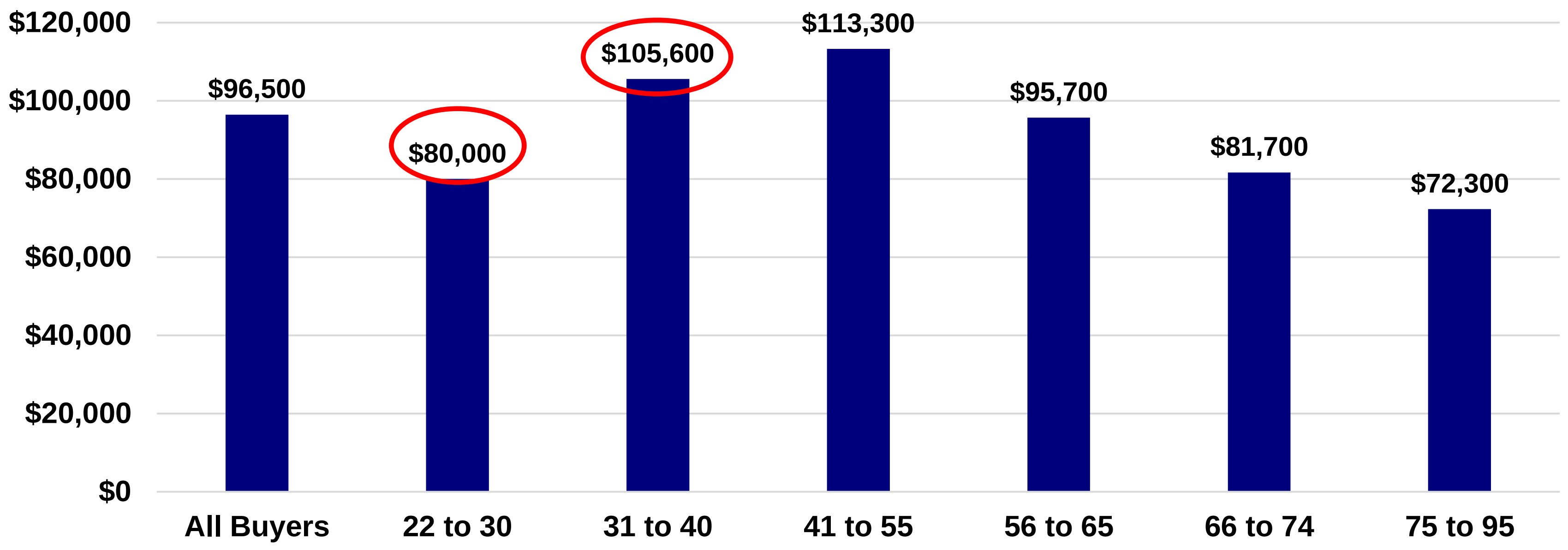
Homeownership Rates by Age Group

Source: U.S. Census

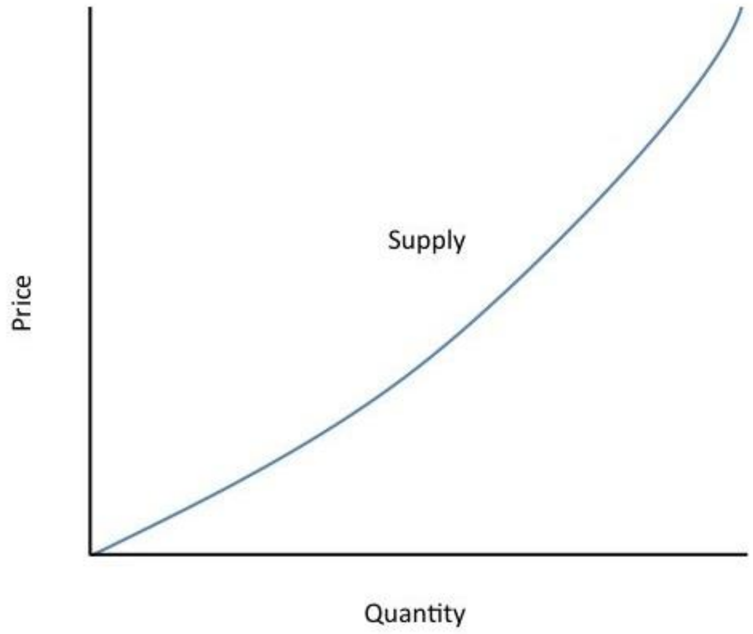
Householder Age	% of Total Occupied
Less than 25 years	**25.7%**
25 to 29 years	**35.3%**
30 to 34 years	**49.1%**
35 to 39 years	**60.0%**
40 to 44 years	**65.5%**
45 to 49 years	**68.9%**
50 to 54 years	**73.2%**
55 to 59 years	**74.9%**
60 to 64 years	**78.2%**
65 to 69 years	**79.6%**
70 to 74 years	**82.1%**
75 years and over	**79.0%**
Total	**66.6%**

Median Household Income by Age Group

Source: 2021 NAR Buyer and Seller Generational Trends



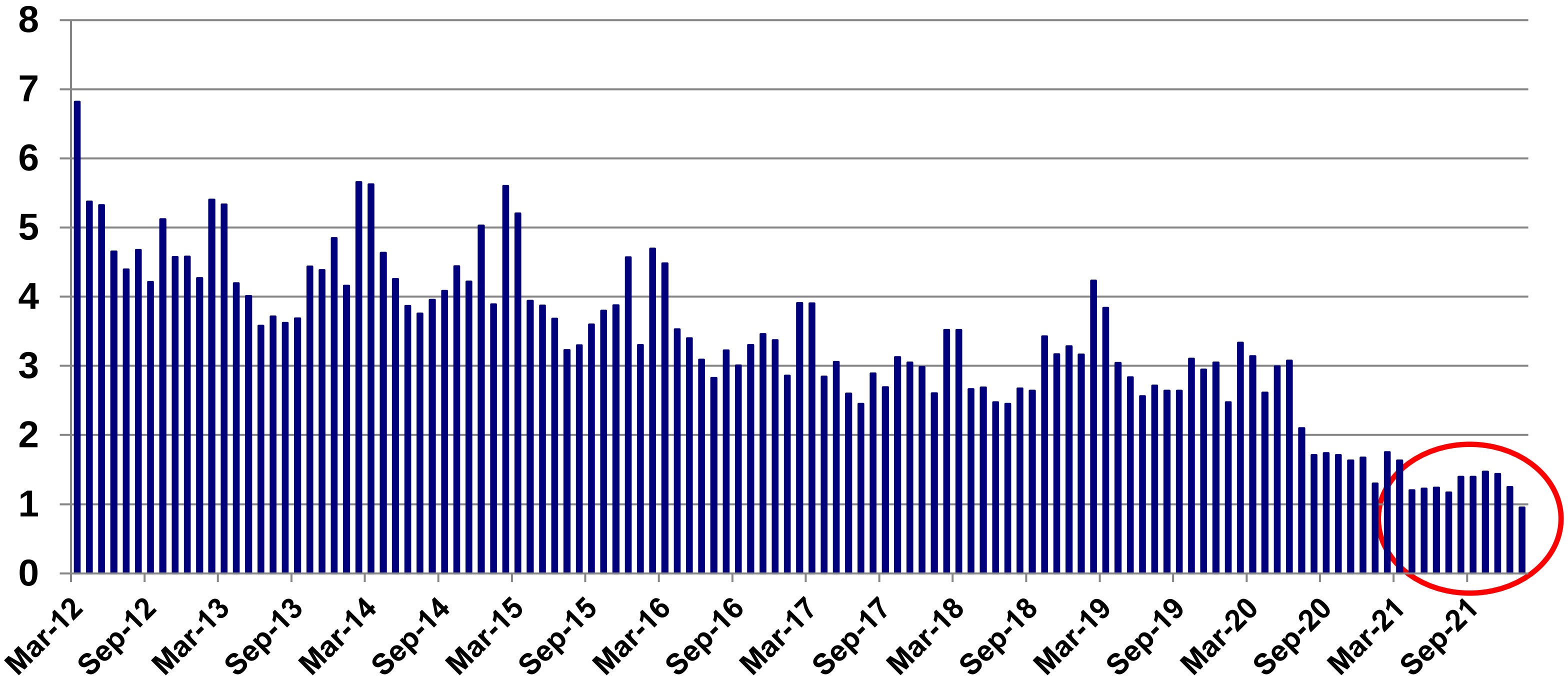
Supply



Months Supply

2012-2022

Source: Redfin; NAR



Prices Are Increasing

Source: Apartment List; NAR; BLS

	Latest Data	% Change Y-O-Y
Apts. Rents	$1,366	17.8%
SF Resale	$374,800	15.8%
Core-CPI	284.431	6.0%

You cannot get this big of an increase in housing without a significant supply demand imbalance

Good News?

The good news is that demand will remain very strong.

What Happens if the Affordability Situation Continues to Deteriorate

(The Unintended Consequences of Ignoring Market Demand)

- Fewer potential buyers can afford the median price home
- Fewer people will be owners
- More people will be renters
- More rental of single family units and more people doubling up
- More Millennials and Gen Z's living with parents
- More parents living with kids
- Smaller homes
- More density

What Happens if the Affordability Situation Continues to Deteriorate

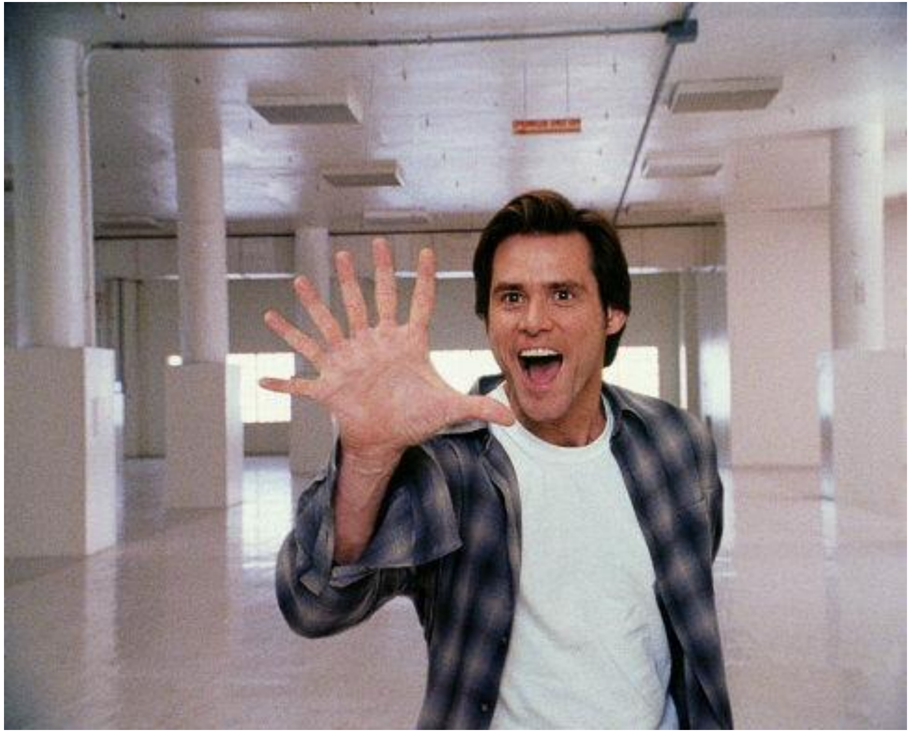
(The Unintended Consequences of Ignoring Market Demand)

- Fewer worker income housing units
- Where do service workers live (policemen, firemen, teachers, nurses, etc.)
- C and D apartment units get less maintenance
- More homelessness
- All of this creates a worsening economic development picture as the ability to draw in more workers diminishes
- Upward pressure on wages and city budgets
- Slower growth for the economy as a whole and less real income growth

Once supply and demand are back in balance (no easy task) prices should normalize.

But at a much higher level than today.

Top 7 Things That Can Be Done to End The Housing Shortage



Top 7 Things That Can Be Done to End The Housing Shortage

1. **Build more housing units**
2. **Build more housing units**
3. **Build more housing units**
4. **Build more housing units**
5. **Build more housing units**
6. **Build more housing units**
7. **Build more housing units**

Is it likely there will be a significant downturn in housing 2022 and 2023?

Probably Not!

- **Demand is too high.**
- **Inventory is too low.**
- **Mortgage rates are the wild card but are not likely to overwhelm the current supply/demand situation.**

How Do You Build More Housing Units?

- More density
- Smaller units
- Shorten the development process at all levels of government
- Allow technologies that shorten or otherwise reduced costs of building

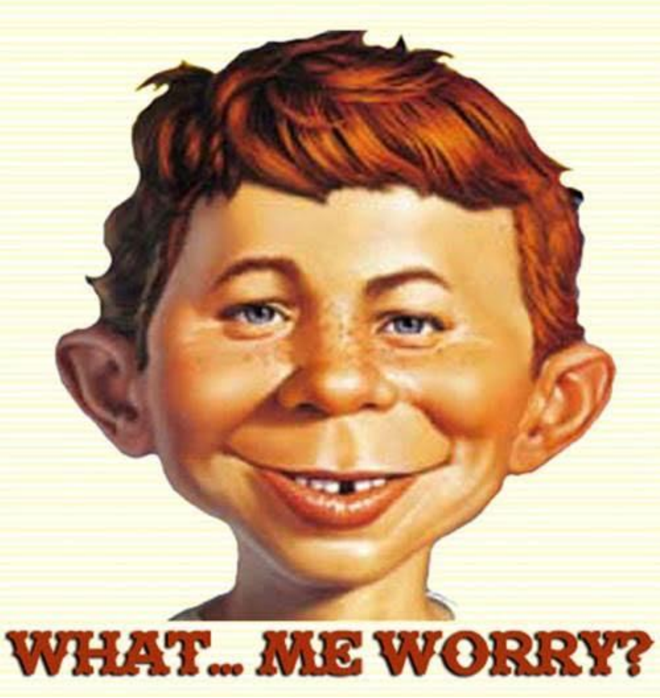

WHAT INFLATION?
A package of hamburger meat
costs the same as it did last month.

How are we doing?

1. Stocks near all-time highs.
2. Home prices at all-time highs.
3. Wages at all-time highs and accelerating.
4. Job opening minus unemployed at all-time highs.
5. Inflation at the highest level since 1982.

And yet Fiscal and Monetary policy has been extremely stimulative

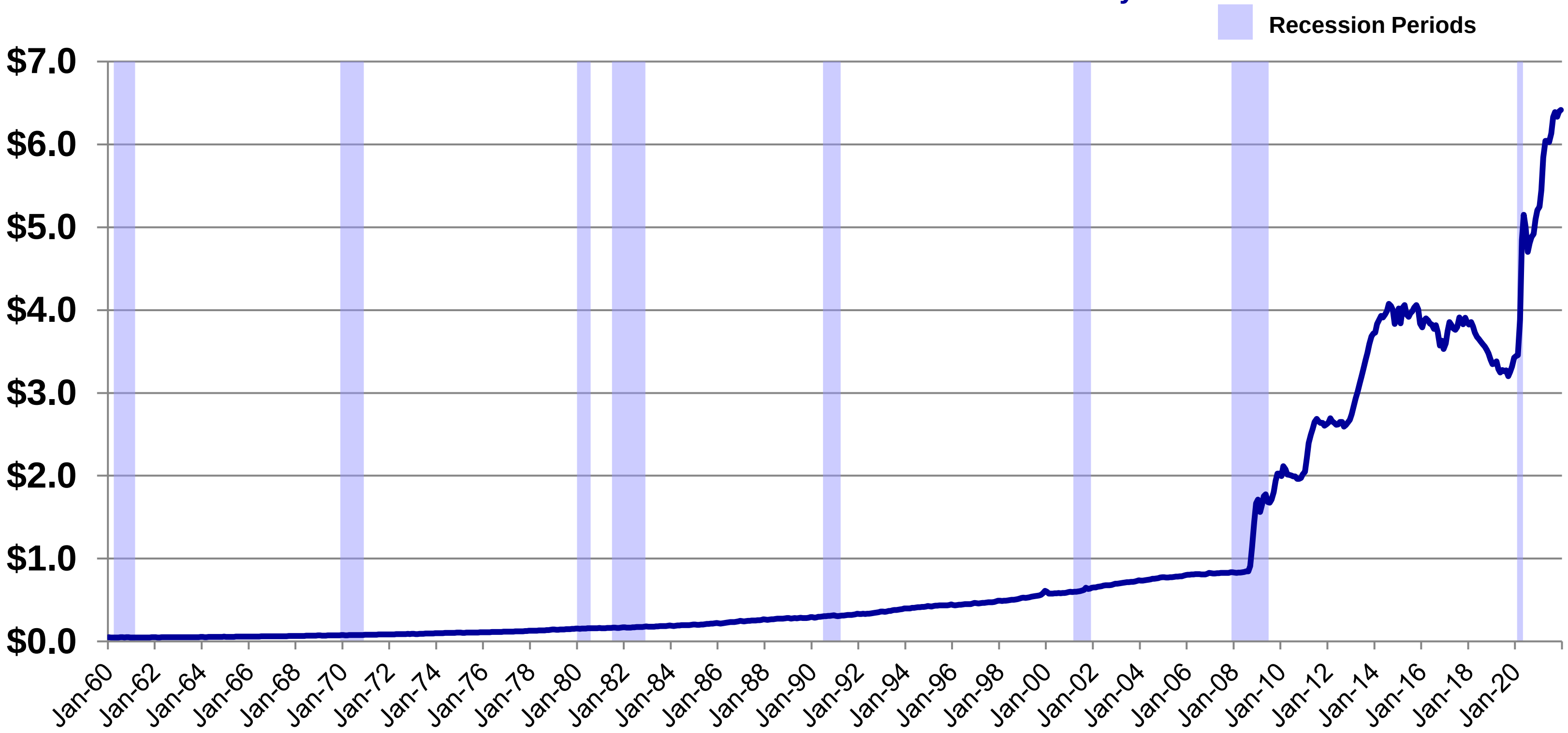
The government continues to inject liquidity to the system while holding rates low and spending trillions more.



Monetary Base (Trillions)

1960 – 2022*

Source: Board of Governors of the Federal Reserve System



The monetary base: the sum of currency in circulation and reserve balances (deposits held by banks and other depository institutions in their accounts at the Federal Reserve).

*Data through December 2021

Because of inflation monetary policy will turn more hawkish.

- Moving rates up from almost zero
- “Fed’s goal is not a recession.” Jeremy Powell
- “Just fine tuning”
- “This is not the 1980’s.” Jeremy Powell
- “Good luck to you! We are in uncharted waters.” Elliott Pollack

Because of inflation monetary policy will turn more hawkish.

- Beware of wage price spiral.
- The Fed does not control the supply chain.
- Is the labor available to solve the supply chain issues in a reasonably short order. If not, the Fed will have some hard choices to make.
- A major factor here is declining real income growth.
- Generally, shortages lead to gluts.
- Time will tell!

Cap Rates

- Cap rates are a function of interest rates and liquidity.
- When the Fed tightens, liquidity will lessen and interest rates will go up.
- This will put upward pressure on cap rates.

Too much money chasing too few goods.

Too much money pushes up prices. Too few goods determines where inflation shows up.

- Our policy response more than made up for the incomes lost to the COVID lockdown without replacing the goods the income were producing.

- Household balance sheets are in better shape than they have been in a long time.
- Demand everywhere has surge as people spend the $5 trillion dollars dropped from helicopters into their pockets.
- This amounts to 25% of GDP and 30% of pre-pandemic federal debt.

- The spendathon brought to light short-comings of the just in-time supply chain.
- Among other issues, there are not enough workers to unclogged those supply chains any time soon.

- There is also hidden inflation throughout the service economy.
- COVID in combination with federal government incentives not to work decimated services.
- Even where cost have not risen, the quality of service has declined.

- Last year alone, the government spend $1.9 trillion on the American Rescue Plan that was supposed to create 7 million jobs. That bill created few new jobs.
- Then, the bipartisan Infrastructure and Jobs Act created another $1.2 trillion dollars in spending over the next several years.
- More stimulus can be expected as the Built Back Better bill is reintroduced in smaller bites and under a different name.

- Having promised us only transitory inflation the Fed currently has no good options with dealing the issue.
- Raising interest rates too rapidly might send us into a recession in an election year and will increase the cost of borrowing on the national debt.

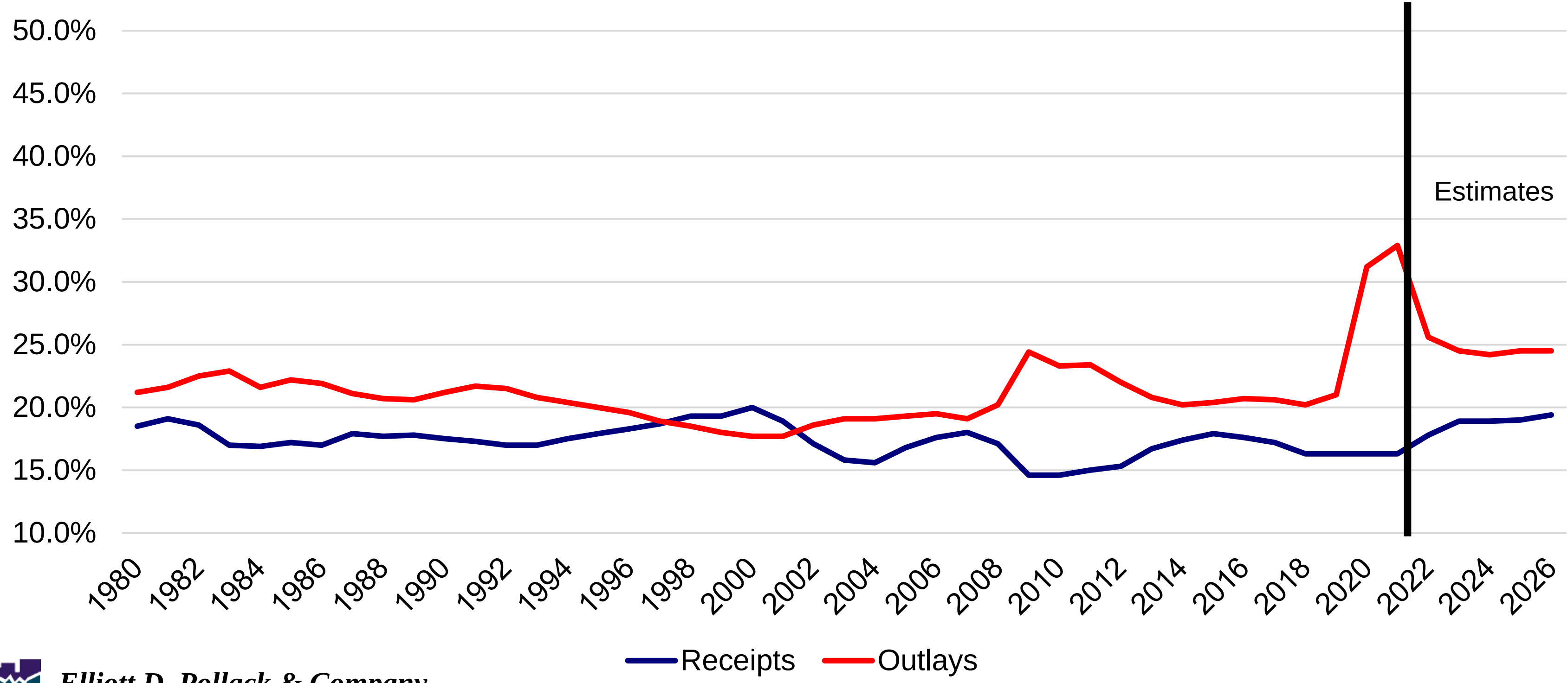
- On the fiscal side, cutting social spending is politically unfeasible.
- Raising taxes could undercut economic growth.

- Overall, the fed has promised to slow the purchase of assets and begin “a balance sheet runoff” following the first hike on the Fed’s Funds Rate.
- The fed has a very difficult task in front of it and the Federal Government’s fiscal policy is wildly out of control.
- The Fed says it will raise the FFR 3 times in 2022.
- Obviously interest rates are going up. The questions are how much and how fast.
- This will be touchy feely situation for the Fed.

I want your money

Federal Tax Receipts and Outlays as a % of GDP

Source: OMB; BEA



Proposed Tax Increases – Taxes are going up

If you are making a lot of money, the government wants a big chunk of it. The devil is in the details. See your accountant soon.

Any tax increase will mainly fall on the upper middle class and above.

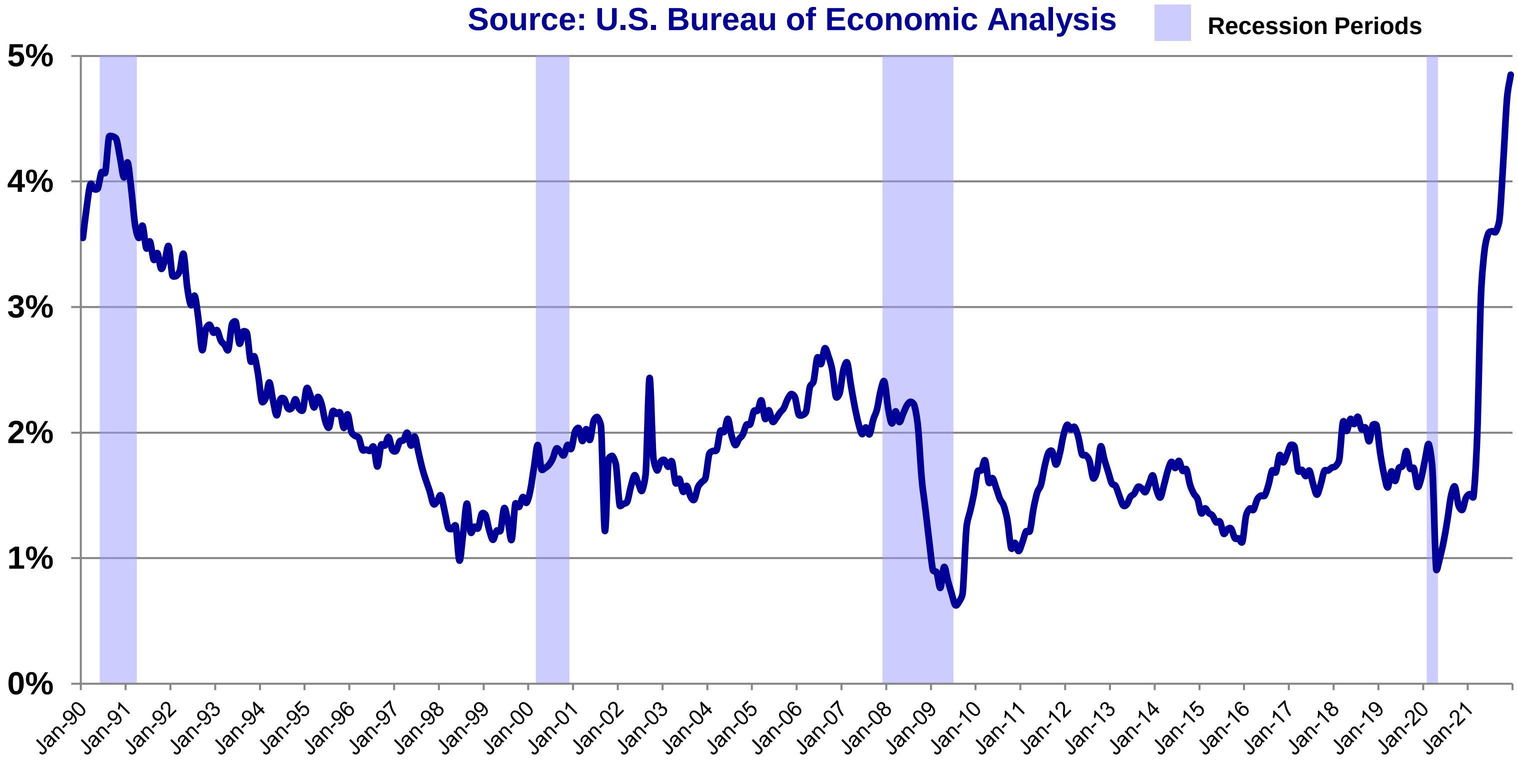
INFLATION—
Limited Supply and High Demand = Inflation

- The jury is still out on inflation in the long run, but price pressures should ultimately ease as the supply chain normalizes.
- That could take a while.

PCE: Excluding Food and Energy Index

Annual % Change

1990 - 2021

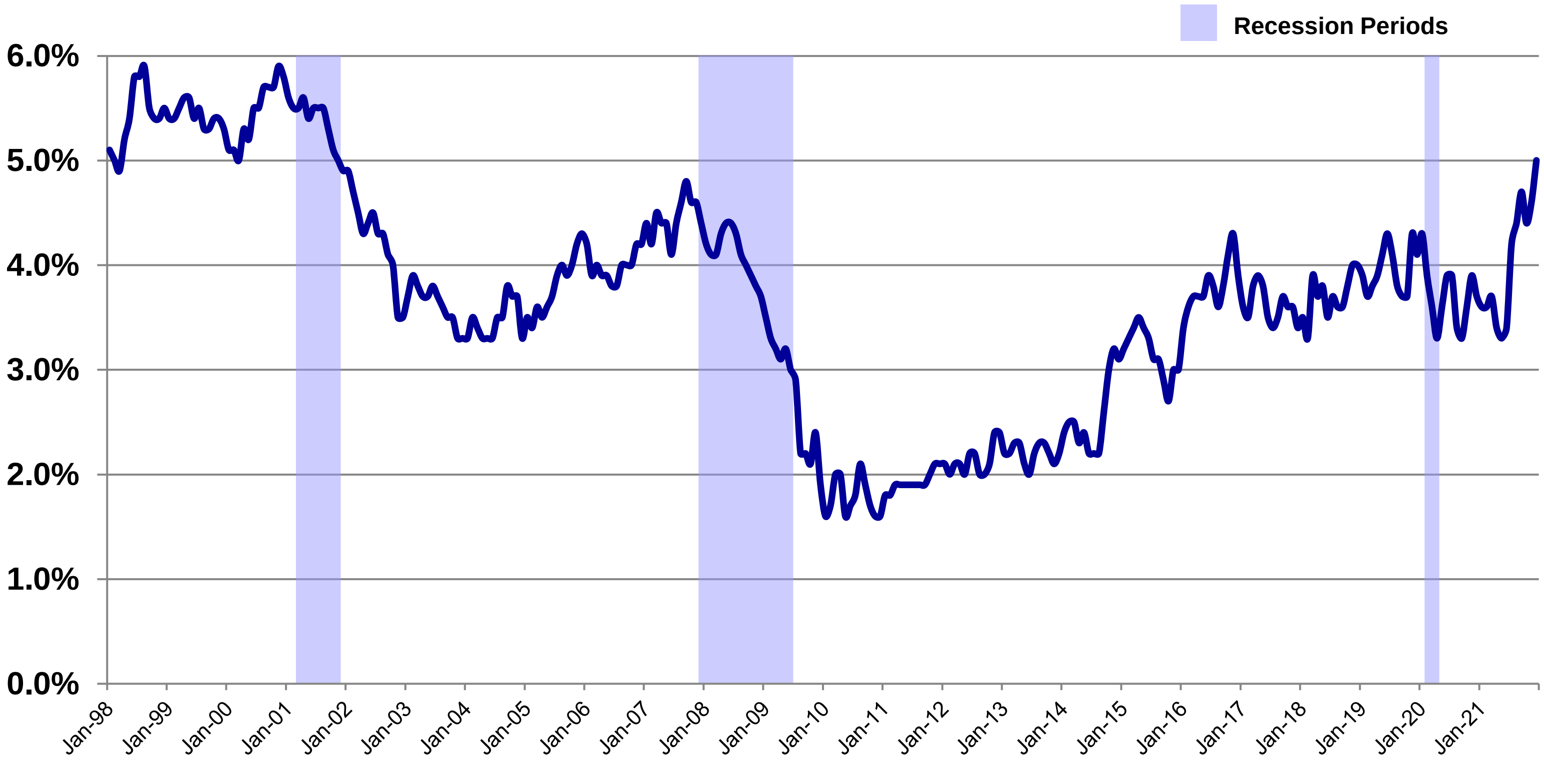


*Data through December 2021

Weighted Overall Wage Growth Tracker, 3-Month Moving Average

1998 - 2021

Source: Sources: Current Population Survey, Bureau of Labor Statistics, and Federal Reserve Bank of Atlanta Calculations.



Politics

- Incentives matter.
- Increased taxes and tougher regulation will clearly result in slower long-term growth. Initially this will be difficult to see due to the high levels of pent-up demand and fiscal & monetary stimulus.

National Economy

- Consumer – Strong
- Business – Strong
- Housing – Strong
- Fed Policy – Going from highly stimulative to mildly hawkish… in theory.
- Fiscal Policy – Highly stimulative

In the near term, the demand side of economy should be strong.

National Risks—The Supply Side

- Inflation
- Interest rates
- Housing/Affordability will become everything
- Bad government policy
- Lack of labor
- Black Swan event


NO WORRIES

Yet, the overall outlook is still positive.

- Consumers are in great shape.
- Businesses are in a great shape.
- Housing demand should remain strong.
- COVID seem to be waning.
- Fed is not looking for another 1980's episode.
- 2022 is an election year.
- Fiscal policy is still wildly out of control.

Overall, it should a decent year.

Overall Conclusions:

Do not panic!

Unless there is a very poor political decisions that affect the economy, a black swan event or a dramatic unexpected move in interest rates…

the economy will continue be strong through 2023.