Economics. Explained.

# Soft Landing?

# Or Worse?


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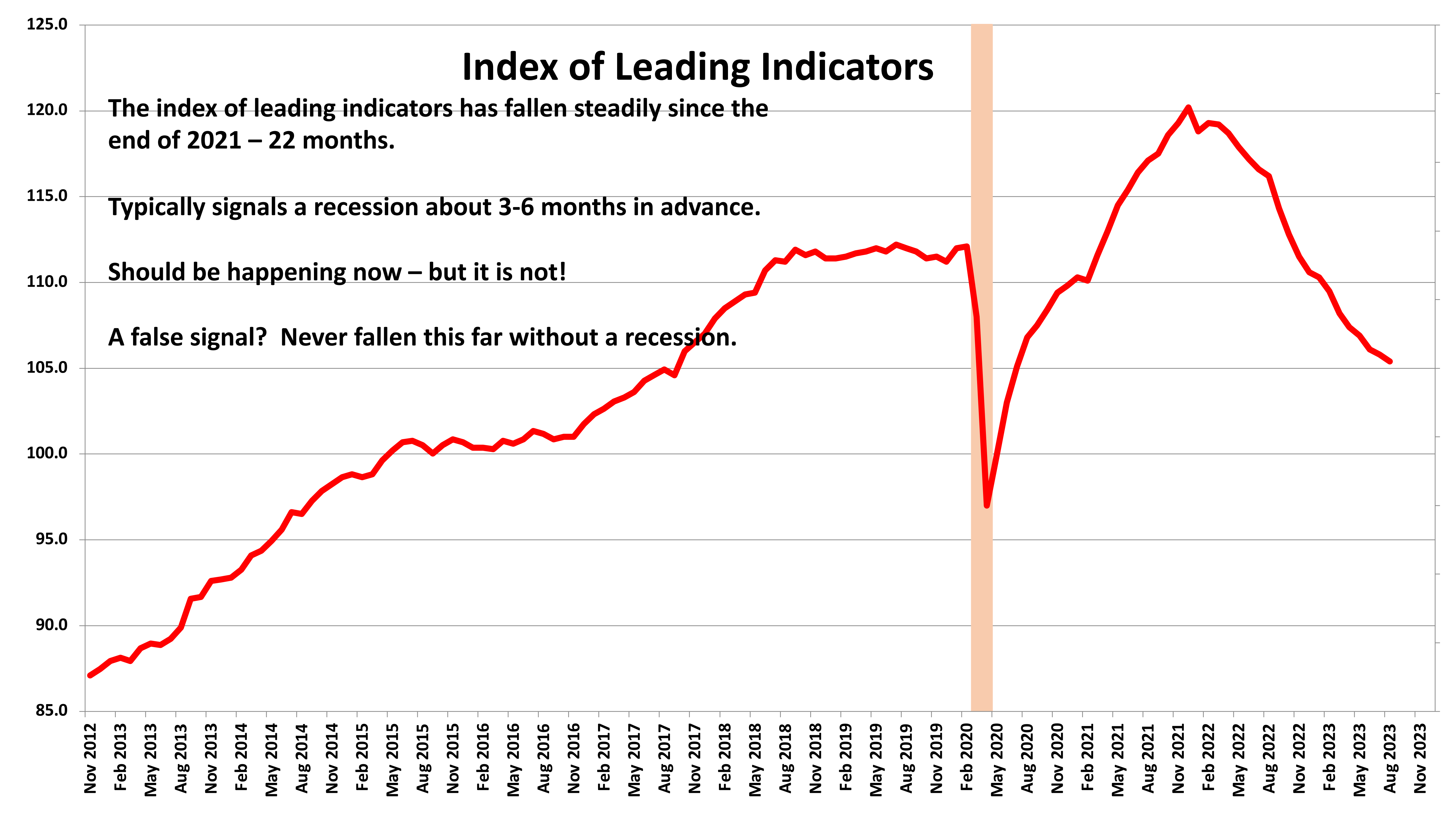
NumberNomics
www.numbernomics.com

# A World of Uncertainty

1. Consumers who are scared but keep spending.
2. Firms who are scared but won't lay off anyone.
3. Homeowners that refuse to put their home on the market.
4. A resumption of payments on student loans.
5. The UAW strike.
6. A dysfunctional Congress.
7. And now war in the Mideast. Anything becomes possible.

# Highlights

1. Many expected a recession. What happened?
2. Do interest rates need to go higher?
3. How quickly will the inflation rate decline?
4. When will interest rates begin to fall?
5. How might the war change all this?
6. How much of a problem is Treasury debt?



Index of Leading Indicators
The index of leading indicators has fallen steadily since the end of 2021 – 22 months.
Typically signals a recession about 3-6 months in advance.
Should be happening now – but it is not!
A false signal? Never fallen this far without a recession.
125.0
120.0
115.0
110.0
105.0
100.0
95.0
90.0
85.0
Nov 2012
Feb 2013
May 2013
Aug 2013
Nov 2013
Feb 2014
May 2014
Aug 2014
Nov 2014
Feb 2015
May 2015
Aug 2015
Nov 2015
Feb 2016
May 2016
Aug 2016
Nov 2016
Feb 2017
May 2017
Aug 2017
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May 2018
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Feb 2021
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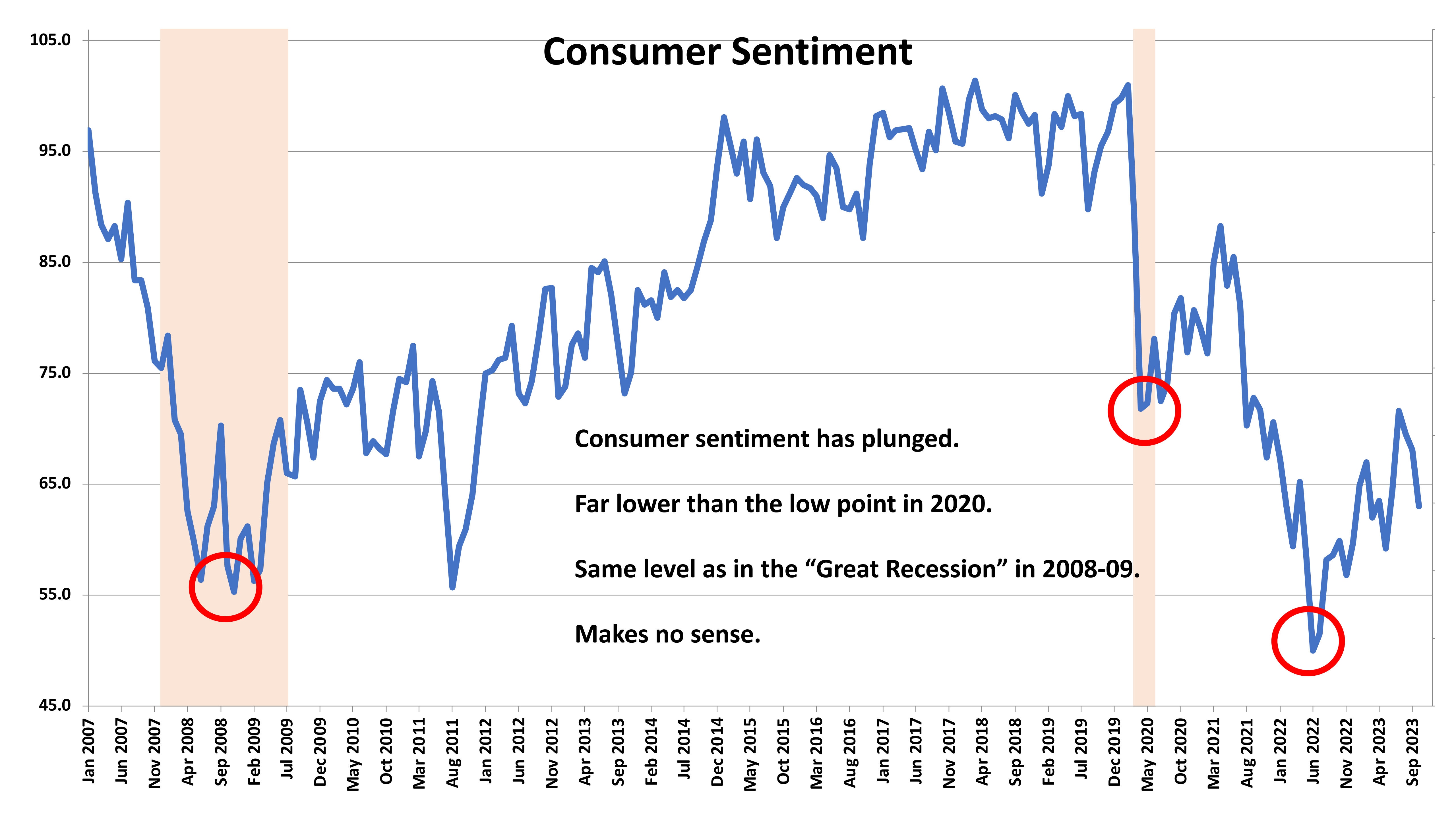
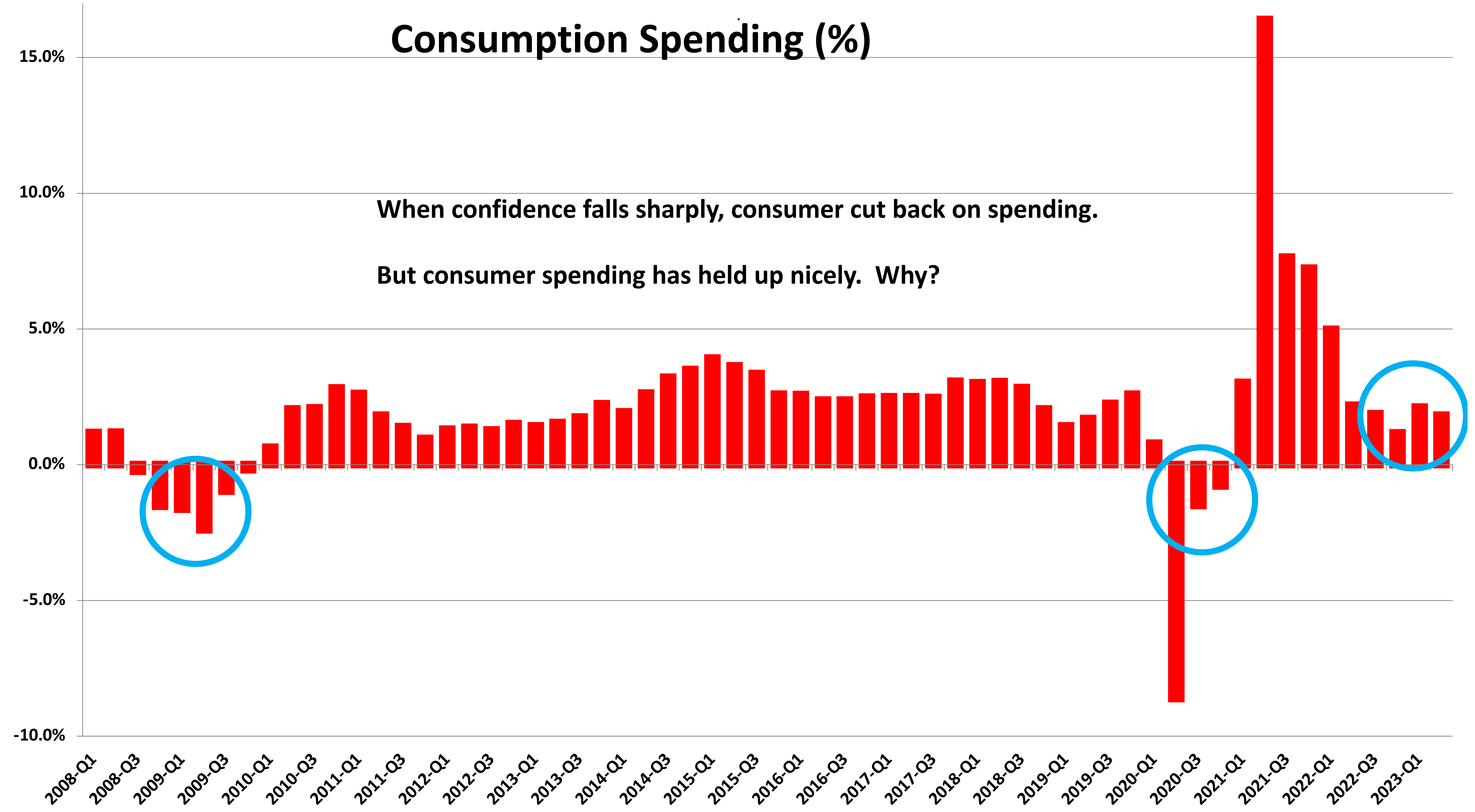
May 2023
Aug 2023
Nov 2023

# Consumption Spending.


Consumer Sentiment
Consumer sentiment has plunged.
Far lower than the low point in 2020.
Same level as in the "Great Recession" in 2008-09.
Makes no sense.
105.0
95.0
85.0
75.0
65.0
55.0
45.0
Jan 2007
Jun 2007
Nov 2007
Apr 2008
Sep 2008
Feb 2009
Jul 2009
Dec 2009
May 2010
Oct 2010
Mar 2011
Aug 2011
Jan 2012
Jun 2012
Nov 2012
Apr 2013
Sep 2013
Feb 2014
Jul 2014
Dec 2014
May 2015
Oct 2015
Mar 2016
Aug 2016
Jan 2017
Jun 2017
Nov 2017
Apr 2018
Sep 2018
Feb 2019
Jul 2019
Dec 2019
May 2020
Oct 2020
Mar 2021
Aug 2021
Jan 2022
Jun 2022
Nov 2022
Apr 2023
Sep 2023


Consumption Spending (%)
When confidence falls sharply, consumer cut back on spending.
But consumer spending has held up nicely.  Why?
15.0%
10.0%
5.0%
0.0%
-5.0%
-10.0%
2008-Q1
2008-Q3
2009-Q1
2009-Q3
2010-Q1
2010-Q3
2011-Q1
2011-Q3
2012-Q1
2012-Q3
2013-Q1
2013-Q3
2014-Q1
2014-Q3
2015-Q1
2015-Q3
2016-Q1
2016-Q3
2017-Q1
2017-Q3
2018-Q1
2018-Q3
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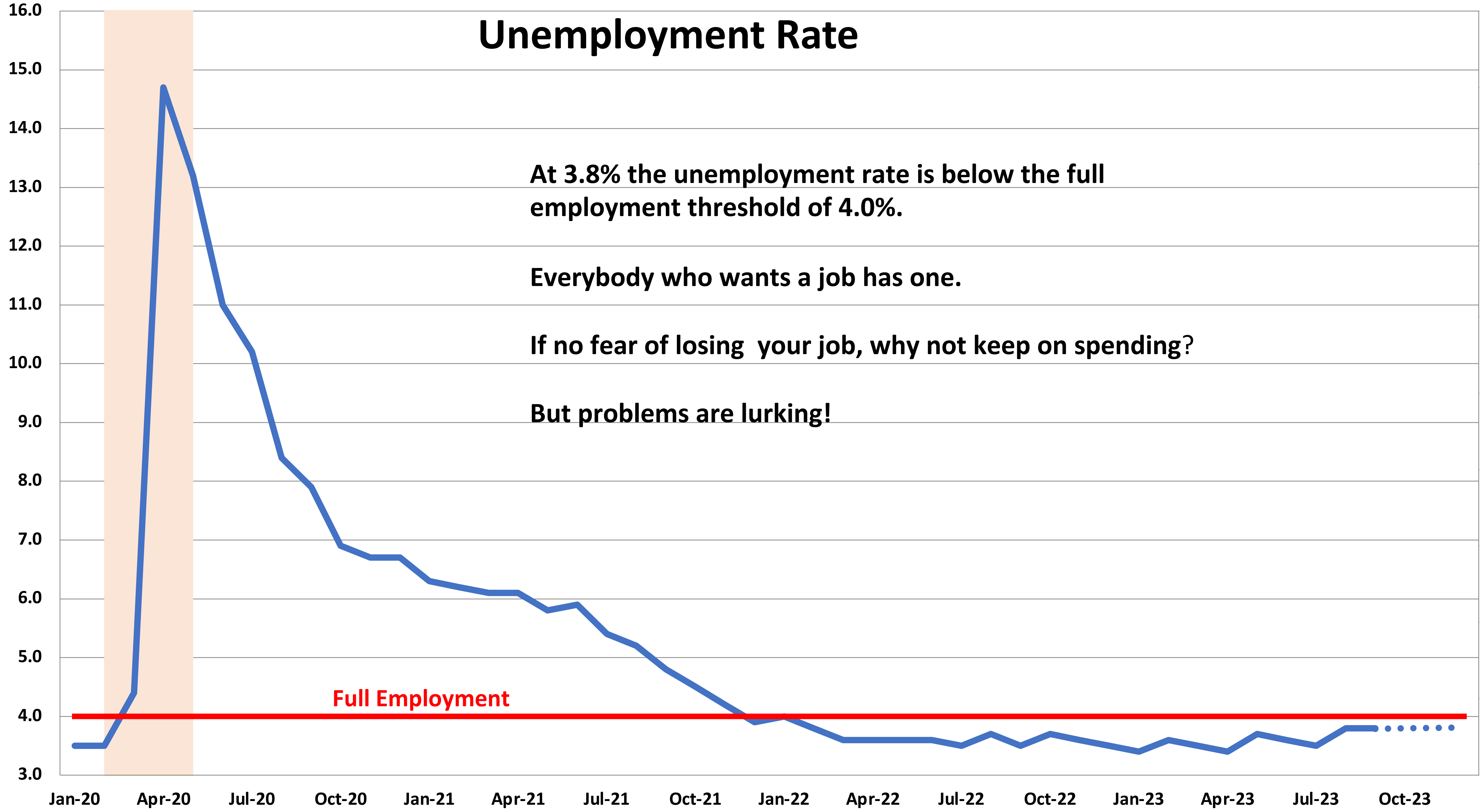
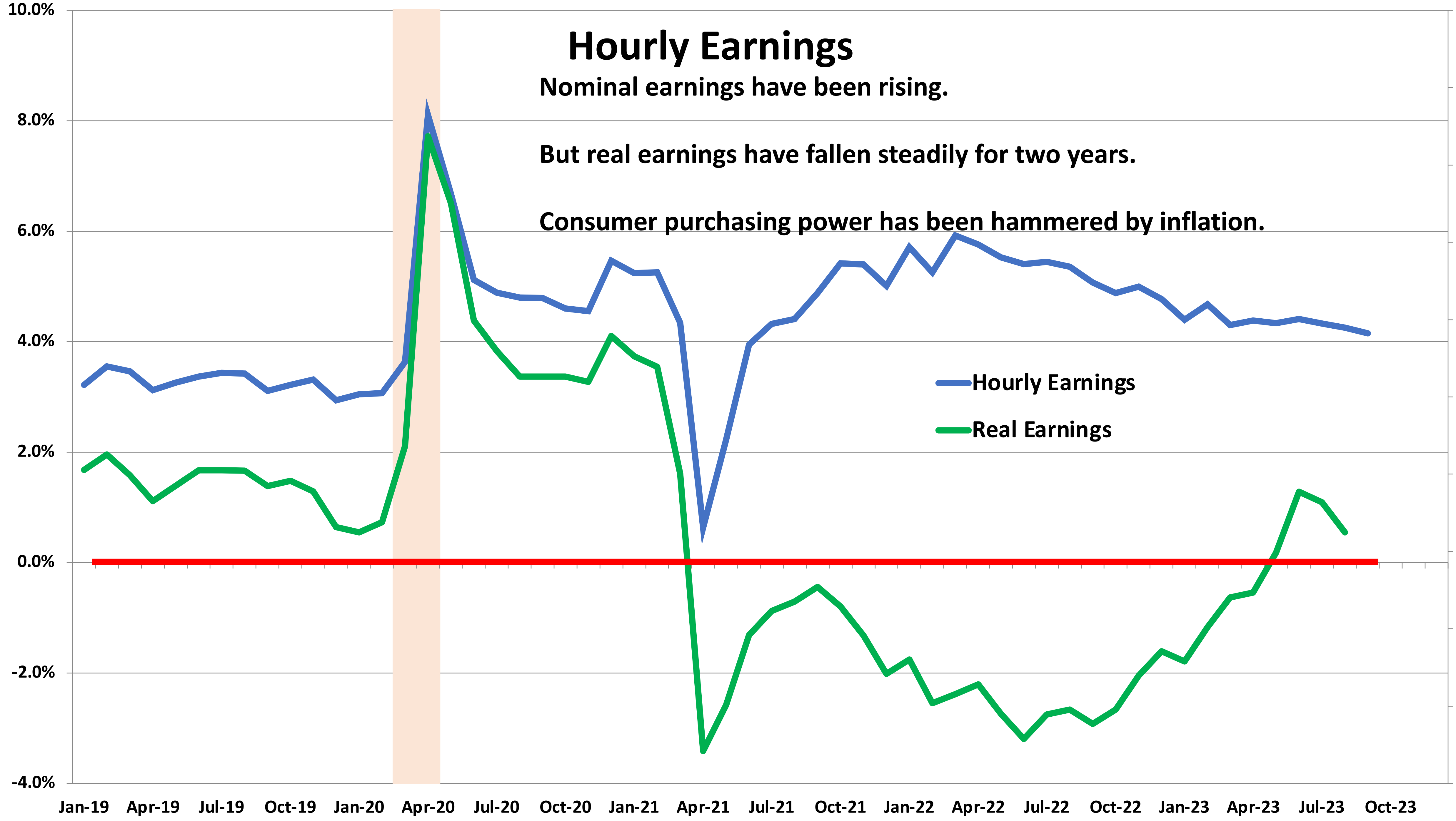
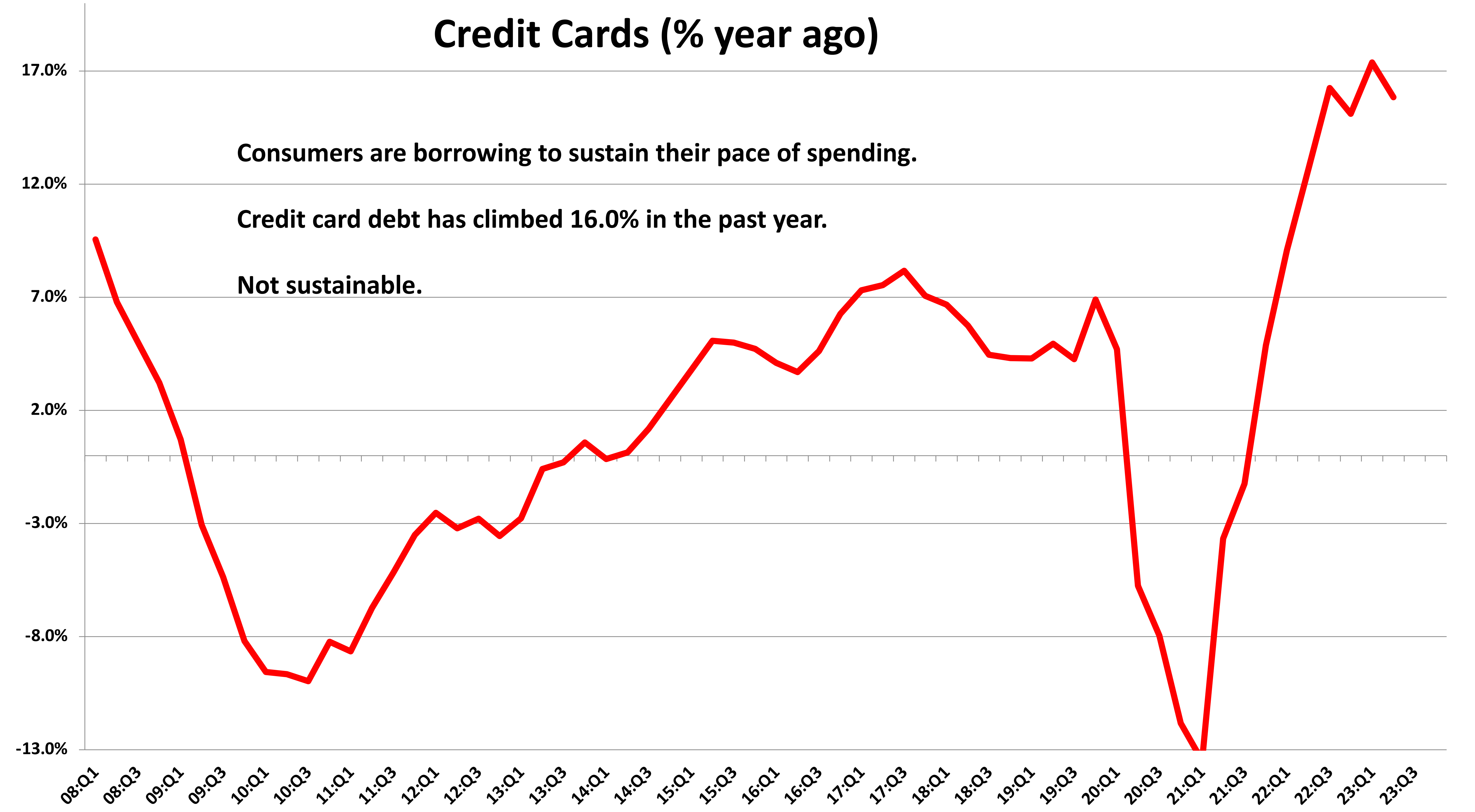
2020-Q1
2020-Q3
2021-Q1
2021-Q3
2022-Q1
2022-Q3
2023-Q1


Unemployment Rate
At 3.8% the unemployment rate is below the full employment threshold of 4.0%.
Everybody who wants a job has one.
If no fear of losing your job, why not keep on spending?
But problems are lurking!
Full Employment
16.0
15.0
14.0
13.0
12.0
11.0
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
Jan-20
Apr-20
Jul-20
Oct-20
Jan-21
Apr-21
Jul-21
Oct-21
Jan-22
Apr-22
Jul-22
Oct-22
Jan-23
Apr-23
Jul-23
Oct-23



Hourly Earnings
Nominal earnings have been rising.
But real earnings have fallen steadily for two years.
Consumer purchasing power has been hammered by inflation.
Hourly Earnings
Real Earnings
10.0%
8.0%
6.0%
4.0%
2.0%
0.0%
-2.0%
-4.0%
Jan-19
Apr-19
Jul-19
Oct-19
Jan-20
Apr-20
Jul-20
Oct-20
Jan-21
Apr-21
Jul-21
Oct-21
Jan-22
Apr-22
Jul-22
Oct-22
Jan-23
Apr-23
Jul-23
Oct-23



Credit Cards (% year ago)
Consumers are borrowing to sustain their pace of spending.
Credit card debt has climbed 16.0% in the past year.
Not sustainable.
17.0%
12.0%
7.0%
2.0%
-3.0%
-8.0%
-13.0%
08:Q1
08:Q3
09:Q1
09:Q3
10:Q1
10:Q3
11:Q1
11:Q3
12:Q1
12:Q3
13:Q1
13:Q3
14:Q1
14:Q3
15:Q1
15:Q3
16:Q1
16:Q3
17:Q1
17:Q3
18:Q1
18:Q3
19:Q1
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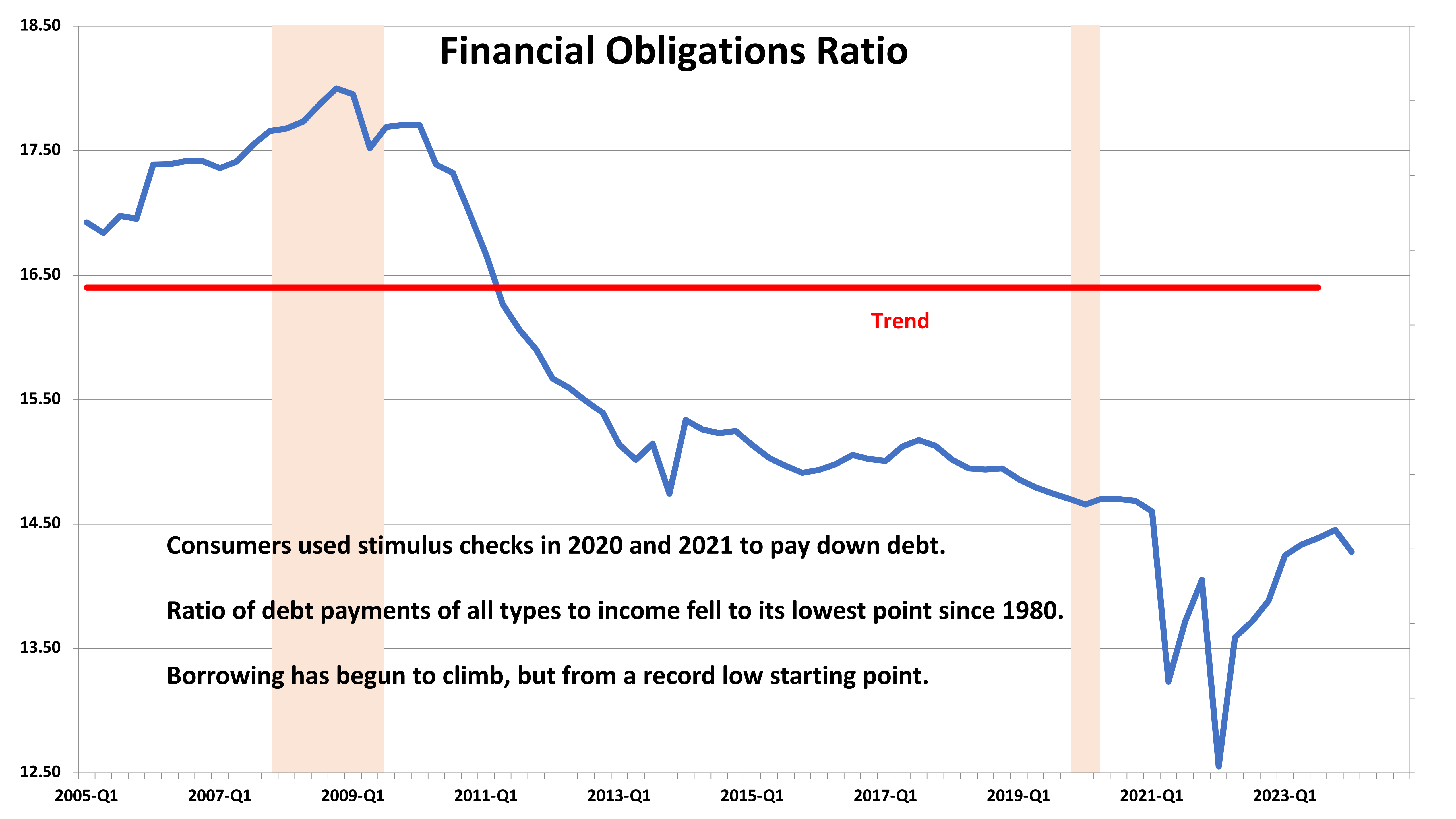
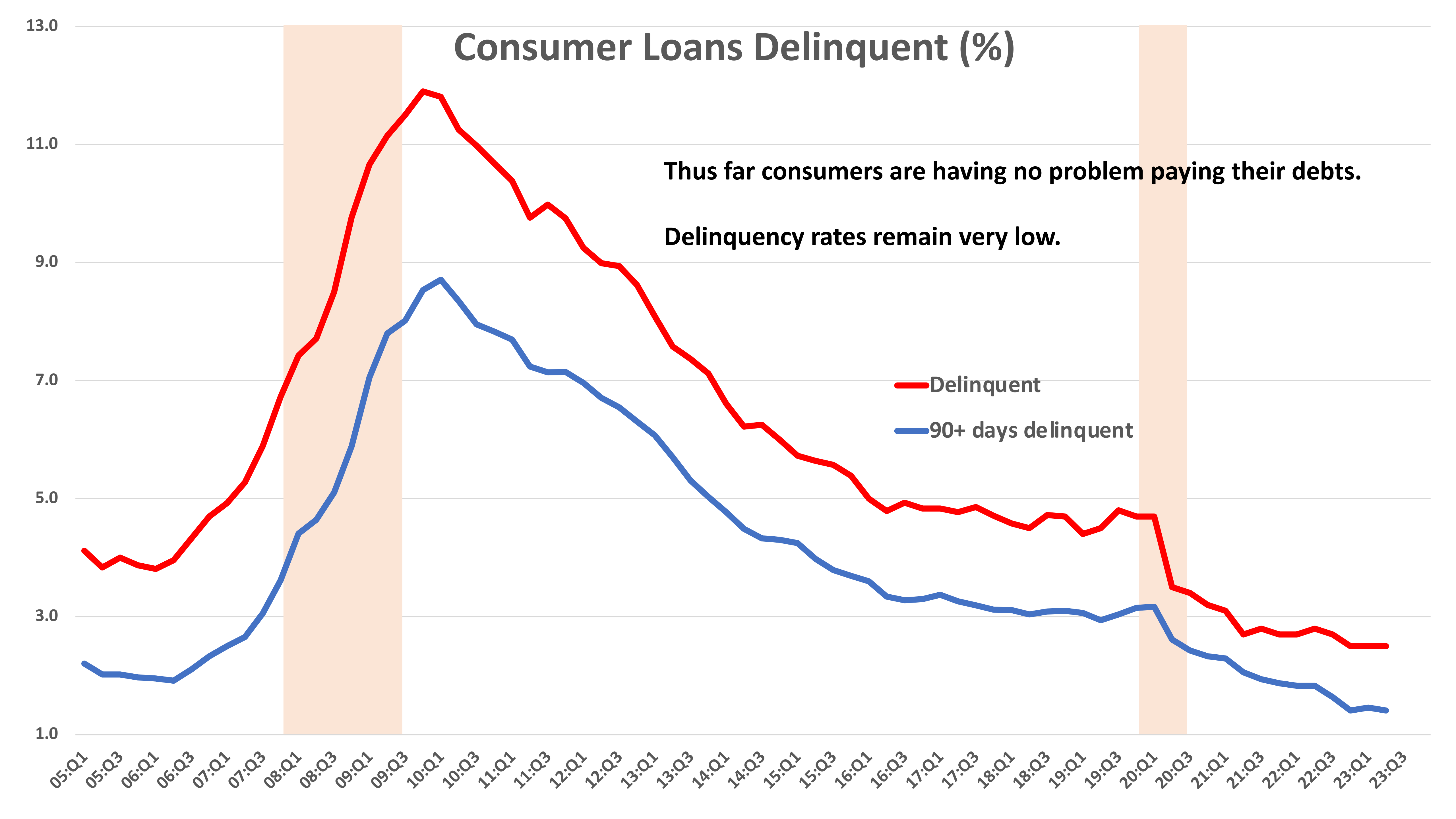
20:Q3
21:Q1
21:Q3
22:Q1
22:Q3
23:Q1
23:Q3


Financial Obligations Ratio
Trend
Consumers used stimulus checks in 2020 and 2021 to pay down debt.
Ratio of debt payments of all types to income fell to its lowest point since 1980.
Borrowing has begun to climb, but from a record low starting point.
18.50
17.50
16.50
15.50
14.50
13.50
12.50
2005-Q1
2007-Q1
2009-Q1
2011-Q1
2013-Q1
2015-Q1
2017-Q1
2019-Q1
2021-Q1
2023-Q1



Consumer Loans Delinquent (%)
Thus far consumers are having no problem paying their debts.
Delinquency rates remain very low.
Delinquent
90+ days delinquent
13.0
11.0
9.0
7.0
5.0
3.0
1.0
05:Q1
05:Q3
06:Q1
06:Q3
07:Q1
07:Q3
08:Q1
08:Q3
09:Q1
09:Q3
10:Q1
10:Q3
11:Q1
11:Q3
12:Q1
12:Q3
13:Q1
13:Q3
14:Q1
14:Q3
15:Q1
15:Q3
16:Q1
16:Q3
17:Q1
17:Q3
18:Q1
18:Q3
19:Q1
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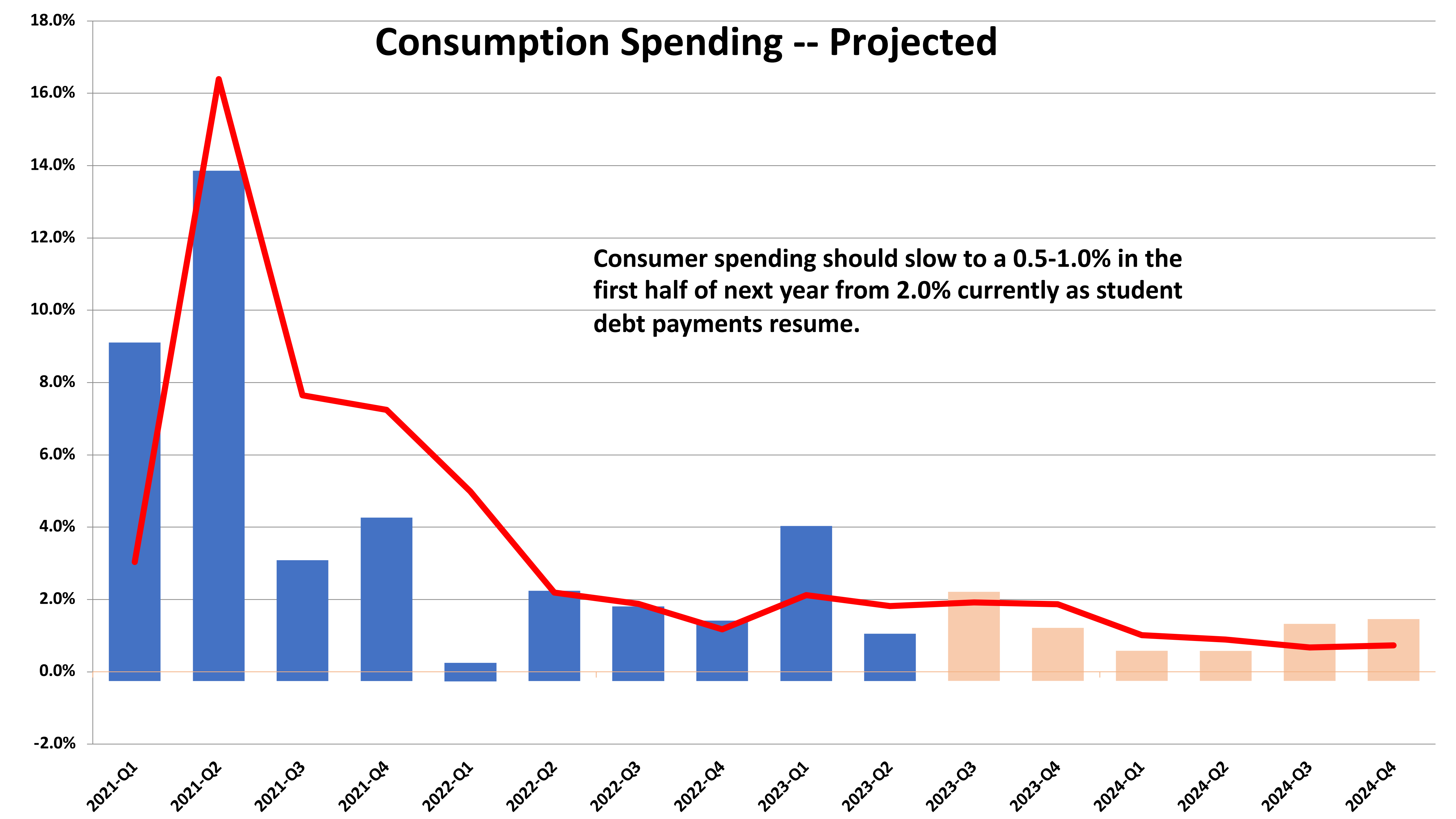
20:Q1
20:Q3
21:Q1
21:Q3
22:Q1
22:Q3
23:Q1
23:Q3


Consumption Spending -- Projected
Consumer spending should slow to a 0.5-1.0% in the first half of next year from 2.0% currently as student debt payments resume.
18.0%
16.0%
14.0%
12.0%
10.0%
8.0%
6.0%
4.0%
2.0%
0.0%
-2.0%
2021-Q1
2021-Q2
2021-Q3
2021-Q4
2022-Q1
2022-Q2
2022-Q3
2022-Q4
2023-Q1
2023-Q2
2023-Q3
2023-Q4
2024-Q1
2024-Q2
2024-Q3
2024-Q4

# Housing.

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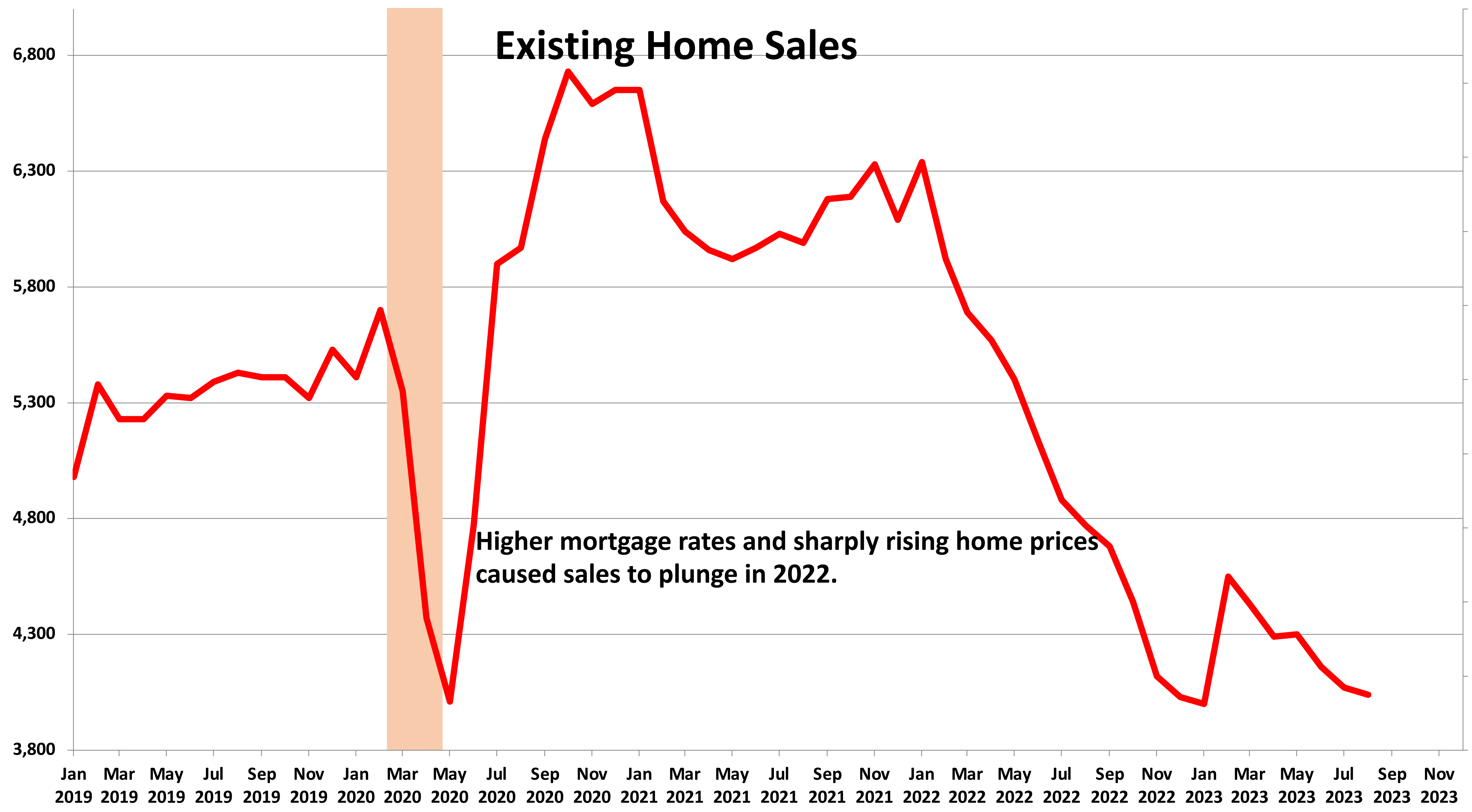
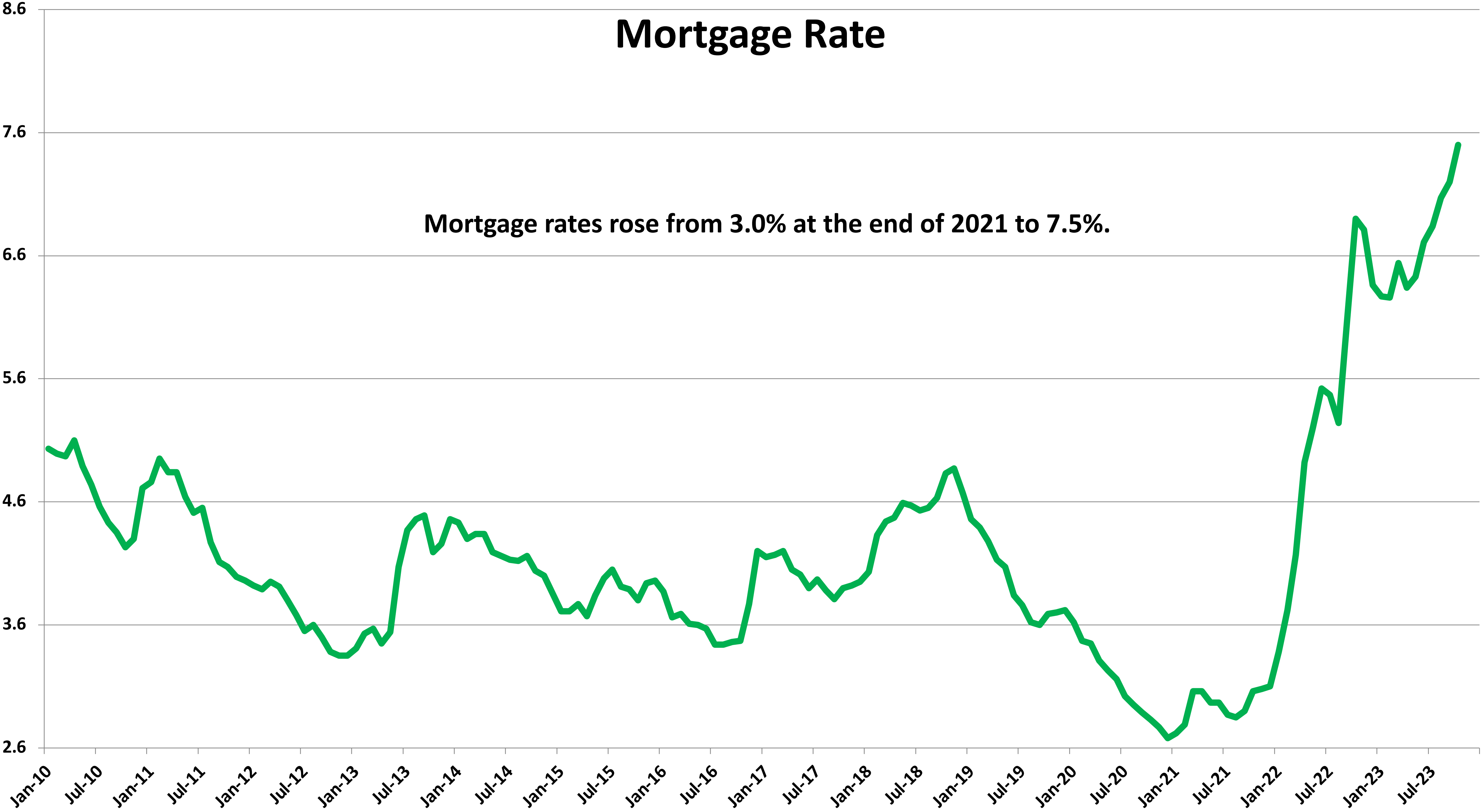
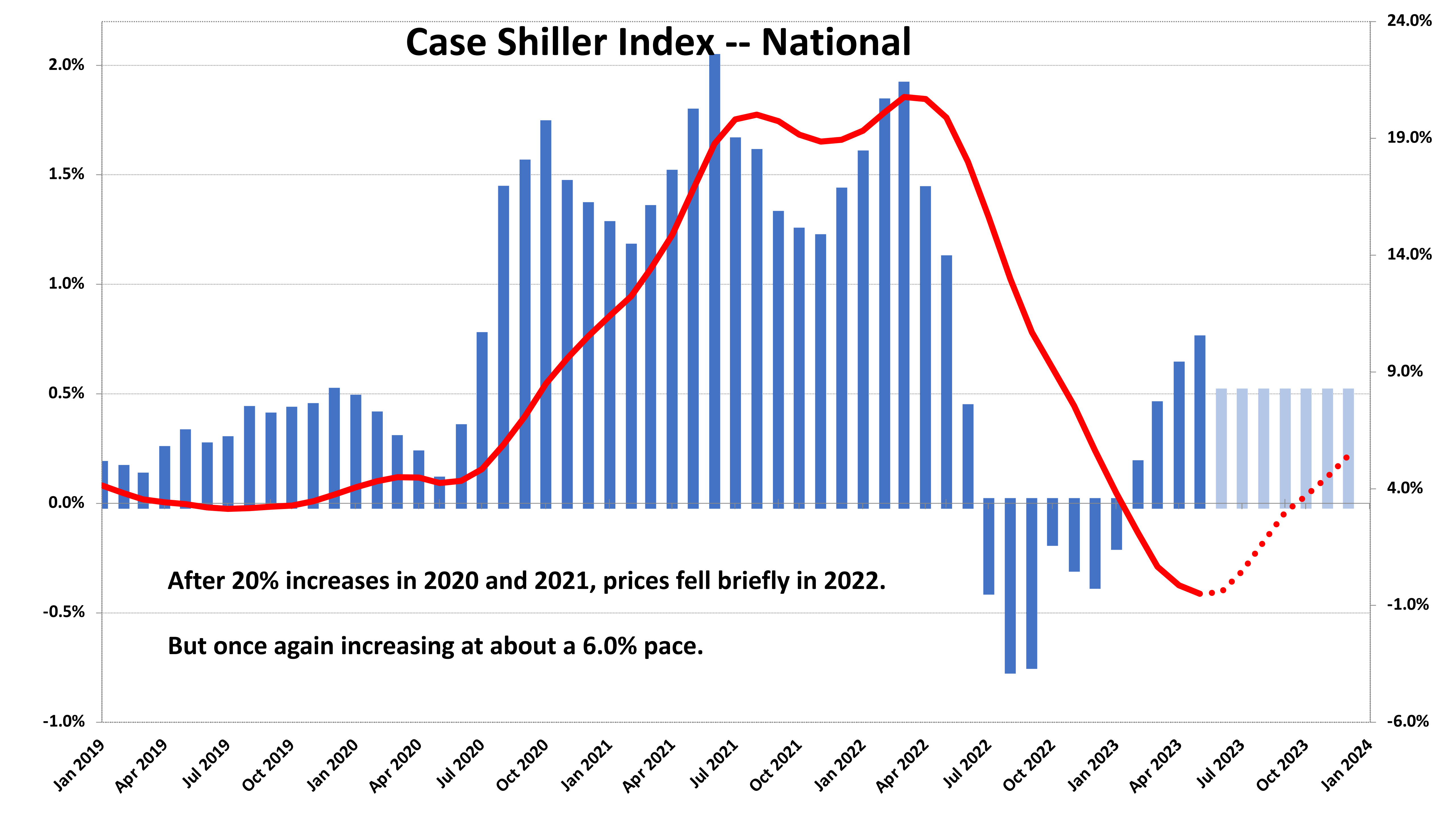
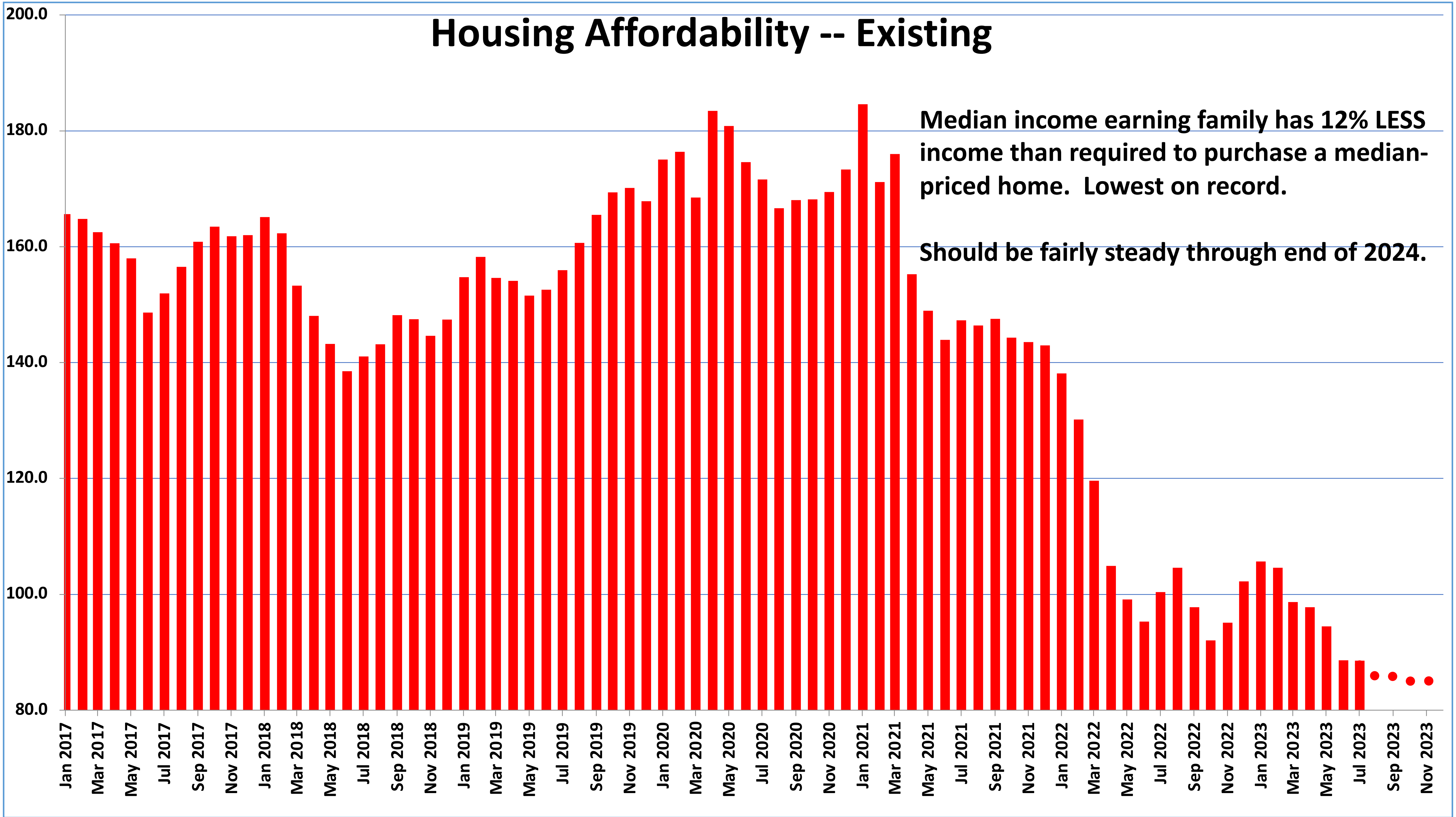
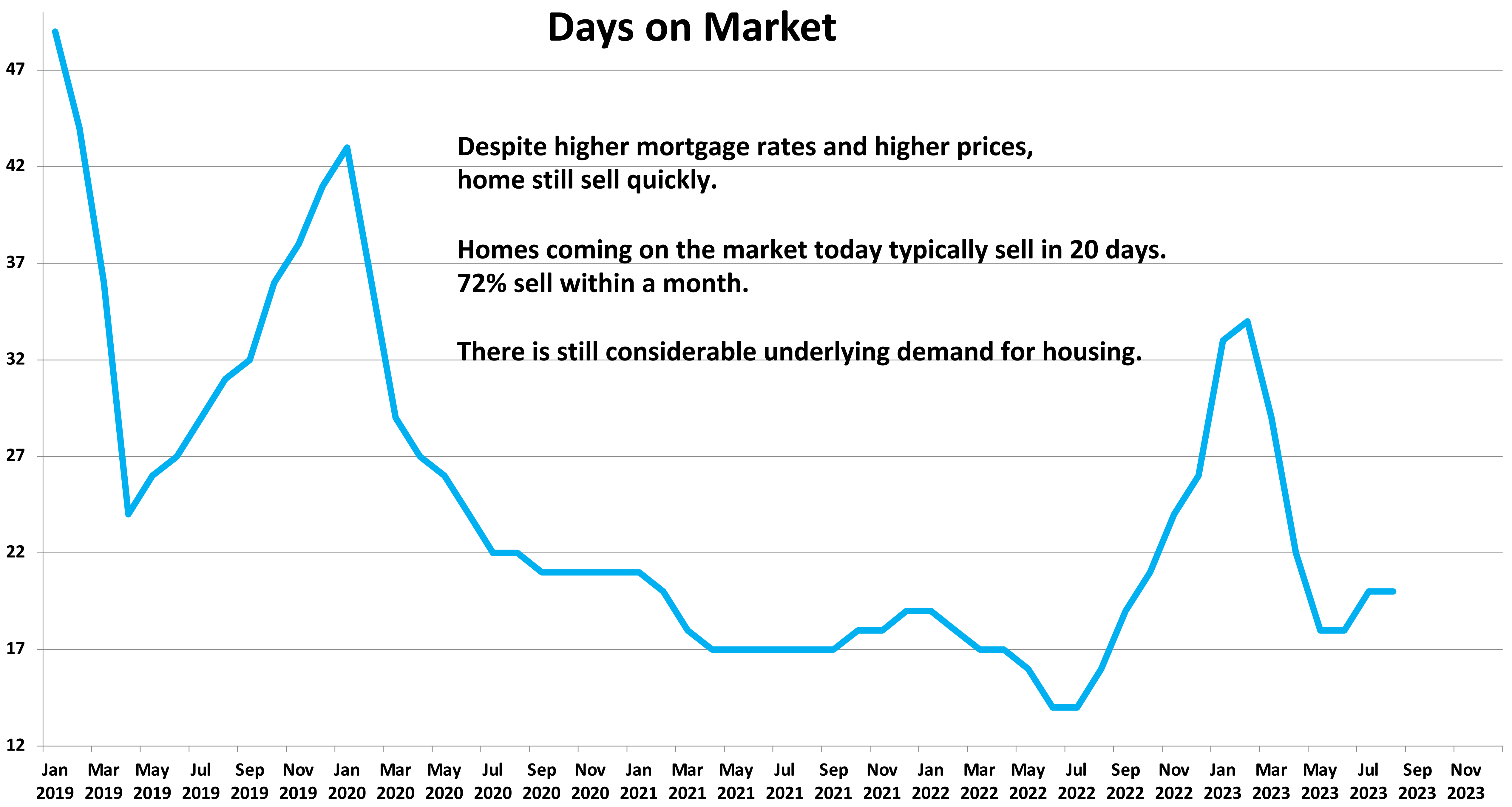

Existing Home Sales
Higher mortgage rates and sharply rising home prices caused sales to plunge in 2022.
6,800
6,300
5,800
5,300
4,800
4,300
3,800
Jan 2019
Mar 2019
May 2019
Jul 2019
Sep 2019
Nov 2019
Jan 2020
Mar 2020
May 2020
Jul 2020
Sep 2020
Nov 2020
Jan 2021
Mar 2021
May 2021
Jul 2021
Sep 2021
Nov 2021
Jan 2022
Mar 2022
May 2022
Jul 2022
Sep 2022
Nov 2022
Jan 2023
Mar 2023
May 2023
Jul 2023
Sep 2023
Nov 2023


Mortgage Rate
Mortgage rates rose from 3.0% at the end of 2021 to 7.5%.
8.6
7.6
6.6
5.6
4.6
3.6
2.6
Jan-10
Jul-10
Jan-11
Jul-11
Jan-12
Jul-12
Jan-13
Jul-13
Jan-14
Jul-14
Jan-15
Jul-15
Jan-16
Jul-16
Jan-17
Jul-17
Jan-18
Jul-18
Jan-19
Jul-19
Jan-20
Jul-20
Jan-21
Jul-21
Jan-22
Jul-22
Jan-23
Jul-23


Case Shiller Index -- National
2.0%
1.5%
1.0%
0.5%
0.0%
-0.5%
-1.0%
24.0%
19.0%
14.0%
9.0%
4.0%
-1.0%
-6.0%
After 20% increases in 2020 and 2021, prices fell briefly in 2022.
But once again increasing at about a 6.0% pace.
Jan 2019
Apr 2019
Jul 2019
Oct 2019
Jan 2020
Apr 2020
Jul 2020
Oct 2020
Jan 2021
Apr 2021
Jul 2021
Oct 2021
Jan 2022
Apr 2022
Jul 2022
Oct 2022
Jan 2023
Apr 2023
Jul 2023
Oct 2023
Jan 2024



Housing Affordability -- Existing
Median income earning family has 12% LESS income than required to purchase a median-priced home. Lowest on record.
Should be fairly steady through end of 2024.
200.0
180.0
160.0
140.0
120.0
100.0
80.0
Jan 2017
Mar 2017
May 2017
Jul 2017
Sep 2017
Nov 2017
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
May 2019
Jul 2019
Sep 2019
Nov 2019
Jan 2020
Mar 2020
May 2020
Jul 2020
Sep 2020
Nov 2020
Jan 2021
Mar 2021
May 2021
Jul 2021
Sep 2021
Nov 2021
Jan 2022
Mar 2022
May 2022
Jul 2022
Sep 2022
Nov 2022
Jan 2023
Mar 2023
May 2023
Jul 2023
Sep 2023
Nov 2023



Days on Market
Despite higher mortgage rates and higher prices,
home still sell quickly.
Homes coming on the market today typically sell in 20 days.
72% sell within a month.
There is still considerable underlying demand for housing.
47
42
37
32
27
22
17
12
Jan 2019
Mar 2019
May 2019
Jul 2019
Sep 2019
Nov 2019
Jan 2020
Mar 2020
May 2020
Jul 2020
Sep 2020
Nov 2020
Jan 2021
Mar 2021
May 2021
Jul 2021
Sep 2021
Nov 2021
Jan 2022
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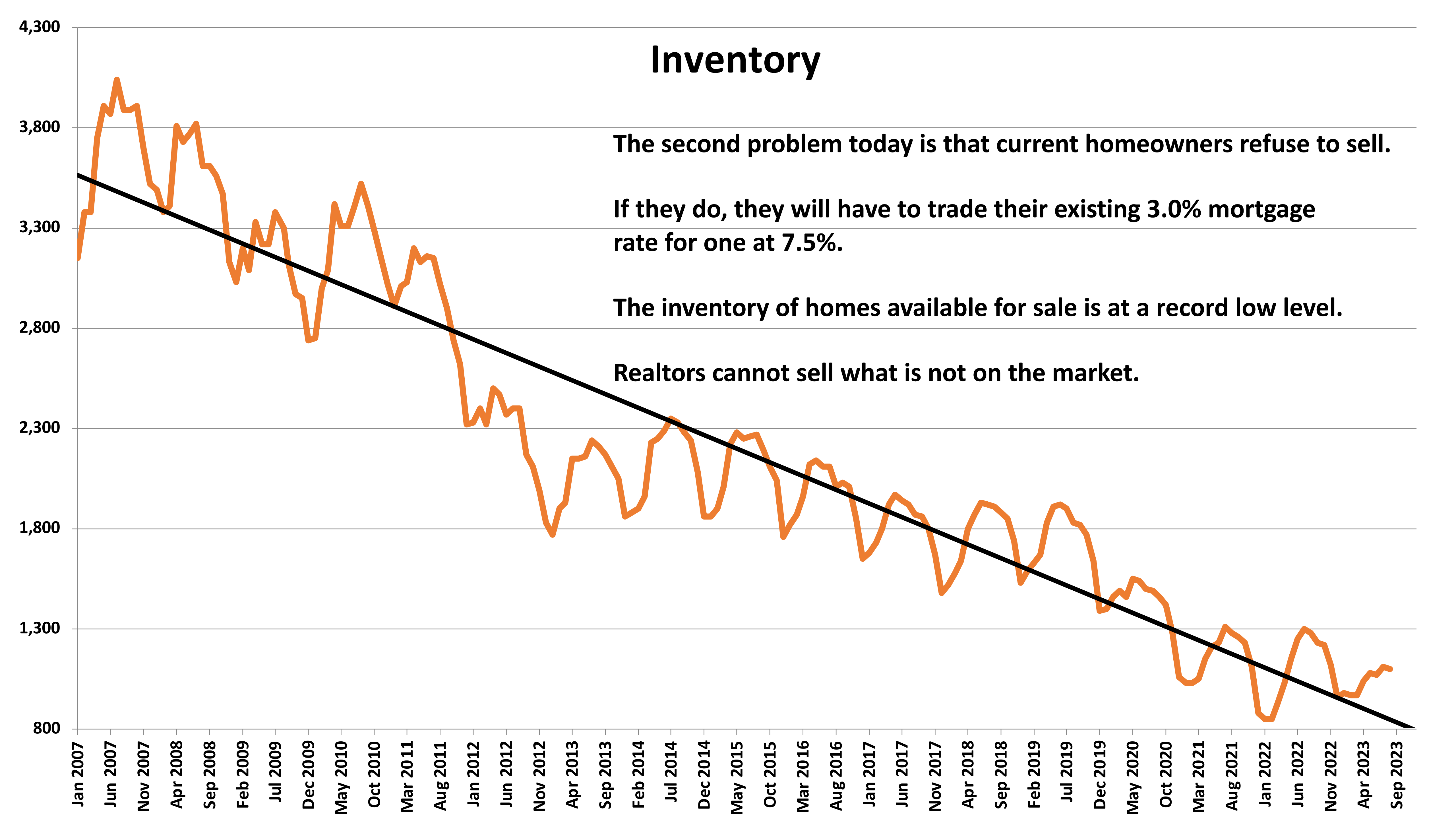
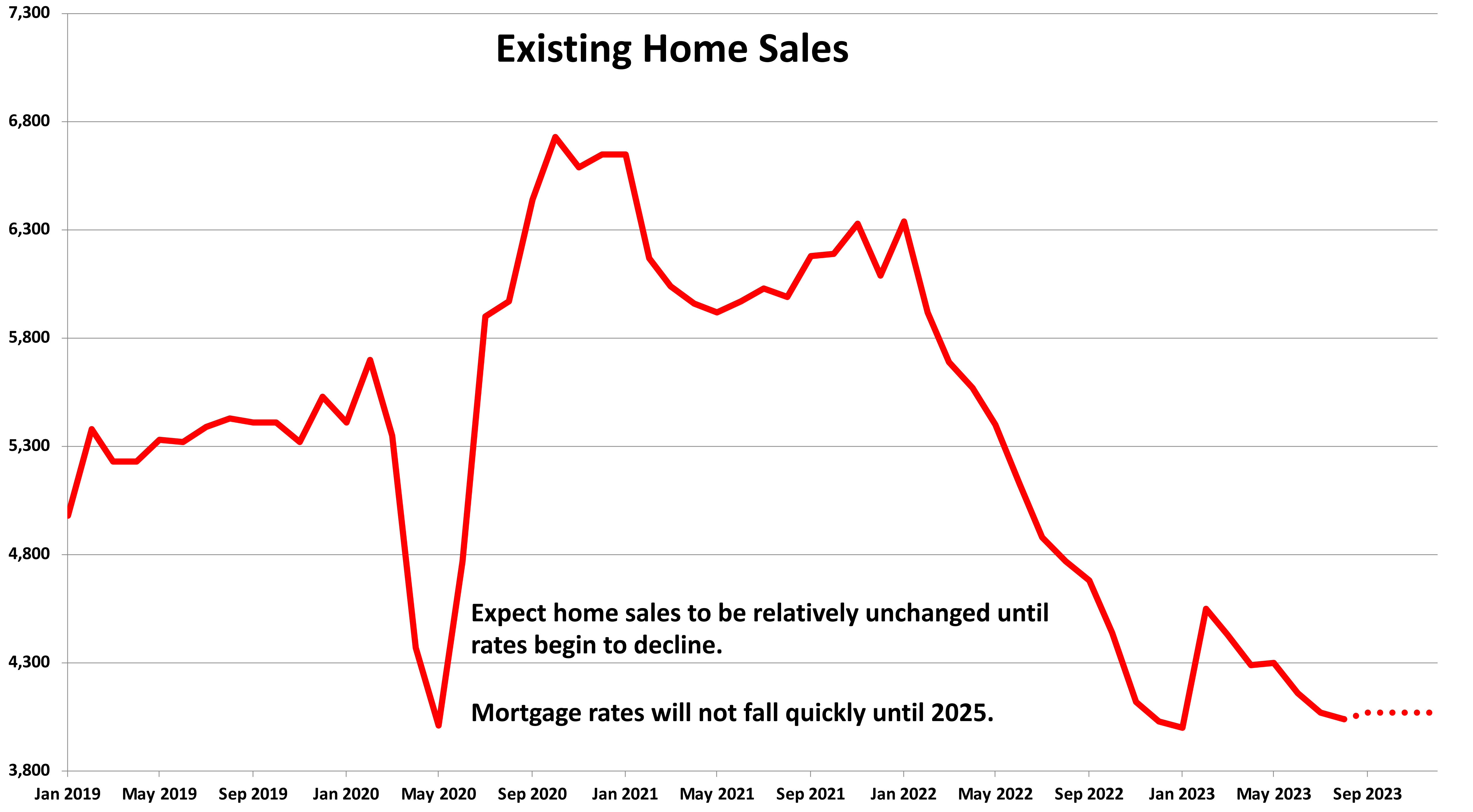
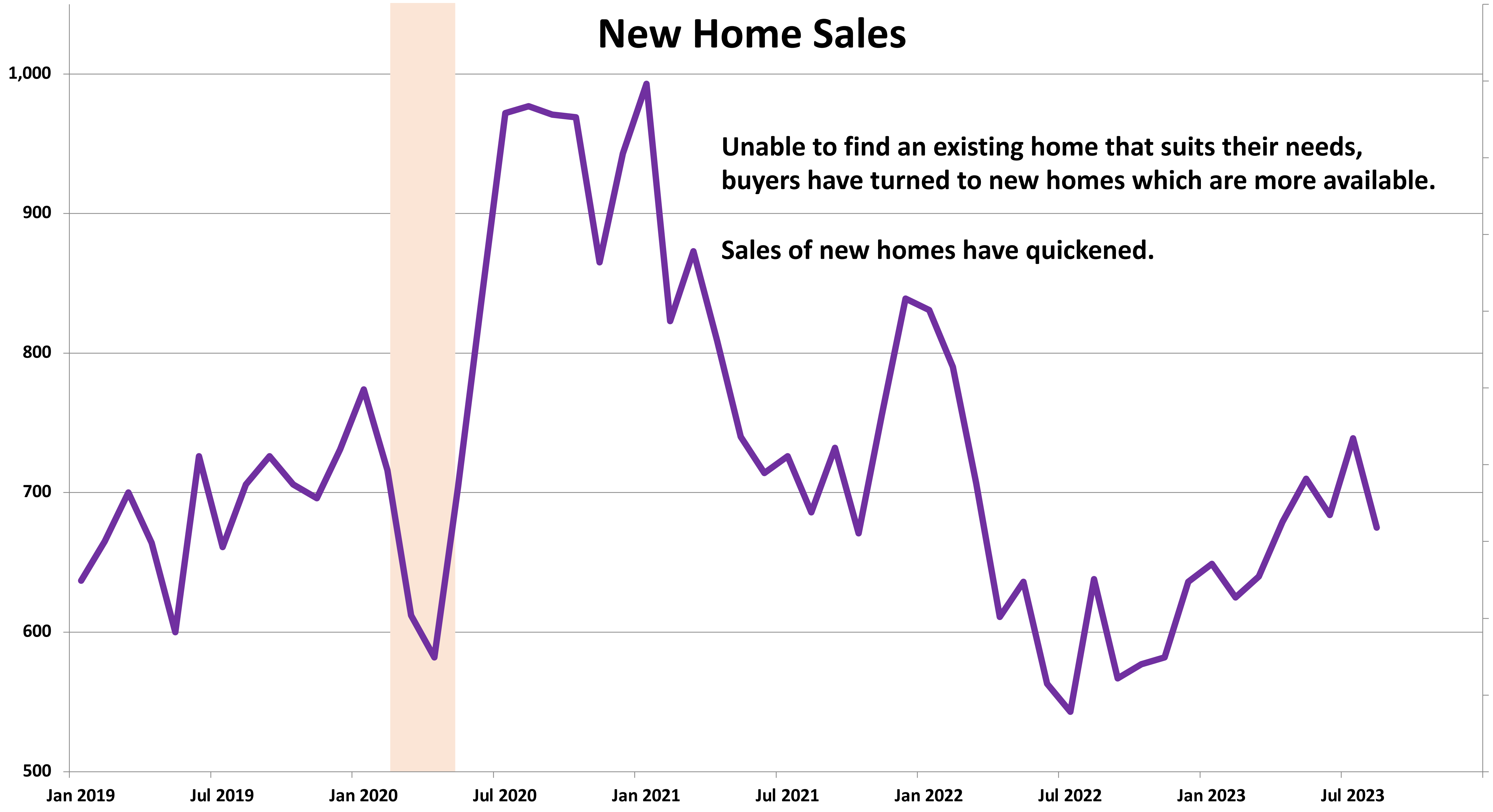
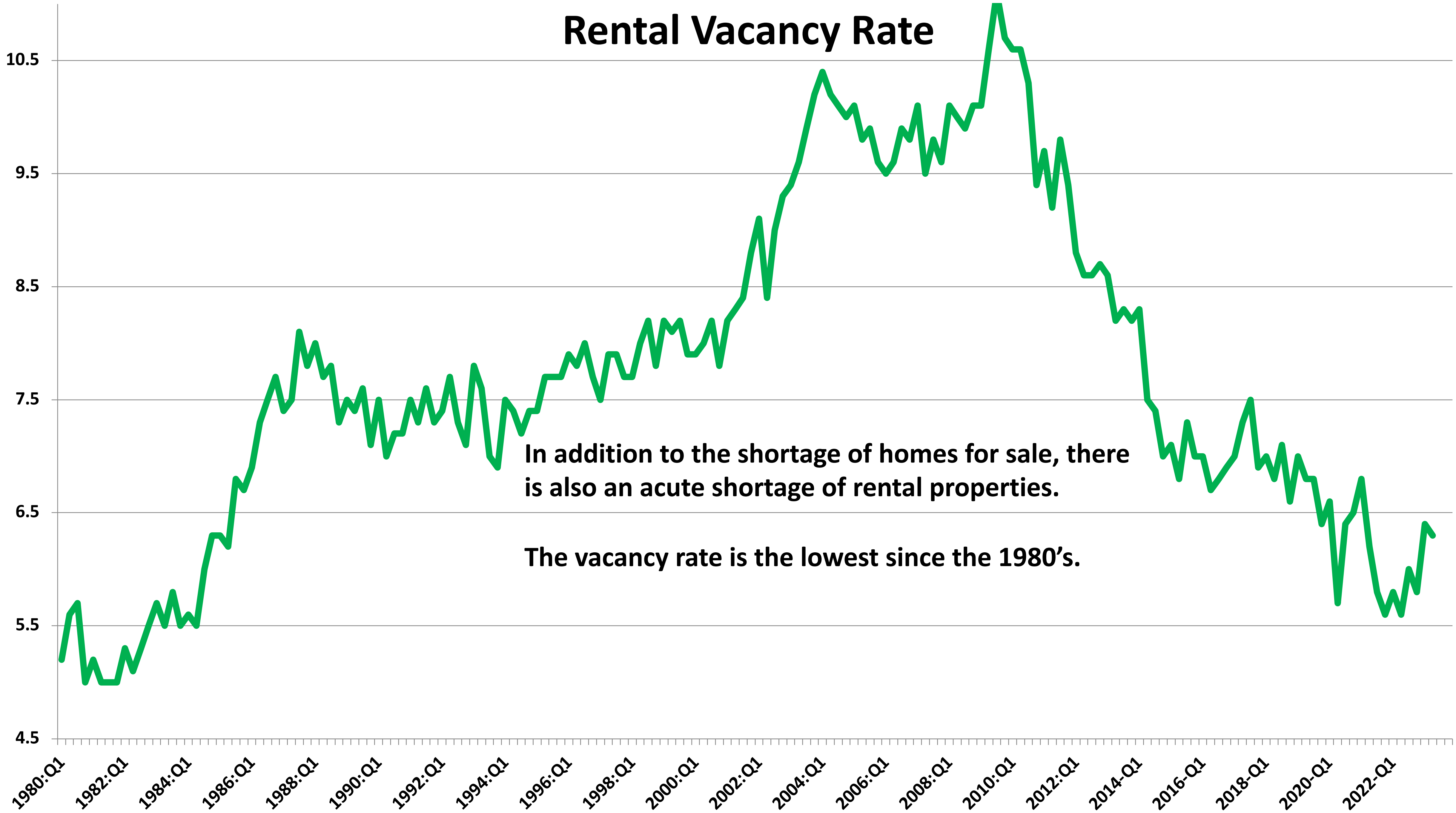
May 2023
Jul 2023
Sep 2023
Nov 2023

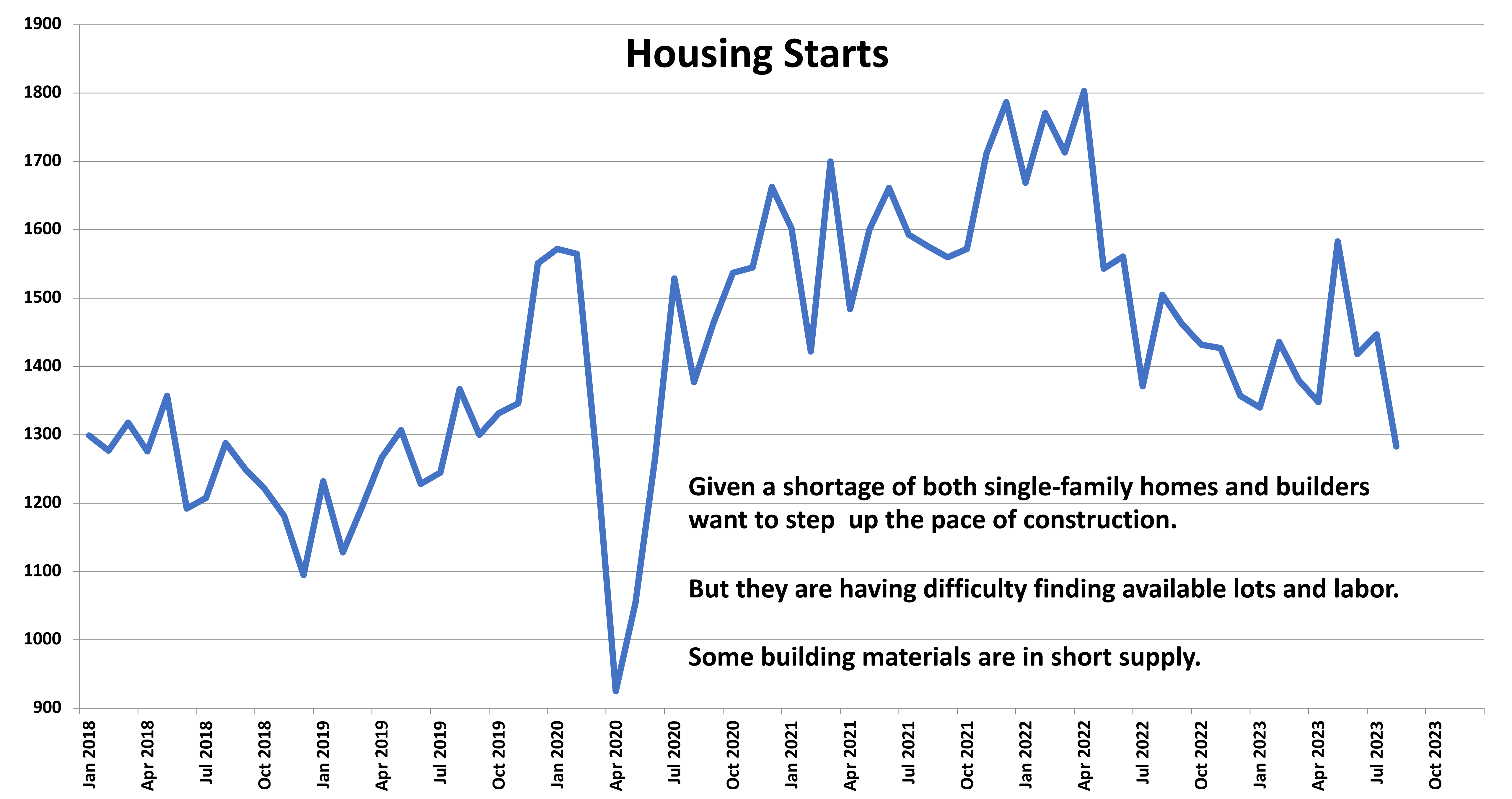


Inventory
The second problem today is that current homeowners refuse to sell.
If they do, they will have to trade their existing 3.0% mortgage rate for one at 7.5%.
The inventory of homes available for sale is at a record low level.
Realtors cannot sell what is not on the market.
4,300
3,800
3,300
2,800
2,300
1,800
1,300
800
Jan 2007
Jun 2007
Nov 2007
Apr 2008
Sep 2008
Feb 2009
Jul 2009
Dec 2009
May 2010
Oct 2010
Mar 2011
Aug 2011
Jan 2012
Jun 2012
Nov 2012
Apr 2013
Sep 2013
Feb 2014
Jul 2014
Dec 2014
May 2015
Oct 2015
Mar 2016
Aug 2016
Jan 2017
Jun 2017
Nov 2017
Apr 2018
Sep 2018
Feb 2019
Jul 2019
Dec 2019
May 2020
Oct 2020
Mar 2021
Aug 2021
Jan 2022
Jun 2022
Nov 2022
Apr 2023
Sep 2023

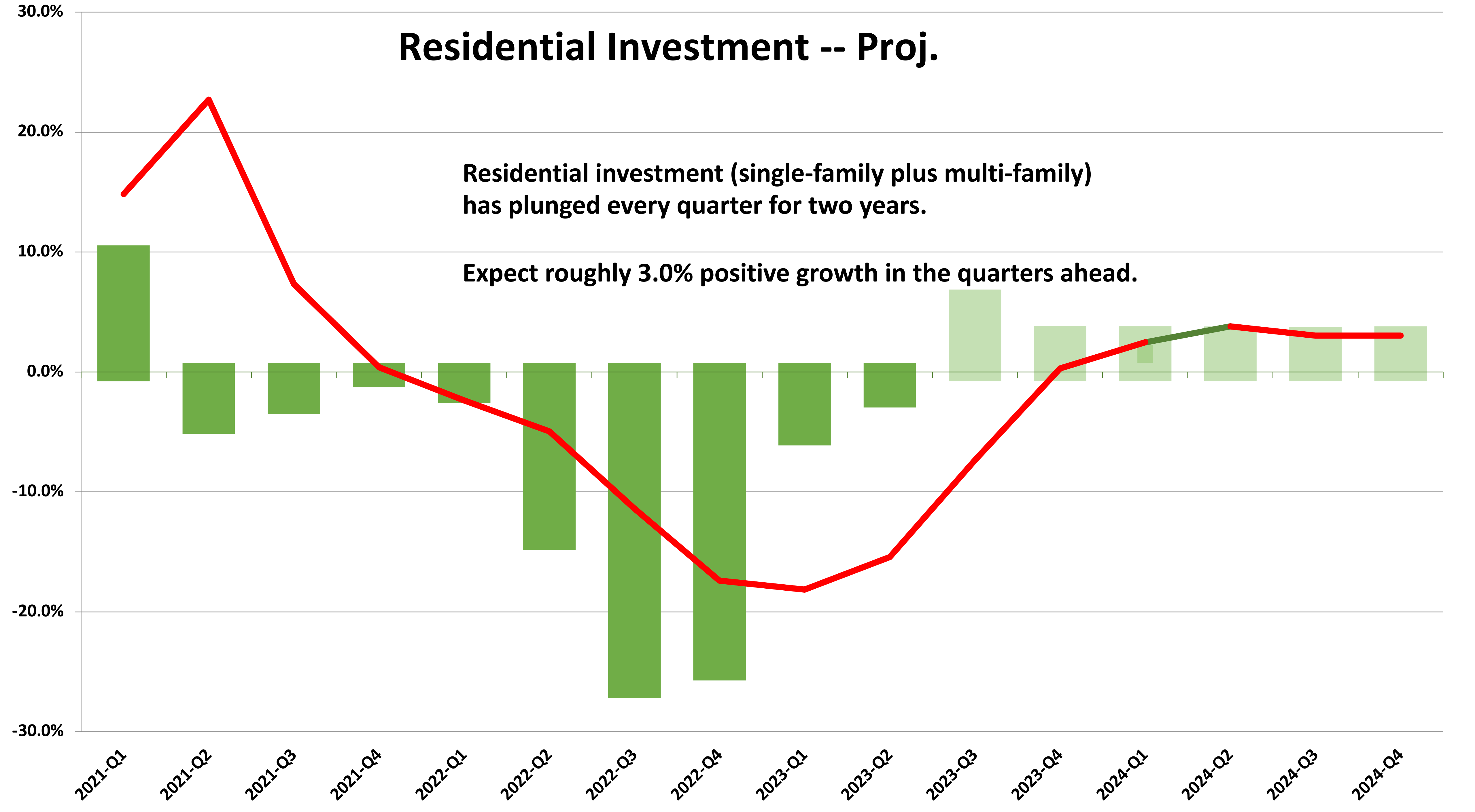

Existing Home Sales
Expect home sales to be relatively unchanged until rates begin to decline.
Mortgage rates will not fall quickly until 2025.
7,300
6,800
6,300
5,800
5,300
4,800
4,300
3,800
Jan 2019
May 2019
Sep 2019
Jan 2020
May 2020
Sep 2020
Jan 2021
May 2021
Sep 2021
Jan 2022
May 2022
Sep 2022
Jan 2023
May 2023
Sep 2023


New Home Sales
Unable to find an existing home that suits their needs,
buyers have turned to new homes which are more available.
Sales of new homes have quickened.
1,000
900
800
700
600
500
Jan 2019
Jul 2019
Jan 2020
Jul 2020
Jan 2021
Jul 2021
Jan 2022
Jul 2022
Jan 2023
Jul 2023

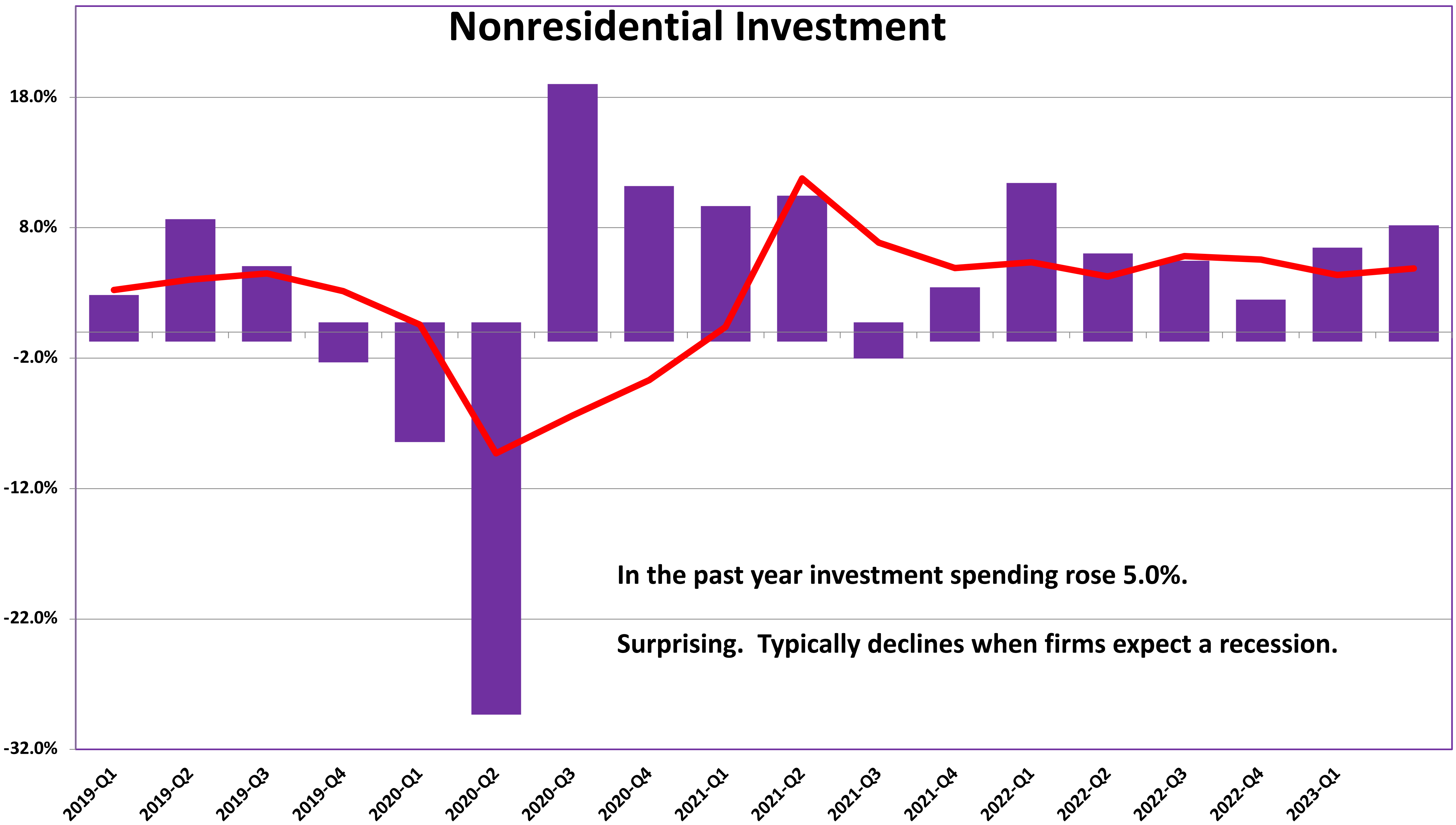

Rental Vacancy Rate
10.5
9.5
8.5
7.5
6.5
5.5
4.5
1980:Q1
1982:Q1
1984:Q1
1986:Q1
1988:Q1
1990:Q1
1992:Q1
1994:Q1
1996:Q1
1998:Q1
2000:Q1
2002:Q1
2004:Q1
2006:Q1
2008:Q1
2010:Q1
2012:Q1
2014-Q1
2016-Q1
2018-Q1
2020-Q1
2022-Q1
In addition to the shortage of homes for sale, there is also an acute shortage of rental properties.
The vacancy rate is the lowest since the 1980’s.

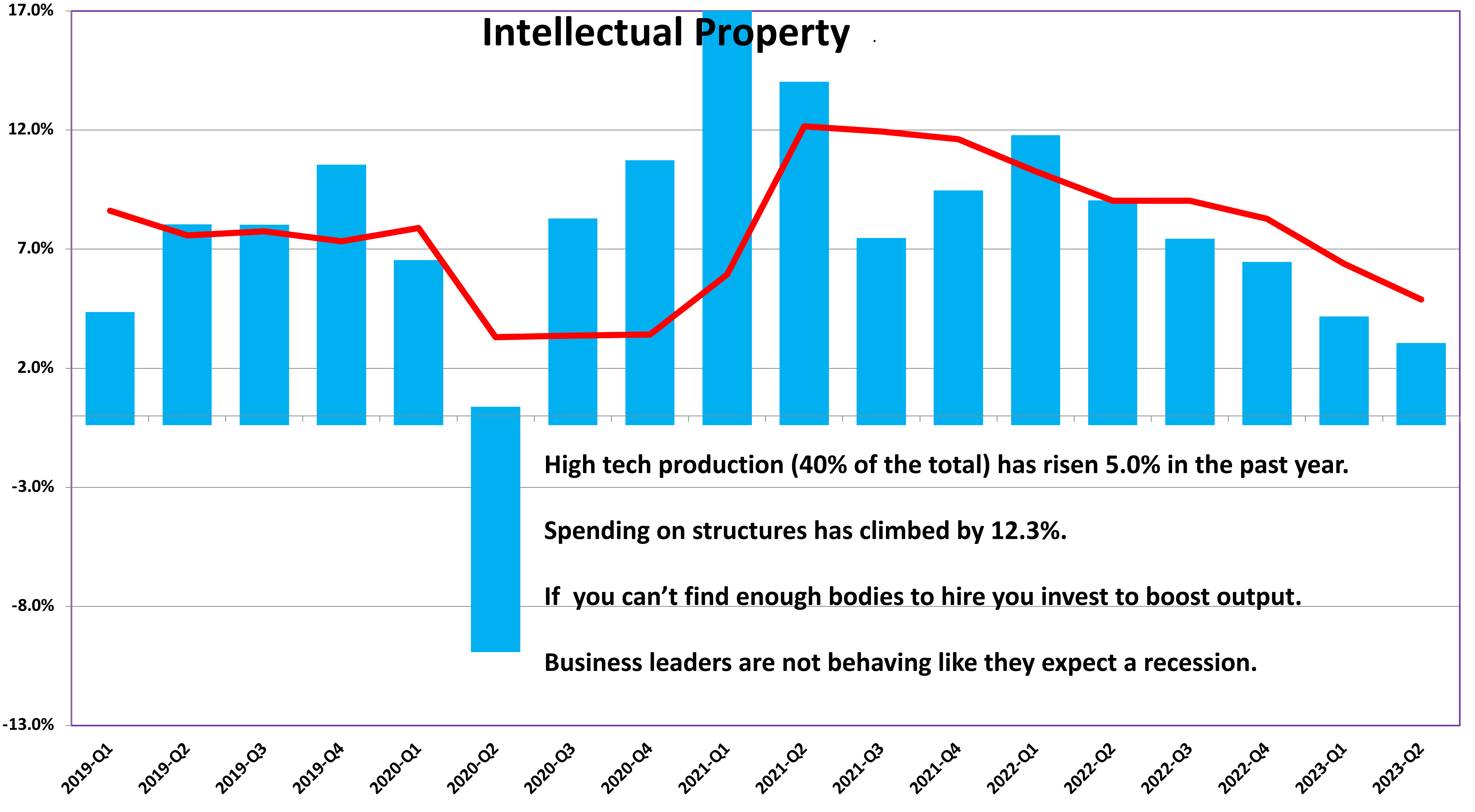


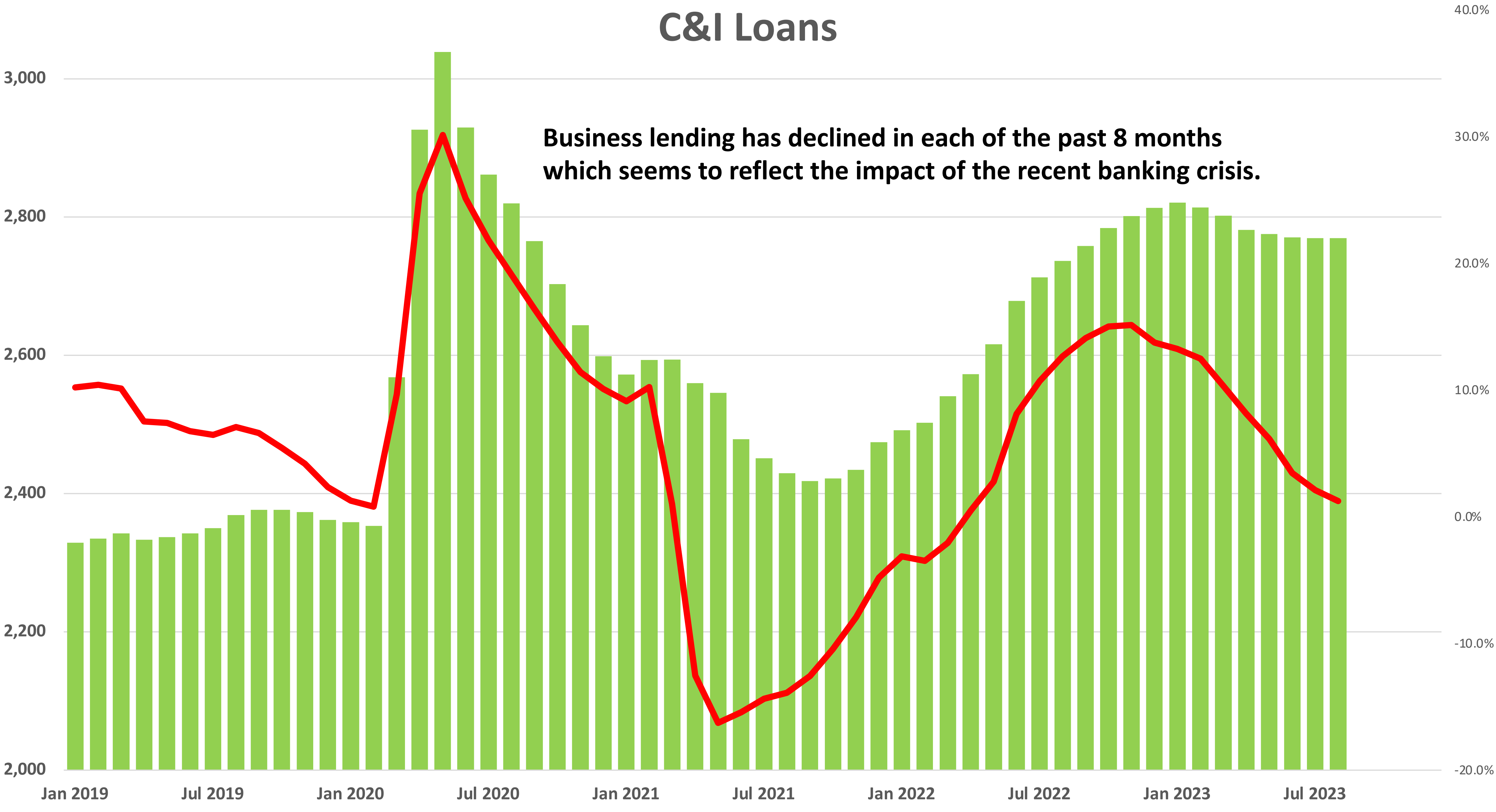
Housing Starts
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
Jan 2018
Apr 2018
Jul 2018
Oct 2018
Jan 2019
Apr 2019
Jul 2019
Oct 2019
Jan 2020
Apr 2020
Jul 2020
Oct 2020
Jan 2021
Apr 2021
Jul 2021
Oct 2021
Jan 2022
Apr 2022
Jul 2022
Oct 2022
Jan 2023
Apr 2023
Jul 2023
Oct 2023
Given a shortage of both single-family homes and builders want to step up the pace of construction.
But they are having difficulty finding available lots and labor.
Some building materials are in short supply.

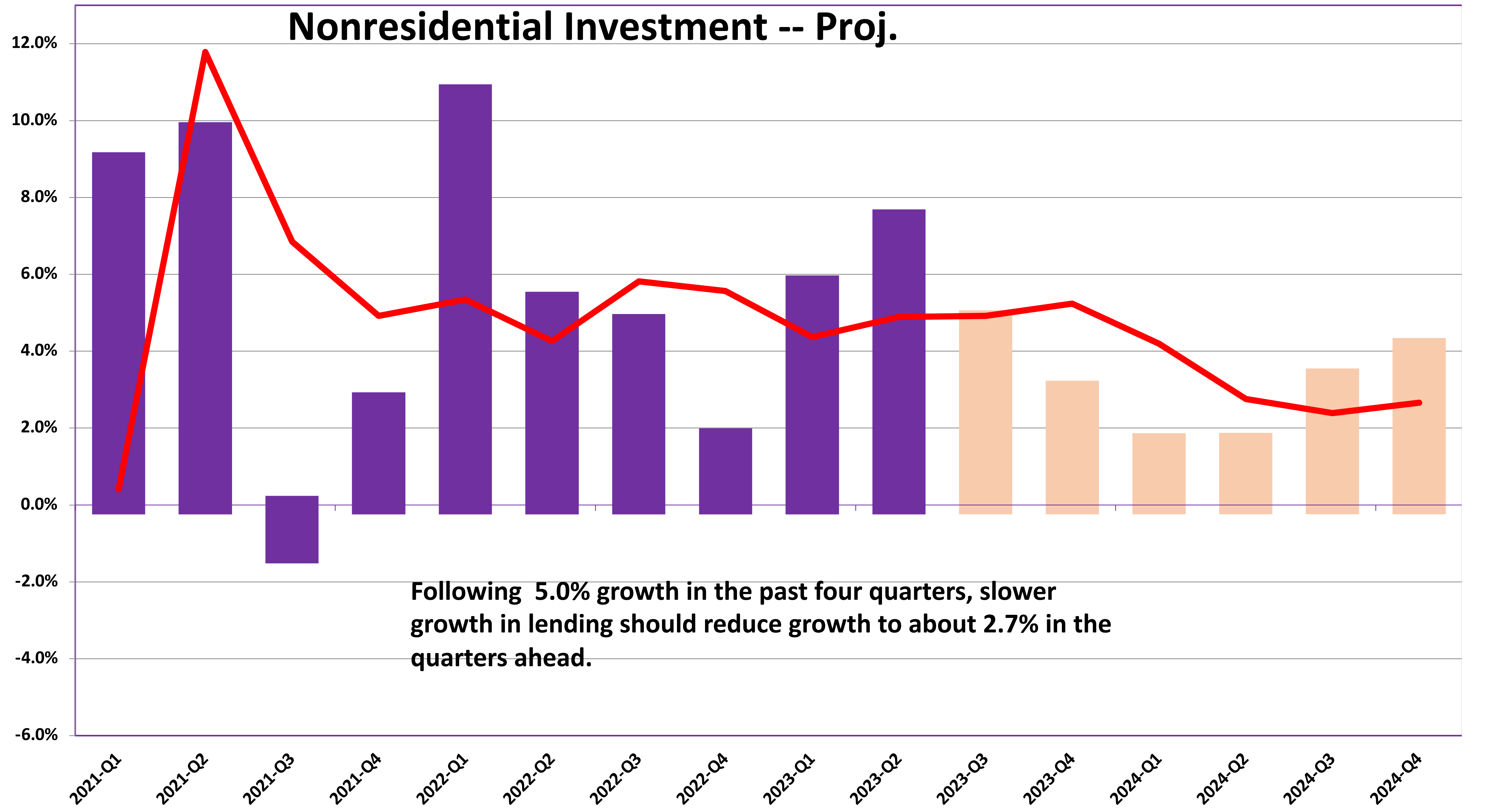

Residential Investment -- Proj.
Residential investment (single-family plus multi-family)
has plunged every quarter for two years.
Expect roughly 3.0% positive growth in the quarters ahead.
30.0%
20.0%
10.0%
0.0%
-10.0%
-20.0%
-30.0%
2021-Q1
2021-Q2
2021-Q3
2021-Q4
2022-Q1
2022-Q2
2022-Q3
2022-Q4
2023-Q1
2023-Q2
2023-Q3
2023-Q4
2024-Q1
2024-Q2
2024-Q3
2024-Q4

# Investment.

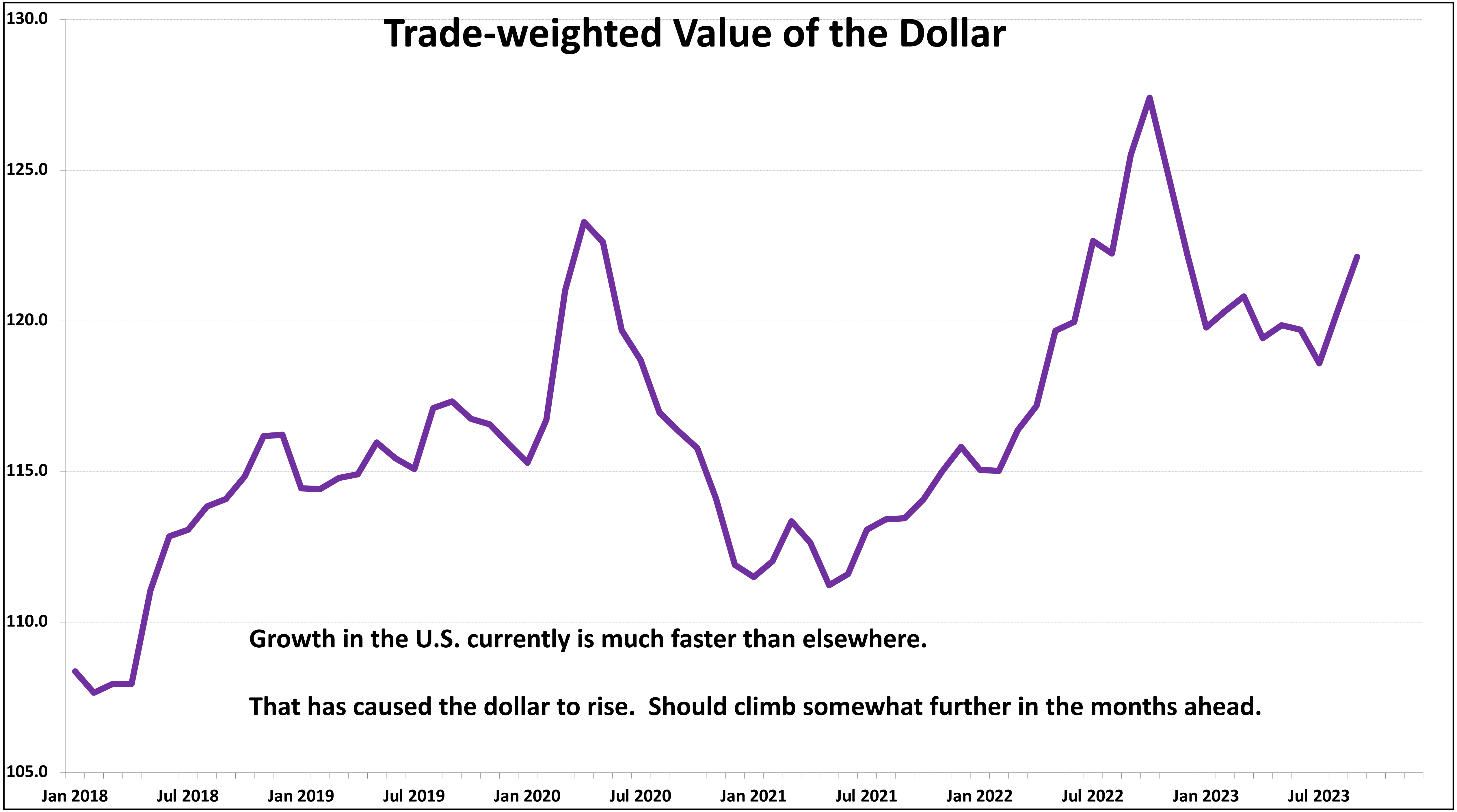

Nonresidential Investment
18.0%
8.0%
-2.0%
-12.0%
-22.0%
-32.0%
2019-Q1
2019-Q2
2019-Q3
2019-Q4
2020-Q1
2020-Q2
2020-Q3
2020-Q4
2021-Q1
2021-Q2
2021-Q3
2021-Q4
2022-Q1
2022-Q2
2022-Q3
2022-Q4
2023-Q1
In the past year investment spending rose 5.0%.
Surprising. Typically declines when firms expect a recession.

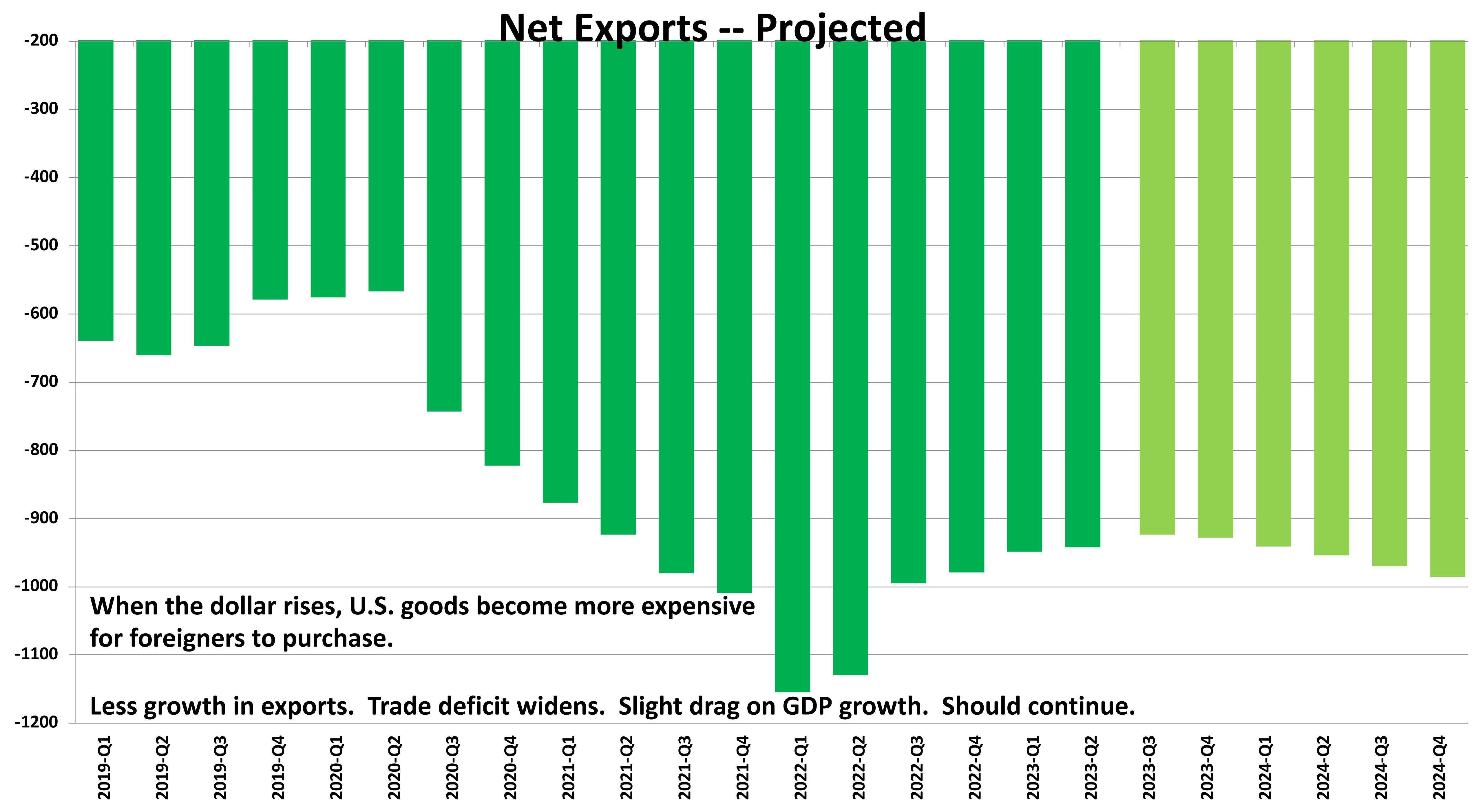

Intellectual Property
17.0%
12.0%
7.0%
2.0%
-3.0%
-8.0%
-13.0%
High tech production (40% of the total) has risen 5.0% in the past year.
Spending on structures has climbed by 12.3%.
If you can't find enough bodies to hire you invest to boost output.
Business leaders are not behaving like they expect a recession.
2019-Q1
2019-Q2
2019-Q3
2019-Q4
2020-Q1
2020-Q2
2020-Q3
2020-Q4
2021-Q1
2021-Q2
2021-Q3
2021-Q4
2022-Q1
2022-Q2
2022-Q3
2022-Q4
2023-Q1
2023-Q2


C&I Loans
Business lending has declined in each of the past 8 months
which seems to reflect the impact of the recent banking crisis.
3,000
2,800
2,600
2,400
2,200
2,000
40.0%
30.0%
20.0%
10.0%
0.0%
-10.0%
-20.0%
Jan 2019
Jul 2019
Jan 2020
Jul 2020
Jan 2021
Jul 2021
Jan 2022
Jul 2022
Jan 2023
Jul 2023

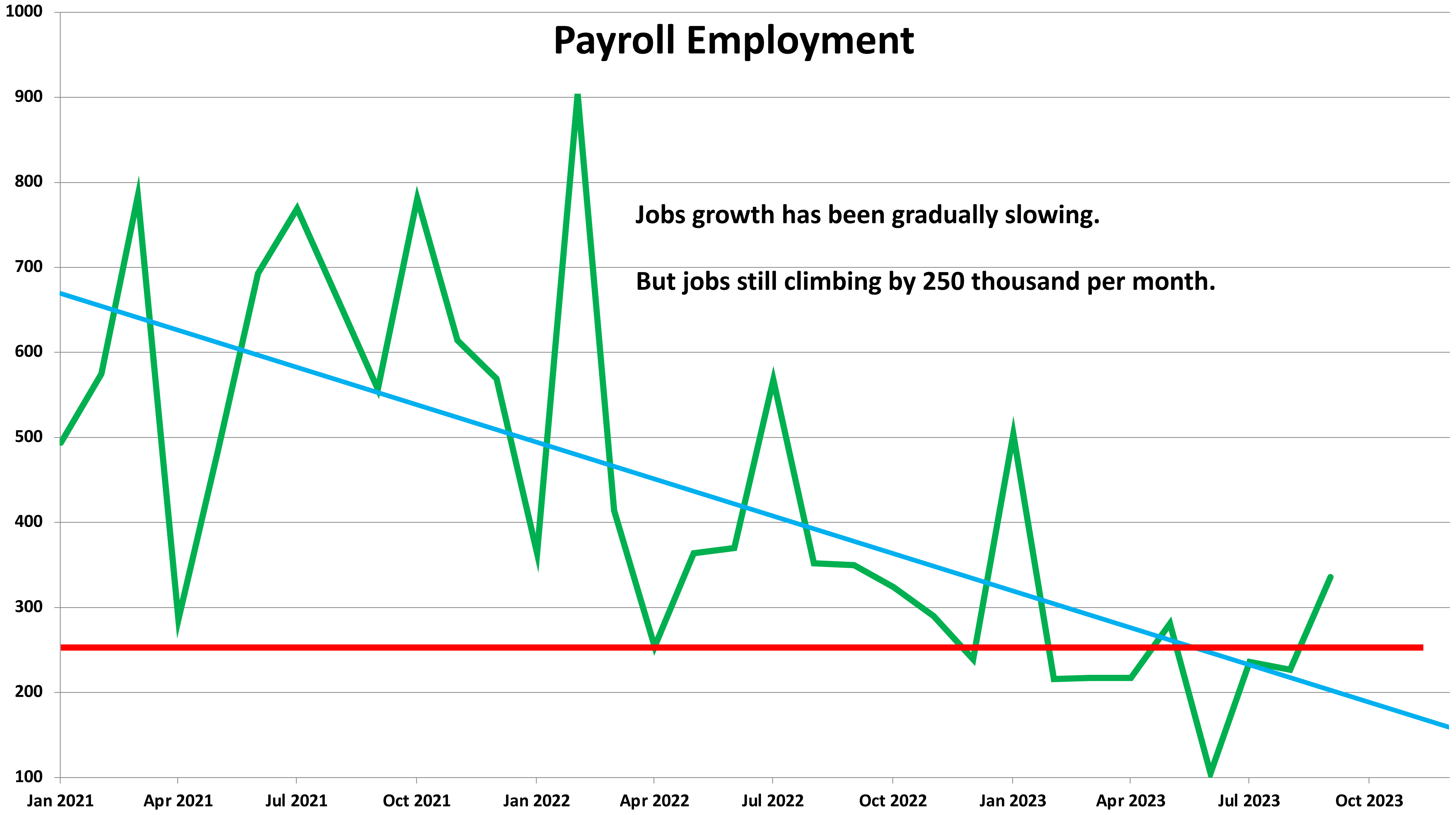

Nonresidential Investment -- Proj.
12.0%
10.0%
8.0%
6.0%
4.0%
2.0%
0.0%
-2.0%
-4.0%
-6.0%
Following 5.0% growth in the past four quarters, slower growth in lending should reduce growth to about 2.7% in the quarters ahead.
2021-Q1
2021-Q2
2021-Q3
2021-Q4
2022-Q1
2022-Q2
2022-Q3
2022-Q4
2023-Q1
2023-Q2
2023-Q3
2023-Q4
2024-Q1
2024-Q2
2024-Q3
2024-Q4

# Trade.

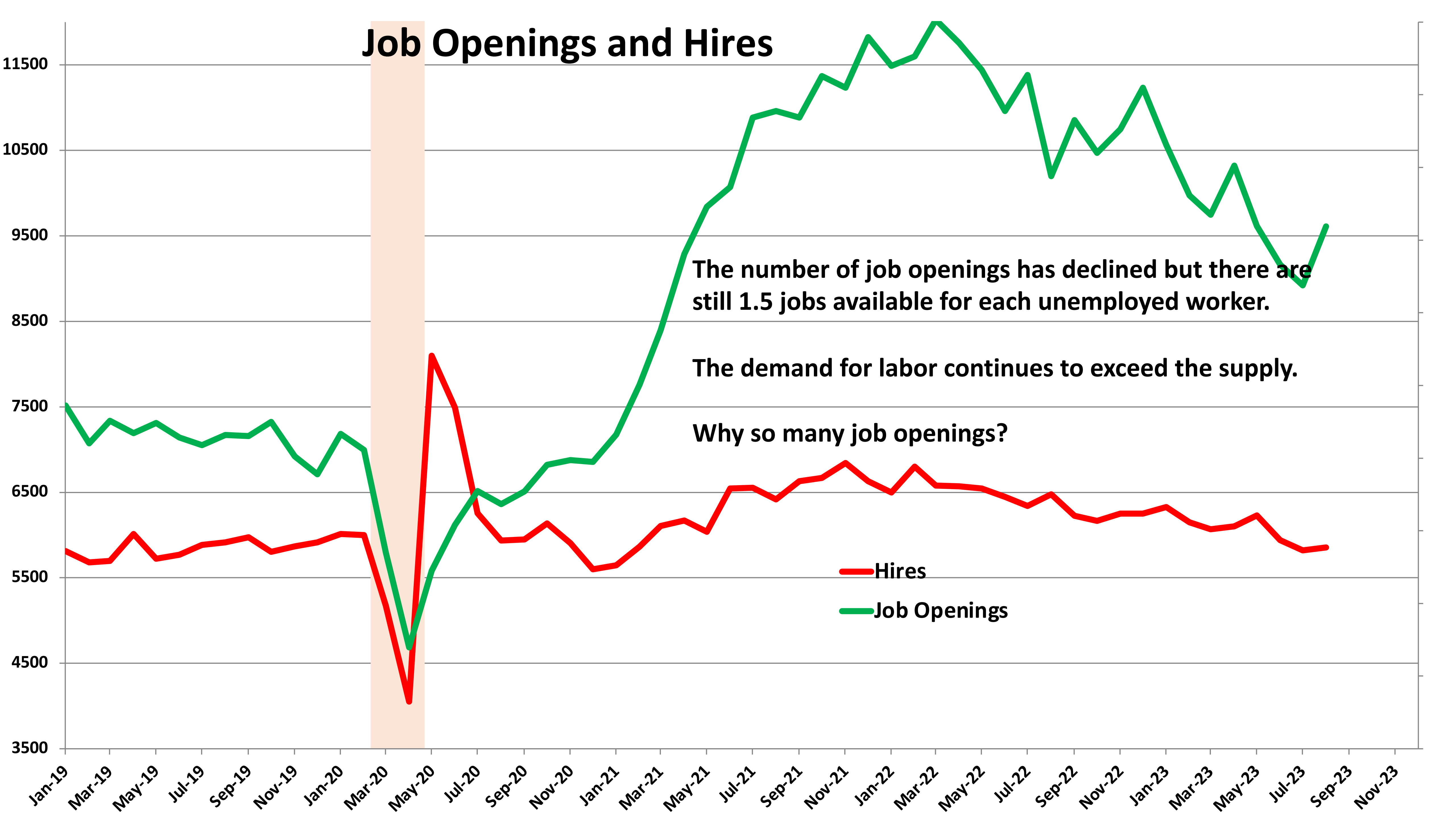

Trade-weighted Value of the Dollar
130.0
125.0
120.0
115.0
110.0
105.0
Jan 2018
Jul 2018
Jan 2019
Jul 2019
Jan 2020
Jul 2020
Jan 2021
Jul 2021
Jan 2022
Jul 2022
Jan 2023
Jul 2023
Growth in the U.S. currently is much faster than elsewhere.
That has caused the dollar to rise. Should climb somewhat further in the months ahead.


Net Exports -- Projected
-200
-300
-400
-500
-600
-700
-800
-900
-1000
-1100
-1200
When the dollar rises, U.S. goods become more expensive for foreigners to purchase.
Less growth in exports. Trade deficit widens. Slight drag on GDP growth. Should continue.
2019-Q1
2019-Q2
2019-Q3
2019-Q4
2020-Q1
2020-Q2
2020-Q3
2020-Q4
2021-Q1
2021-Q2
2021-Q3
2021-Q4
2022-Q1
2022-Q2
2022-Q3
2022-Q4
2023-Q1
2023-Q2
2023-Q3
2023-Q4
2024-Q1
2024-Q2
2024-Q3
2024-Q4

# Employment.



Payroll Employment
Jobs growth has been gradually slowing.
But jobs still climbing by 250 thousand per month.
1000
900
800
700
600
500
400
300
200
100
Jan 2021
Apr 2021
Jul 2021
Oct 2021
Jan 2022
Apr 2022
Jul 2022
Oct 2022
Jan 2023
Apr 2023
Jul 2023
Oct 2023



Job Openings and Hires
11500
10500
9500
8500
7500
6500
5500
4500
3500
The number of job openings has declined but there are still 1.5 jobs available for each unemployed worker.
The demand for labor continues to exceed the supply.
Why so many job openings?
Hires
Job Openings
Jan-19
Mar-19
May-19
Jul-19
Sep-19
Nov-19
Jan-20
Mar-20
May-20
Jul-20
Sep-20
Nov-20
Jan-21
Mar-21
May-21
Jul-21
Sep-21
Nov-21
Jan-22
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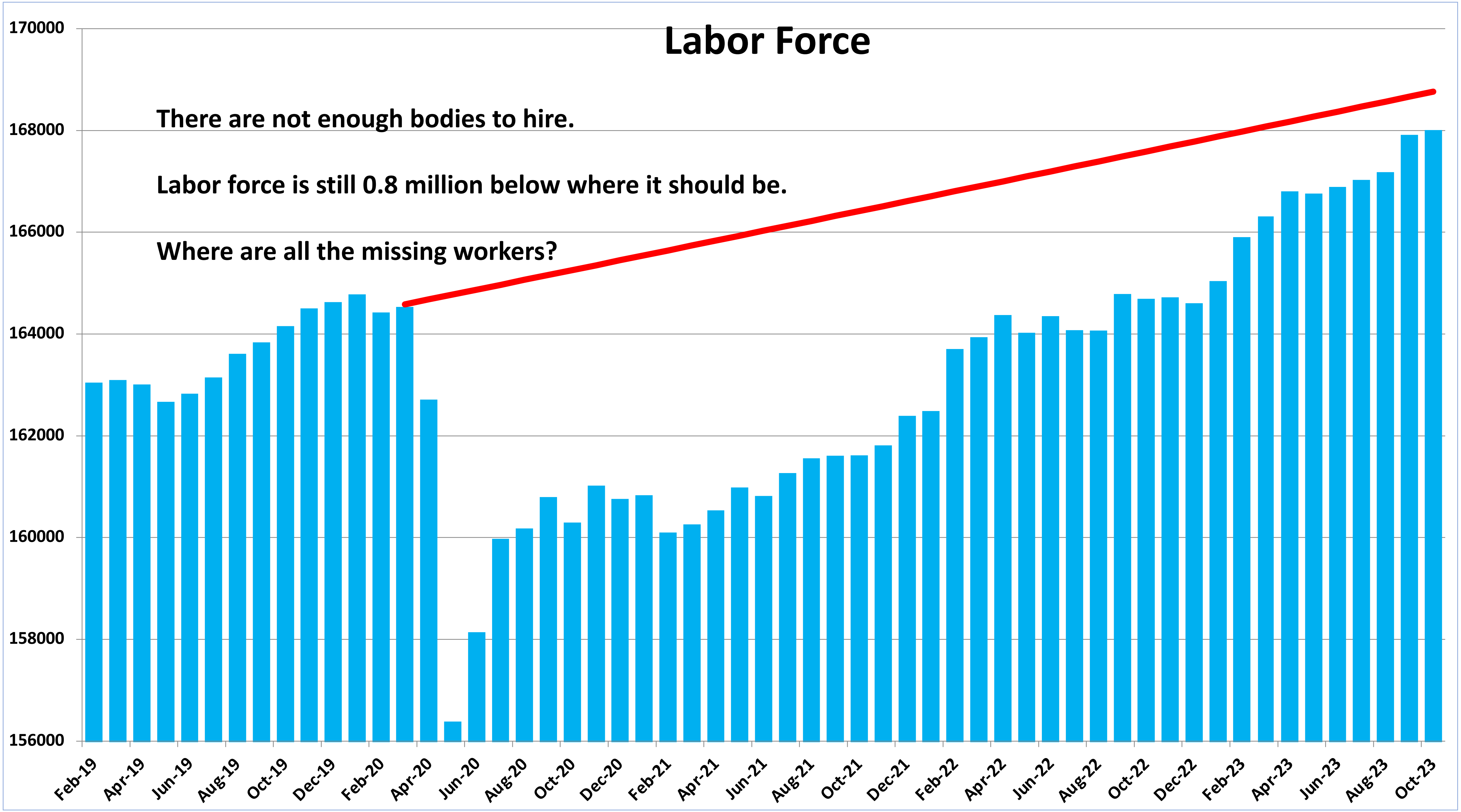
Jul-23
Sep-23
Nov-23

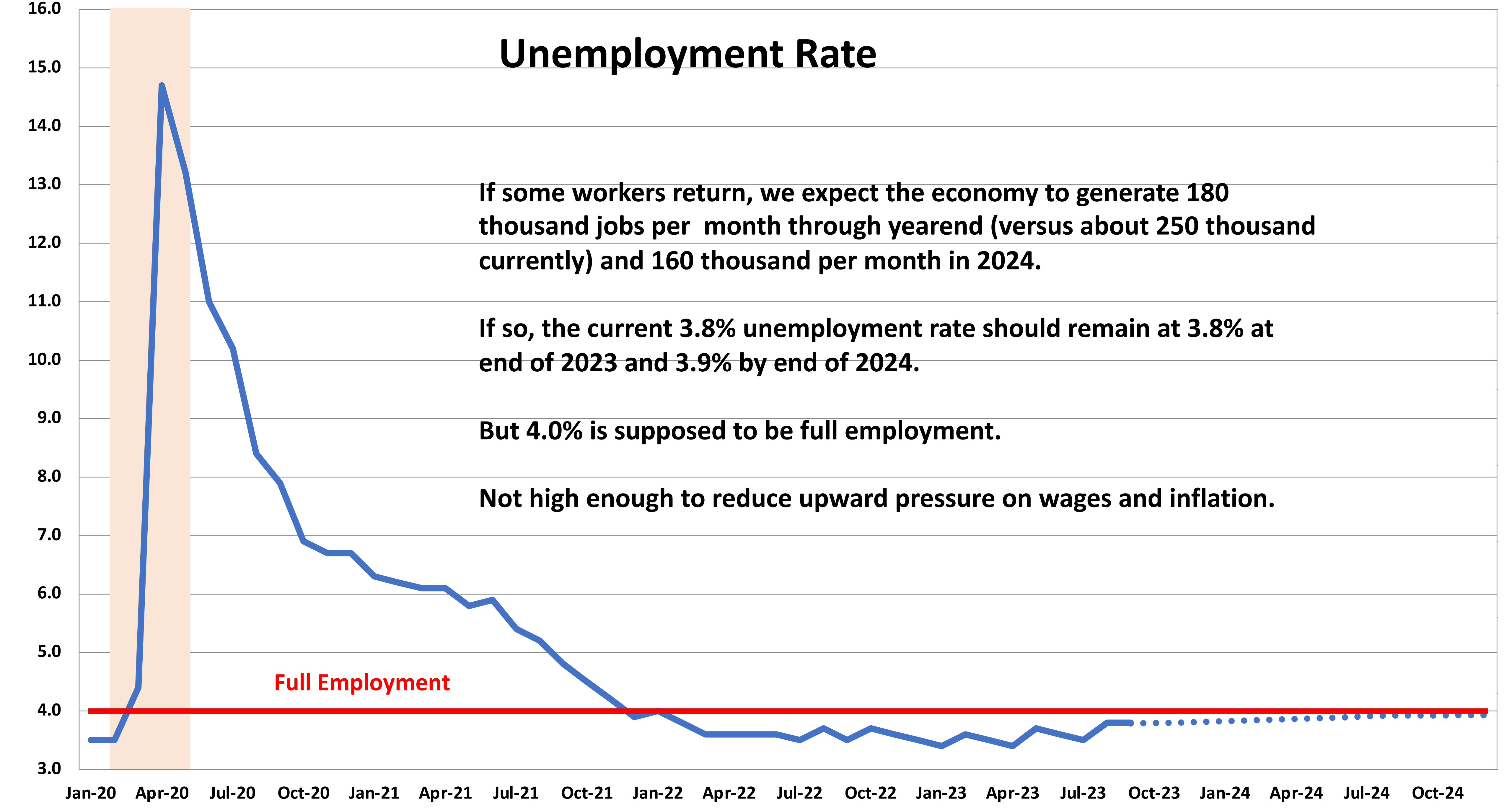

Labor Force
There are not enough bodies to hire.
Labor force is still 0.8 million below where it should be.
Where are all the missing workers?
170000
168000
166000
164000
162000
160000
158000
156000
Feb-19
Apr-19
Jun-19
Aug-19
Oct-19
Dec-19
Feb-20
Apr-20
Jun-20
Aug-20
Oct-20
Dec-20
Feb-21
Apr-21
Jun-21
Aug-21
Oct-21
Dec-21
Feb-22
Apr-22
Jun-22
Aug-22
Oct-22
Dec-22
Feb-23
Apr-23
Jun-23
Aug-23
Oct-23

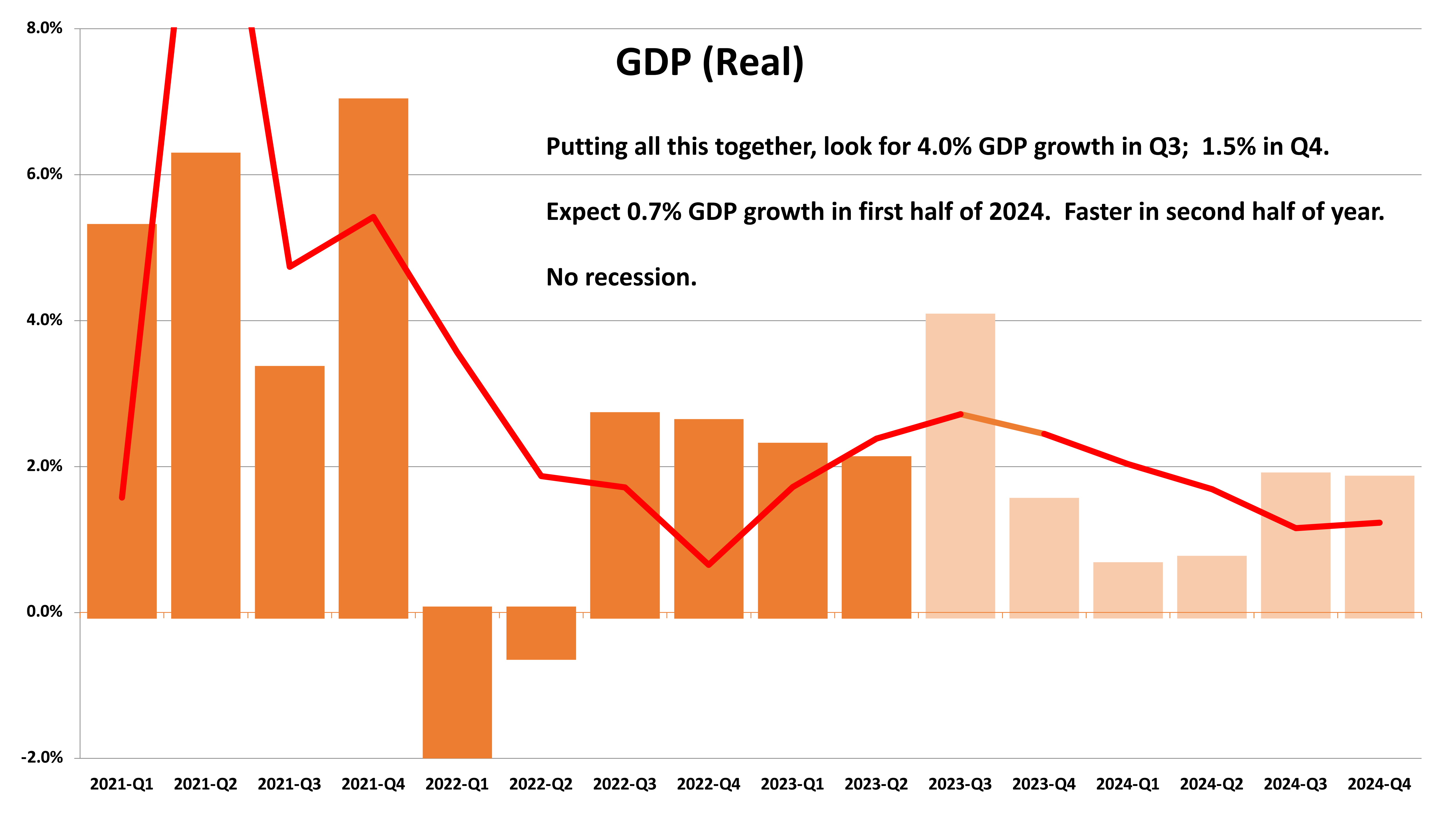
# 1.5 million missing workers.

1. 1.0 million retired.

2. Some 0.5 million died from COVID.

Some of the missing workers are once again looking for jobs.

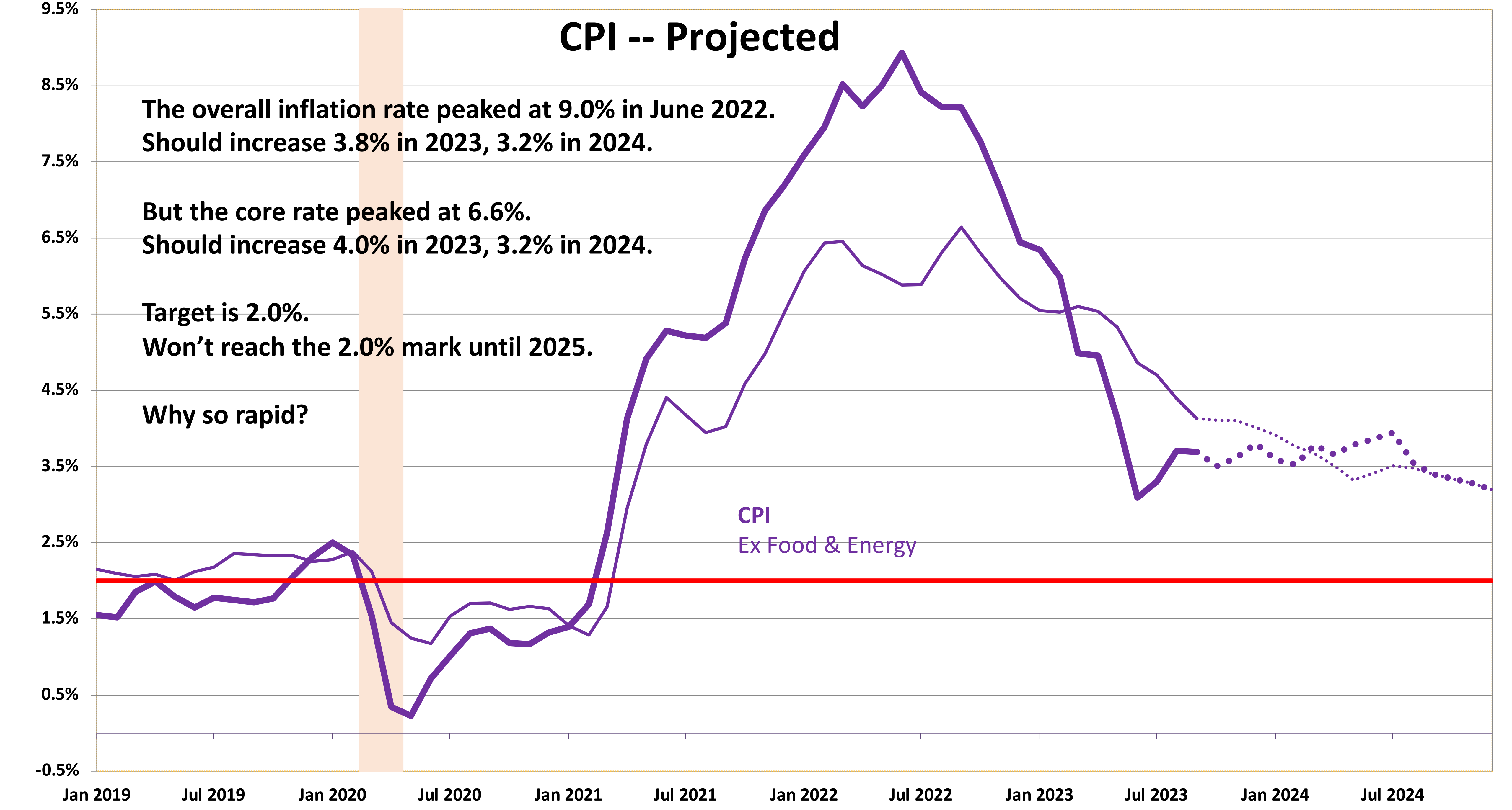

Unemployment Rate
If some workers return, we expect the economy to generate 180 thousand jobs per month through yearend (versus about 250 thousand currently) and 160 thousand per month in 2024.
If so, the current 3.8% unemployment rate should remain at 3.8% at end of 2023 and 3.9% by end of 2024.
But 4.0% is supposed to be full employment.
Not high enough to reduce upward pressure on wages and inflation.
Full Employment
16.0
15.0
14.0
13.0
12.0
11.0
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
Jan-20
Apr-20
Jul-20
Oct-20
Jan-21
Apr-21
Jul-21
Oct-21
Jan-22
Apr-22
Jul-22
Oct-22
Jan-23
Apr-23
Jul-23
Oct-23
Jan-24
Apr-24
Jul-24
Oct-24

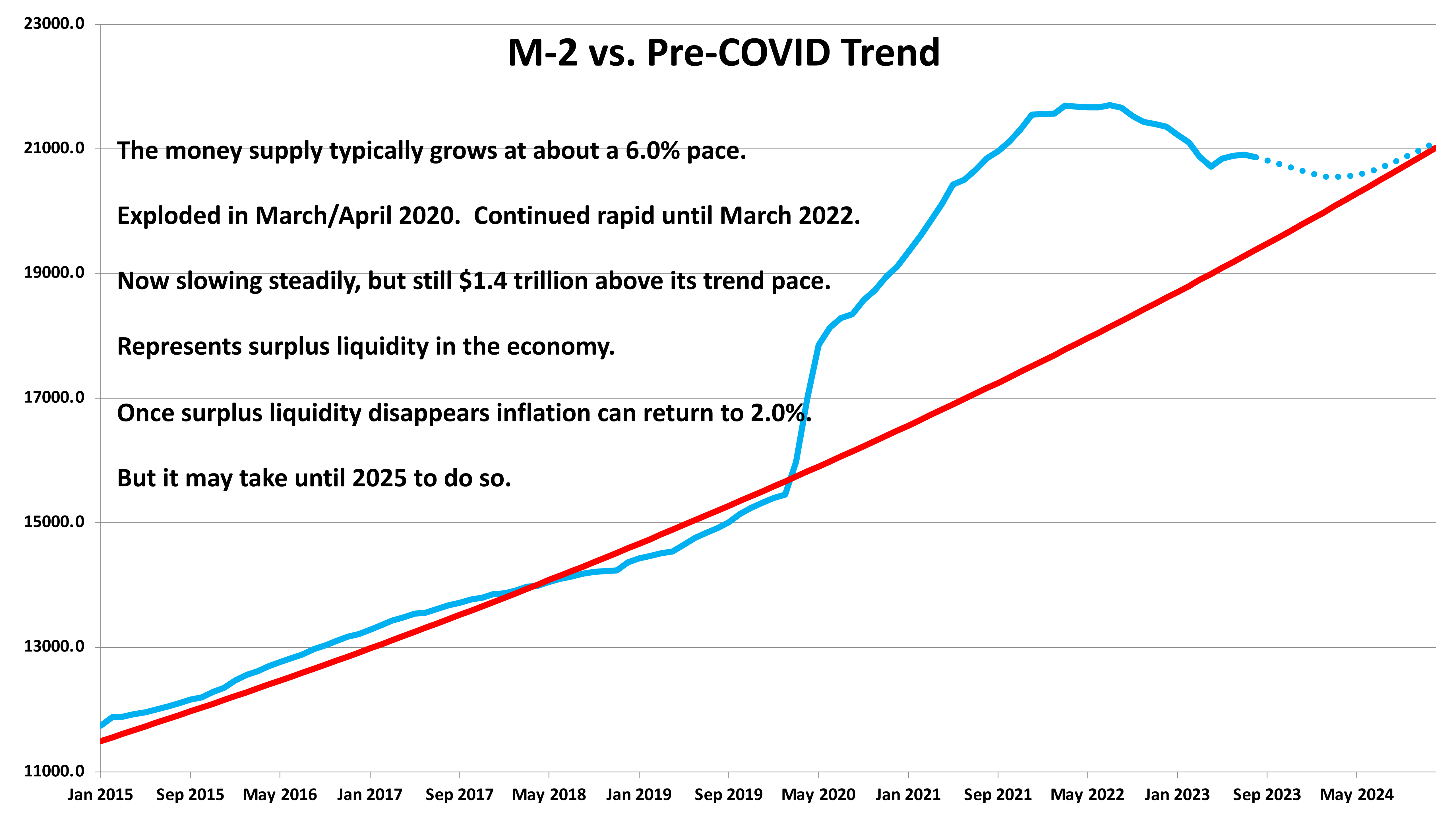


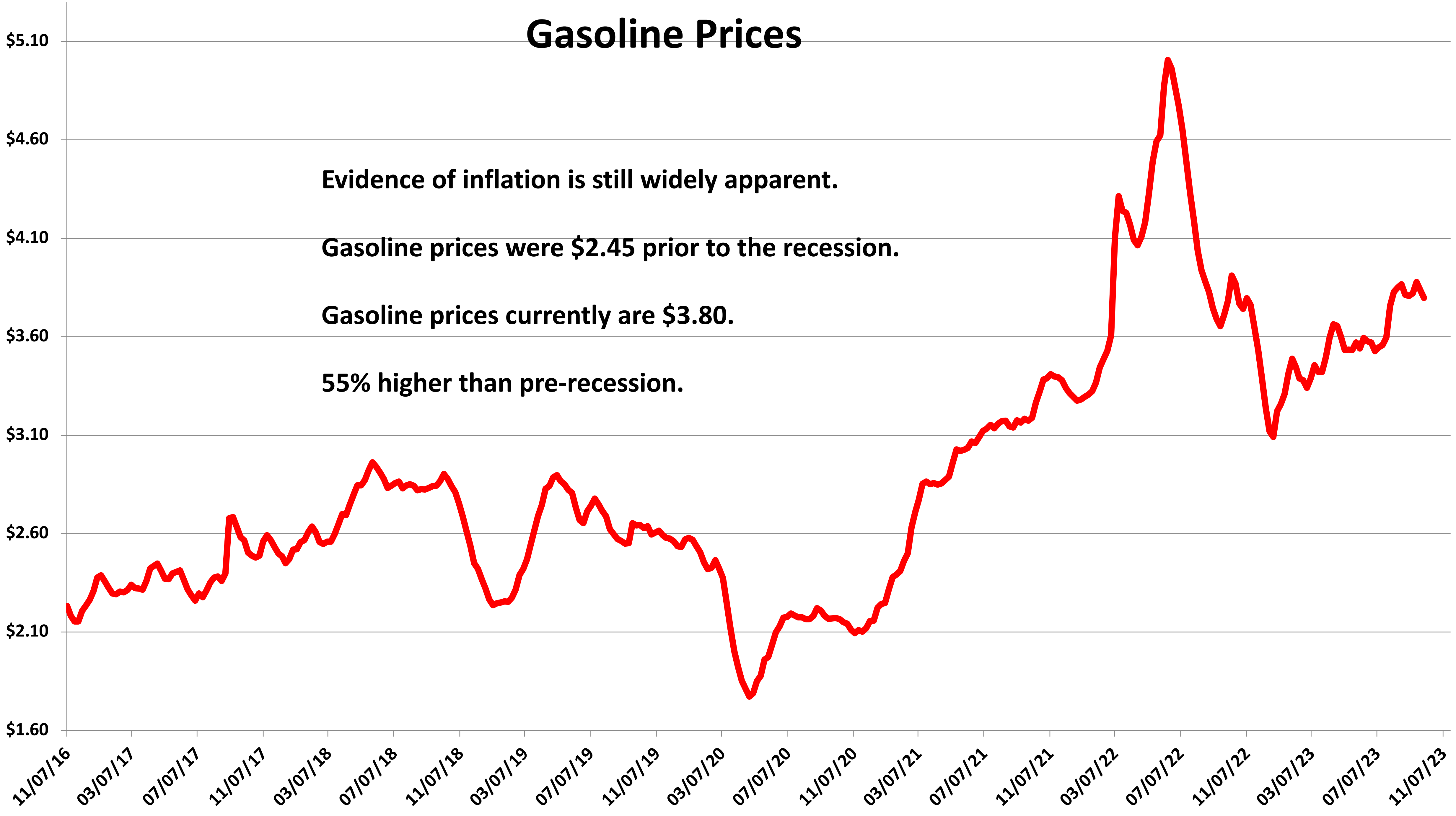
GDP (Real)
Putting all this together, look for 4.0% GDP growth in Q3;  1.5% in Q4.
Expect 0.7% GDP growth in first half of 2024.  Faster in second half of year.
No recession.
8.0%
6.0%
4.0%
2.0%
0.0%
-2.0%
2021-Q1
2021-Q2
2021-Q3
2021-Q4
2022-Q1
2022-Q2
2022-Q3
2022-Q4
2023-Q1
2023-Q2
2023-Q3
2023-Q4
2024-Q1
2024-Q2
2024-Q3
2024-Q4

Economics. Explained.

# Inflation.


CPI -- Projected
The overall inflation rate peaked at 9.0% in June 2022.
Should increase 3.8% in 2023, 3.2% in 2024.
But the core rate peaked at 6.6%.
Should increase 4.0% in 2023, 3.2% in 2024.
Target is 2.0%.
Won’t reach the 2.0% mark until 2025.
Why so rapid?
CPI
Ex Food & Energy
9.5%
8.5%
7.5%
6.5%
5.5%
4.5%
3.5%
2.5%
1.5%
0.5%
-0.5%
Jan 2019
Jul 2019
Jan 2020
Jul 2020
Jan 2021
Jul 2021
Jan 2022
Jul 2022
Jan 2023
Jul 2023
Jan 2024
Jul 2024


M-2 vs. Pre-COVID Trend
The money supply typically grows at about a 6.0% pace.
Exploded in March/April 2020.  Continued rapid until March 2022.
Now slowing steadily, but still $1.4 trillion above its trend pace.
Represents surplus liquidity in the economy.
Once surplus liquidity disappears inflation can return to 2.0%.
But it may take until 2025 to do so.
23000.0
21000.0
19000.0
17000.0
15000.0
13000.0
11000.0
Jan 2015
Sep 2015
May 2016
Jan 2017
Sep 2017
May 2018
Jan 2019
Sep 2019
May 2020
Jan 2021
Sep 2021
May 2022
Jan 2023
Sep 2023
May 2024


Gasoline Prices
Evidence of inflation is still widely apparent.
Gasoline prices were $2.45 prior to the recession.
Gasoline prices currently are $3.80.
55% higher than pre-recession.
$5.10
$4.60
$4.10
$3.60
$3.10
$2.60
$2.10
$1.60
11/07/16
03/07/17
07/07/17
11/07/17
03/07/18
07/07/18
11/07/18
03/07/19
07/07/19
11/07/19
03/07/20
07/07/20
11/07/20
03/07/21
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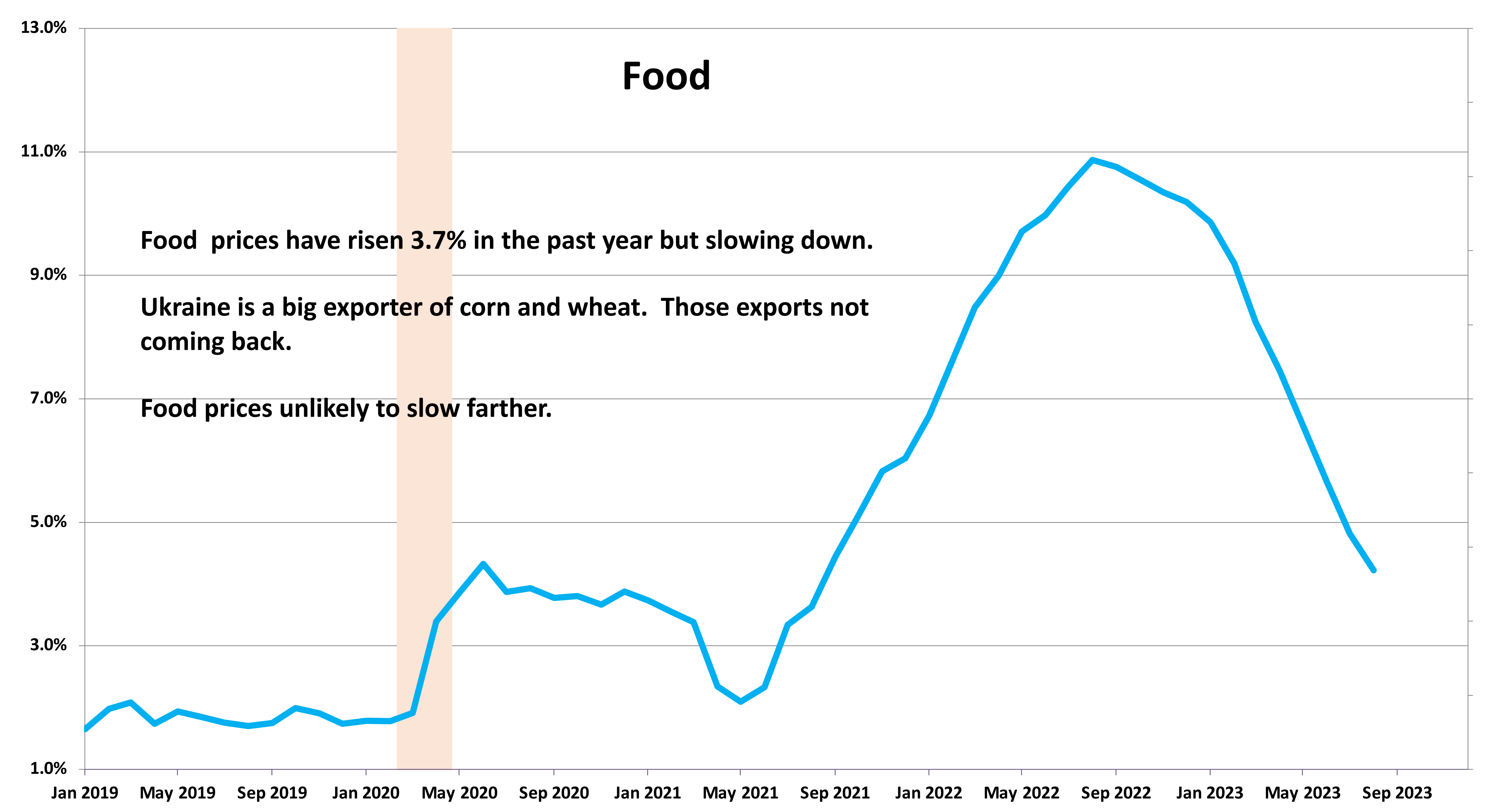
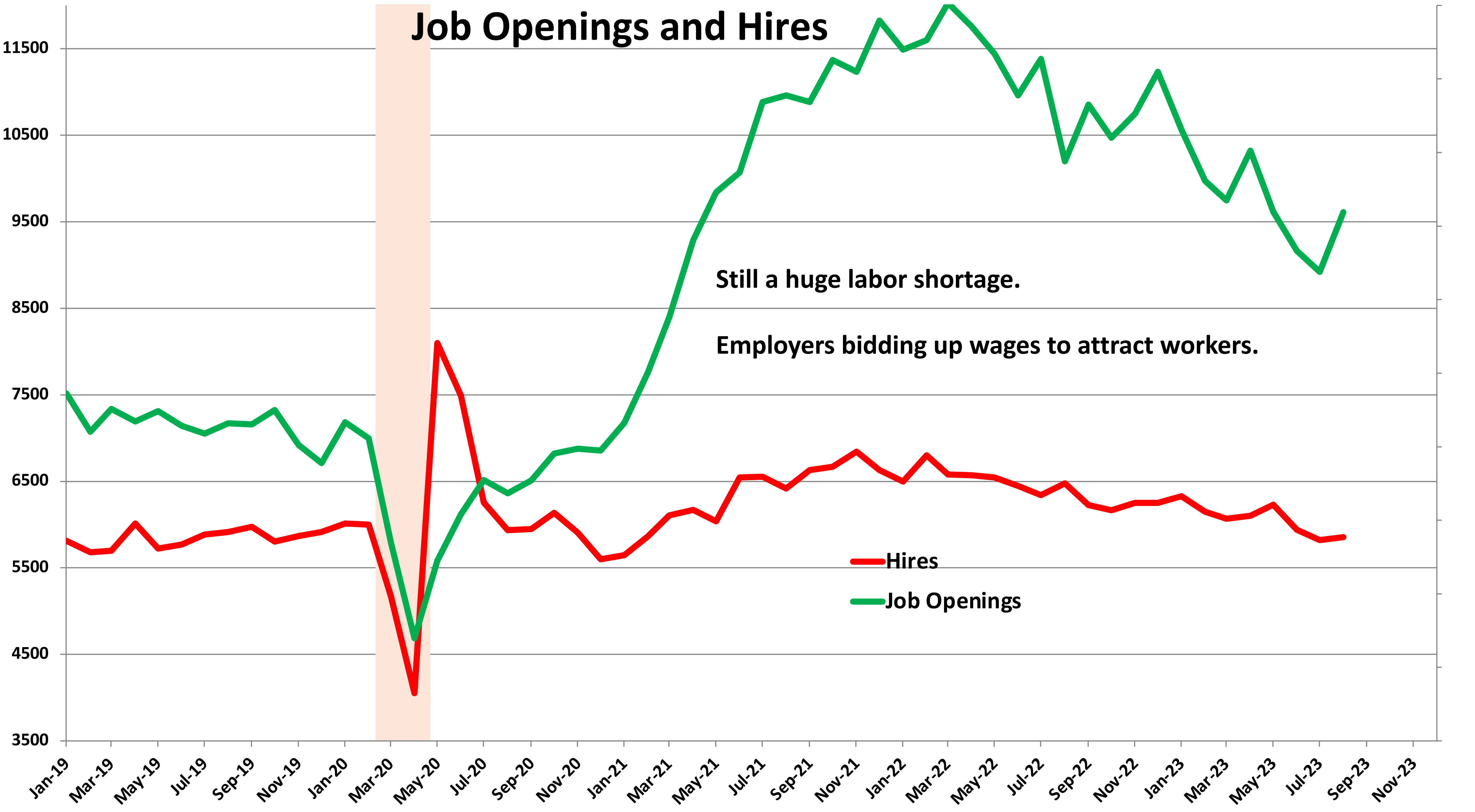
07/07/23
11/07/23



Food
Food prices have risen 3.7% in the past year but slowing down.
Ukraine is a big exporter of corn and wheat. Those exports not coming back.
Food prices unlikely to slow farther.
13.0%
11.0%
9.0%
7.0%
5.0%
3.0%
1.0%
Jan 2019
May 2019
Sep 2019
Jan 2020
May 2020
Sep 2020
Jan 2021
May 2021
Sep 2021
Jan 2022
May 2022
Sep 2022
Jan 2023
May 2023
Sep 2023


Job Openings and Hires
Still a huge labor shortage.
Employers bidding up wages to attract workers.
Hires
Job Openings
11500
10500
9500
8500
7500
6500
5500
4500
3500
Jan-19
Mar-19
May-19
Jul-19
Sep-19
Nov-19
Jan-20
Mar-20
May-20
Jul-20
Sep-20
Nov-20
Jan-21
Mar-21
May-21
Jul-21
Sep-21
Nov-21
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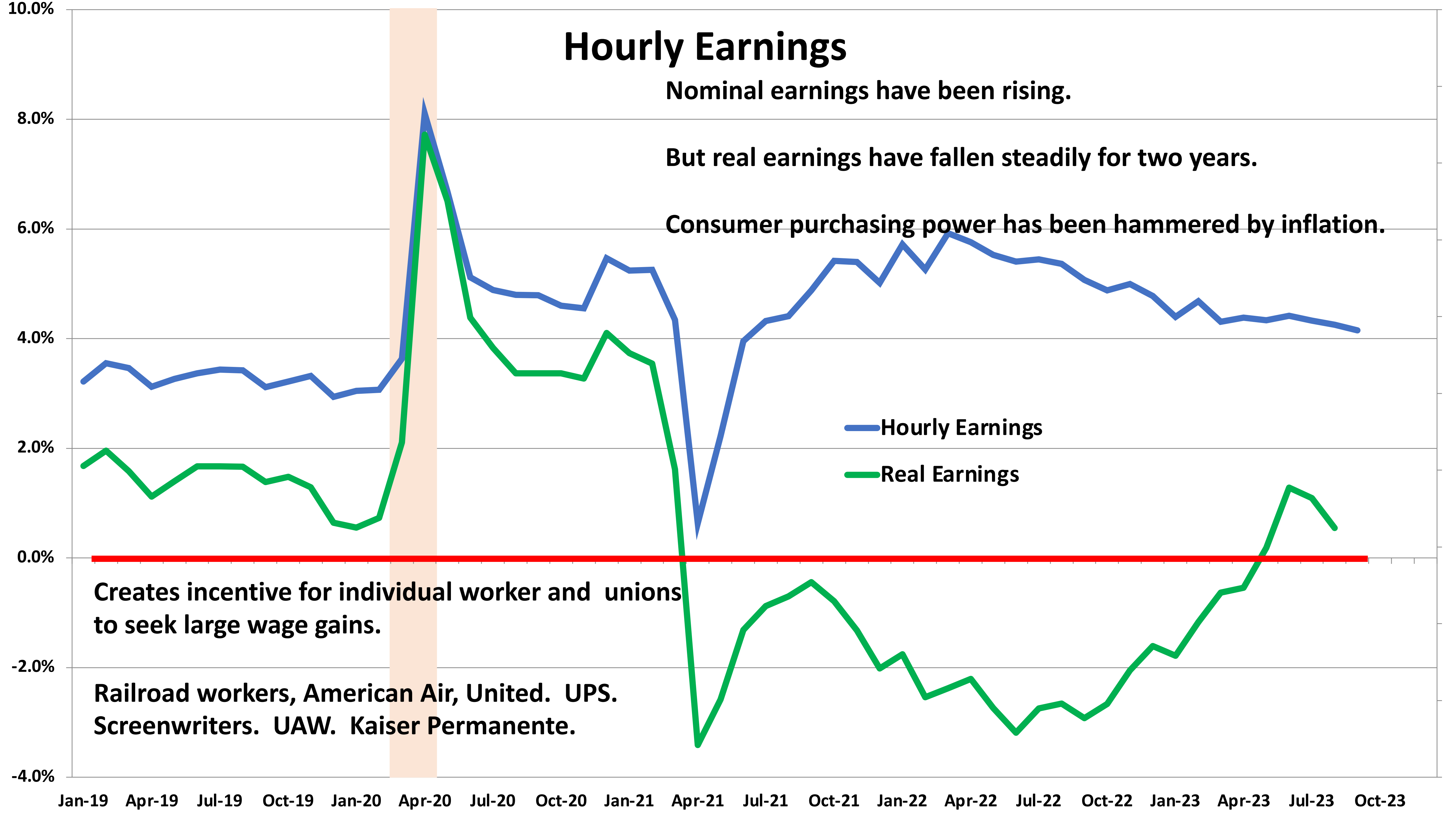
Jul-23
Sep-23
Nov-23


Hourly Earnings
Nominal earnings have been rising.
But real earnings have fallen steadily for two years.
Consumer purchasing power has been hammered by inflation.
Hourly Earnings
Real Earnings
Creates incentive for individual worker and unions to seek large wage gains.
Railroad workers, American Air, United. UPS. Screenwriters. UAW. Kaiser Permanente.
10.0%
8.0%
6.0%
4.0%
2.0%
0.0%
-2.0%
-4.0%
Jan-19
Apr-19
Jul-19
Oct-19
Jan-20
Apr-20
Jul-20
Oct-20
Jan-21
Apr-21
Jul-21
Oct-21
Jan-22
Apr-22
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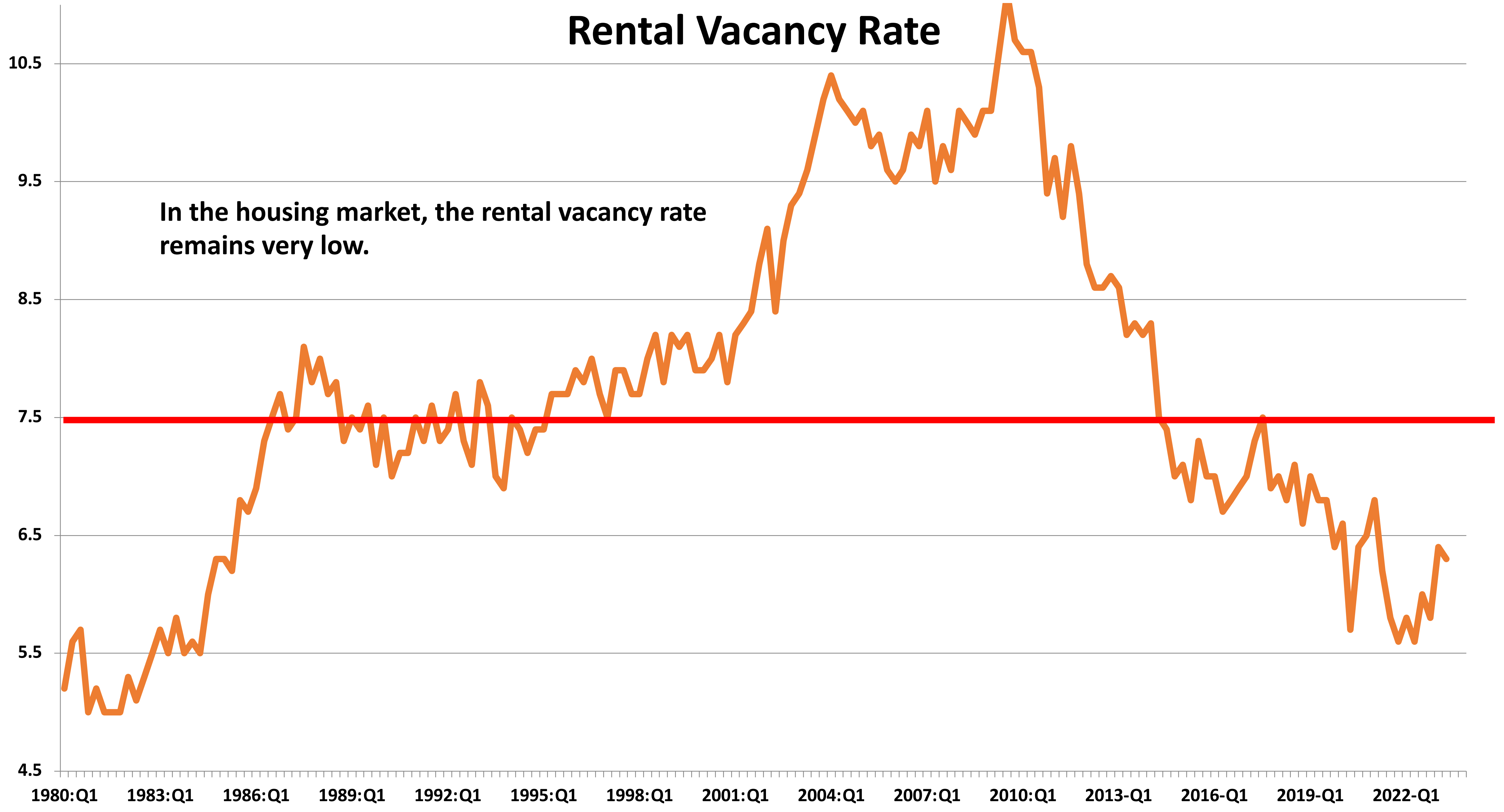
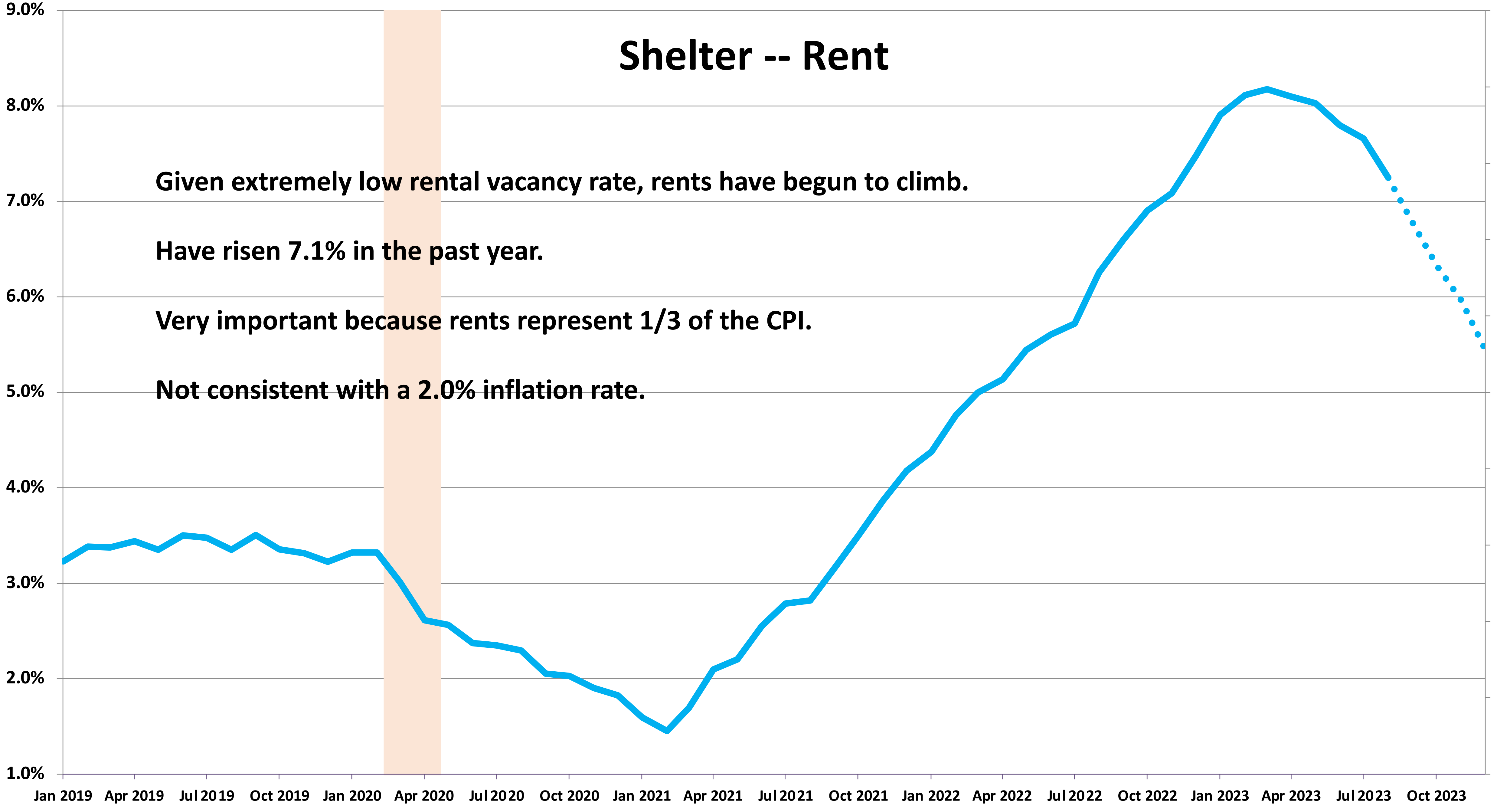
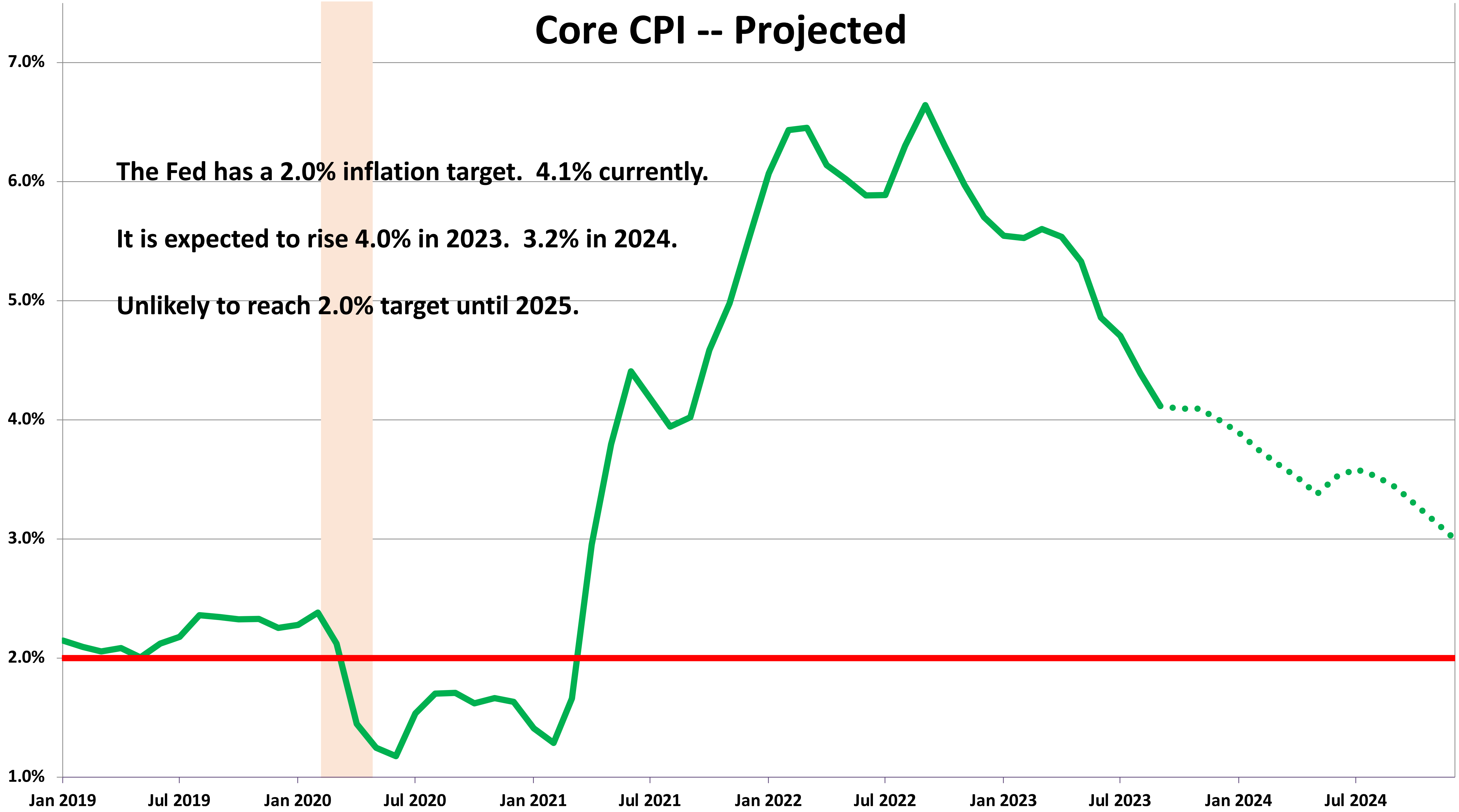
Jan-23
Apr-23
Jul-23
Oct-23

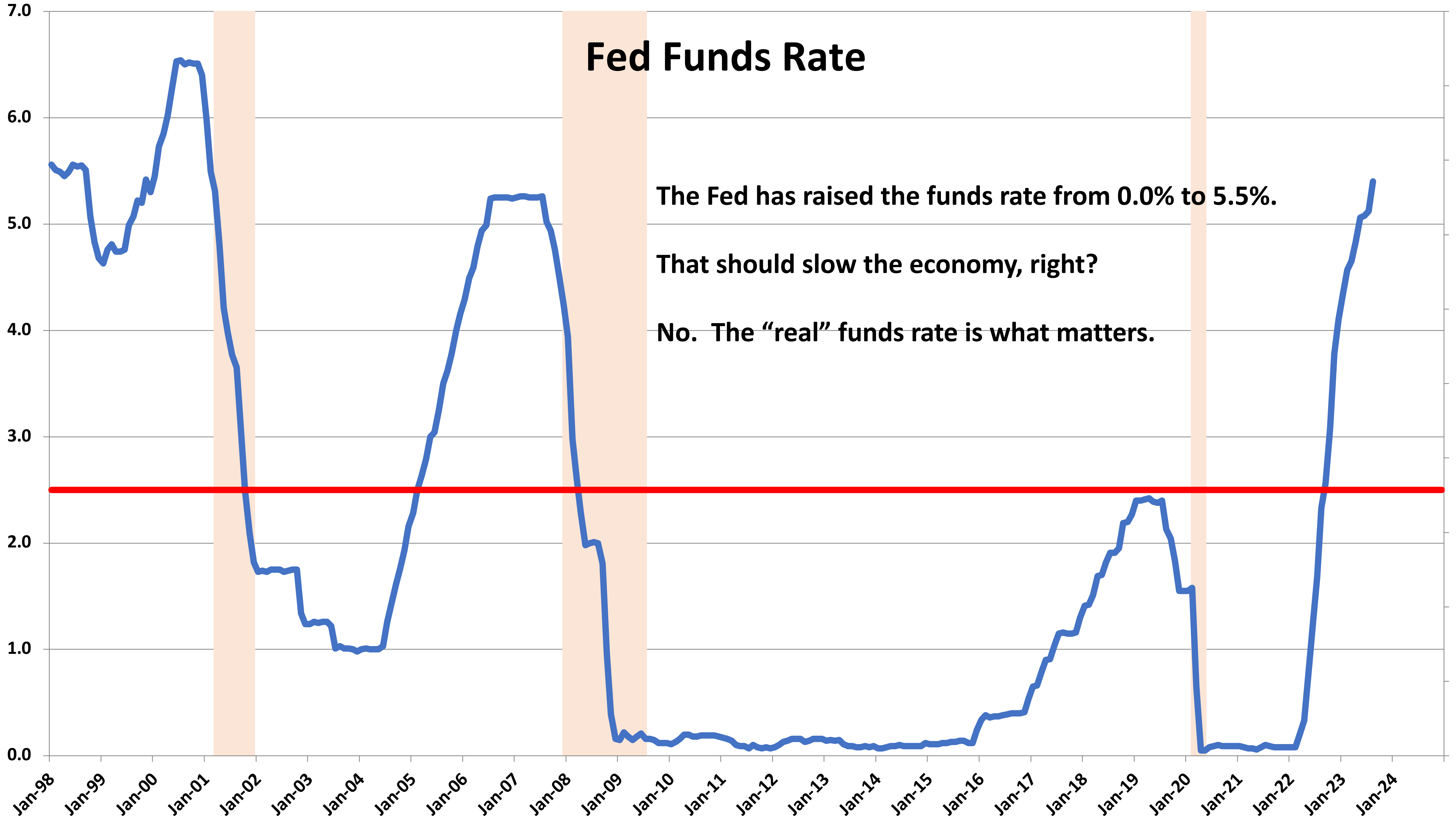

Rental Vacancy Rate
In the housing market, the rental vacancy rate remains very low.
10.5
9.5
8.5
7.5
6.5
5.5
4.5
1980:Q1
1983:Q1
1986:Q1
1989:Q1
1992:Q1
1995:Q1
1998:Q1
2001:Q1
2004:Q1
2007:Q1
2010:Q1
2013-Q1
2016-Q1
2019-Q1
2022-Q1



Shelter -- Rent
Given extremely low rental vacancy rate, rents have begun to climb.
Have risen 7.1% in the past year.
Very important because rents represent 1/3 of the CPI.
Not consistent with a 2.0% inflation rate.
9.0%
8.0%
7.0%
6.0%
5.0%
4.0%
3.0%
2.0%
1.0%
Jan 2019
Apr 2019
Jul 2019
Oct 2019
Jan 2020
Apr 2020
Jul 2020
Oct 2020
Jan 2021
Apr 2021
Jul 2021
Oct 2021
Jan 2022
Apr 2022
Jul 2022
Oct 2022
Jan 2023
Apr 2023
Jul 2023
Oct 2023


Core CPI -- Projected
The Fed has a 2.0% inflation target. 4.1% currently.
It is expected to rise 4.0% in 2023. 3.2% in 2024.
Unlikely to reach 2.0% target until 2025.
7.0%
6.0%
5.0%
4.0%
3.0%
2.0%
1.0%
Jan 2019
Jul 2019
Jan 2020
Jul 2020
Jan 2021
Jul 2021
Jan 2022
Jul 2022
Jan 2023
Jul 2023
Jan 2024
Jul 2024

# How will the Fed respond to this?



Fed Funds Rate
The Fed has raised the funds rate from 0.0% to 5.5%.
That should slow the economy, right?
No.  The “real” funds rate is what matters.
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
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Jan-15
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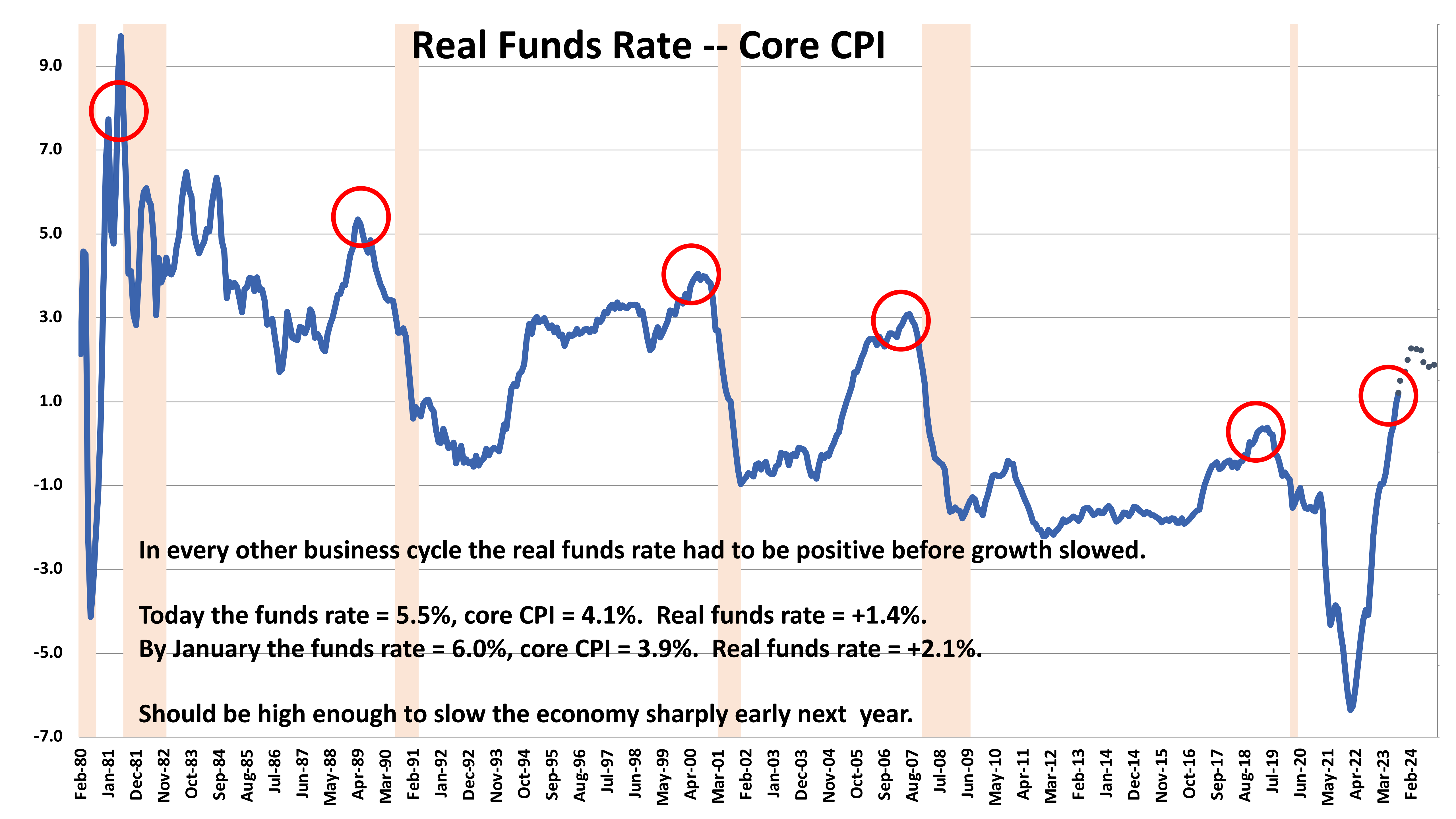
Jan-17
Jan-18
Jan-19
Jan-20
Jan-21
Jan-22
Jan-23
Jan-24


Real Funds Rate -- Core CPI
In every other business cycle the real funds rate had to be positive before growth slowed.
Today the funds rate = 5.5%, core CPI = 4.1%. Real funds rate = +1.4%.
By January the funds rate = 6.0%, core CPI = 3.9%. Real funds rate = +2.1%.
Should be high enough to slow the economy sharply early next year.
9.0
7.0
5.0
3.0
1.0
-1.0
-3.0
-5.0
-7.0
Feb-80
Jan-81
Dec-81
Nov-82
Oct-83
Sep-84
Aug-85
Jul-86
Jun-87
May-88
Apr-89
Mar-90
Feb-91
Jan-92
Dec-92
Nov-93
Oct-94
Sep-95
Aug-96
Jul-97
Jun-98
May-99
Apr-00
Mar-01
Feb-02
Jan-03
Dec-03
Nov-04
Oct-05
Sep-06
Aug-07
Jul-08
Jun-09
May-10
Apr-11
Mar-12
Feb-13
Jan-14
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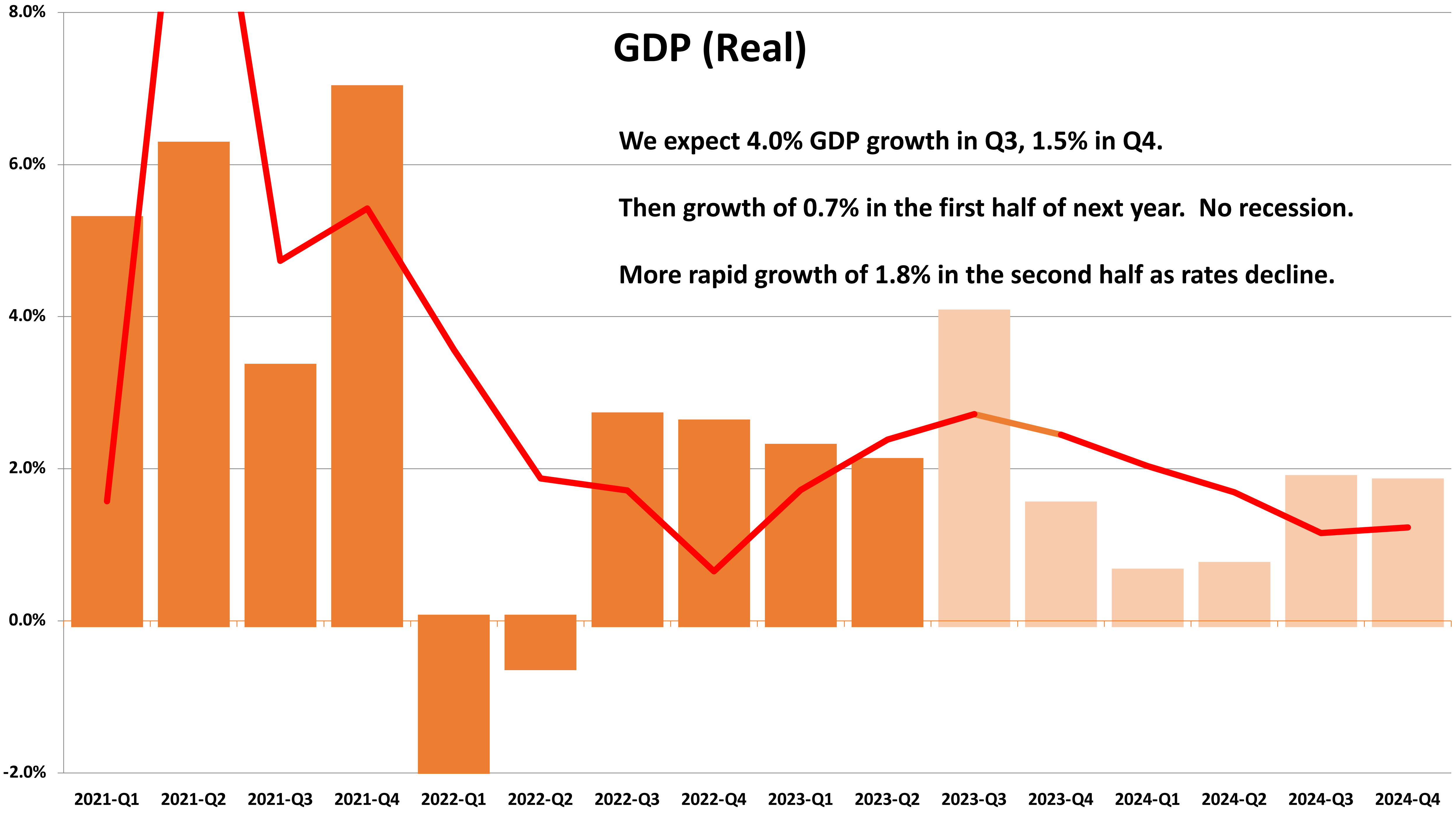
Sep-17
Aug-18
Jul-19
Jun-20
May-21
Apr-22
Mar-23
Feb-24


GDP (Real)
We expect 4.0% GDP growth in Q3, 1.5% in Q4.
Then growth of 0.7% in the first half of next year. No recession.
More rapid growth of 1.8% in the second half as rates decline.
8.0%
6.0%
4.0%
2.0%
0.0%
-2.0%
2021-Q1
2021-Q2
2021-Q3
2021-Q4
2022-Q1
2022-Q2
2022-Q3
2022-Q4
2023-Q1
2023-Q2
2023-Q3
2023-Q4
2024-Q1
2024-Q2
2024-Q3
2024-Q4

# Forecasts – 2023/2024

| | 2022 | 2023 | 2024 |
|---|---|---|---|
| GDP Growth -- | 0.7% | 2.4% | 1.3% |
| Unemployment Rate -- | 3.5% | 3.8% | 3.8% |
| Core CPI-- | 5.7% | 4.0% | 3.2% |
| Fed Funds Rate -- | 4.1% | 5.8% | 4.8% |
| 10-Year Note -- | 3.6% | 4.7% | 4.8% |
| 30-Year Mortgage Rate -- | 6.3% | 7.6% | 6.6% |

Economics. Explained.

# Soft Landing
# But…

Stephen D. Slifer
NumberNomics
www.numbernomics.com

# A Mideast War Could Alter that Outcome –

1. Oil prices surge to $120 per barrel.
2. Transport. costs rise. Inflation returns.
3. GDP growth slows in Europe, U.S.

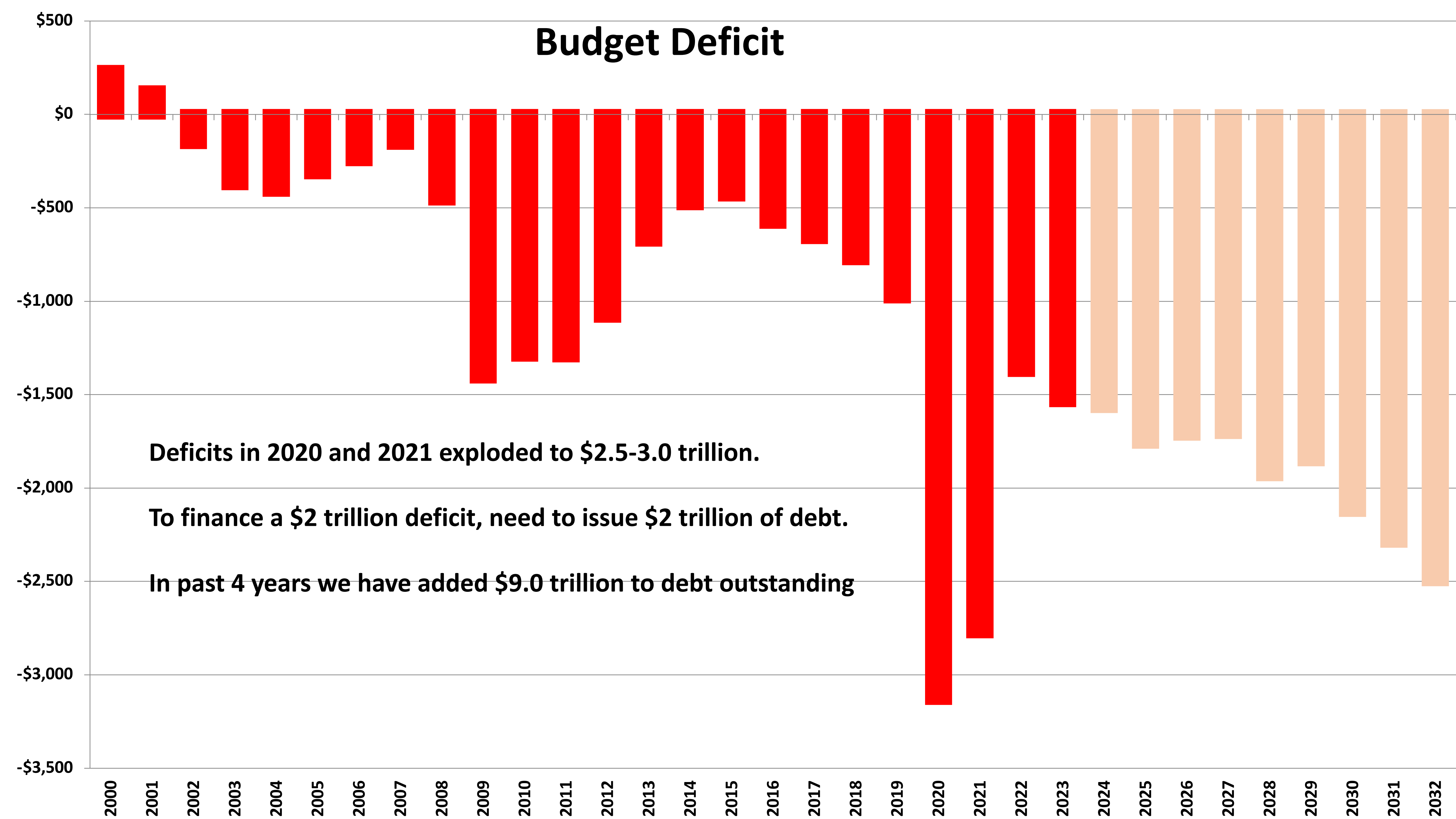
Economics. Explained.

# Soft Landing – Most Likely
# But…

# Recession?
# Stagflation?

Stephen D. Slifer
NumberNomics
www.numbernomics.com

# Government Deficits and Debt


Budget Deficit
$500
$0
-$500
-$1,000
-$1,500
-$2,000
-$2,500
-$3,000
-$3,500
Deficits in 2020 and 2021 exploded to $2.5-3.0 trillion.
To finance a $2 trillion deficit, need to issue $2 trillion of debt.
In past 4 years we have added $9.0 trillion to debt outstanding
2000
2001
2002
2003
2004
2005
2006
2007
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2011
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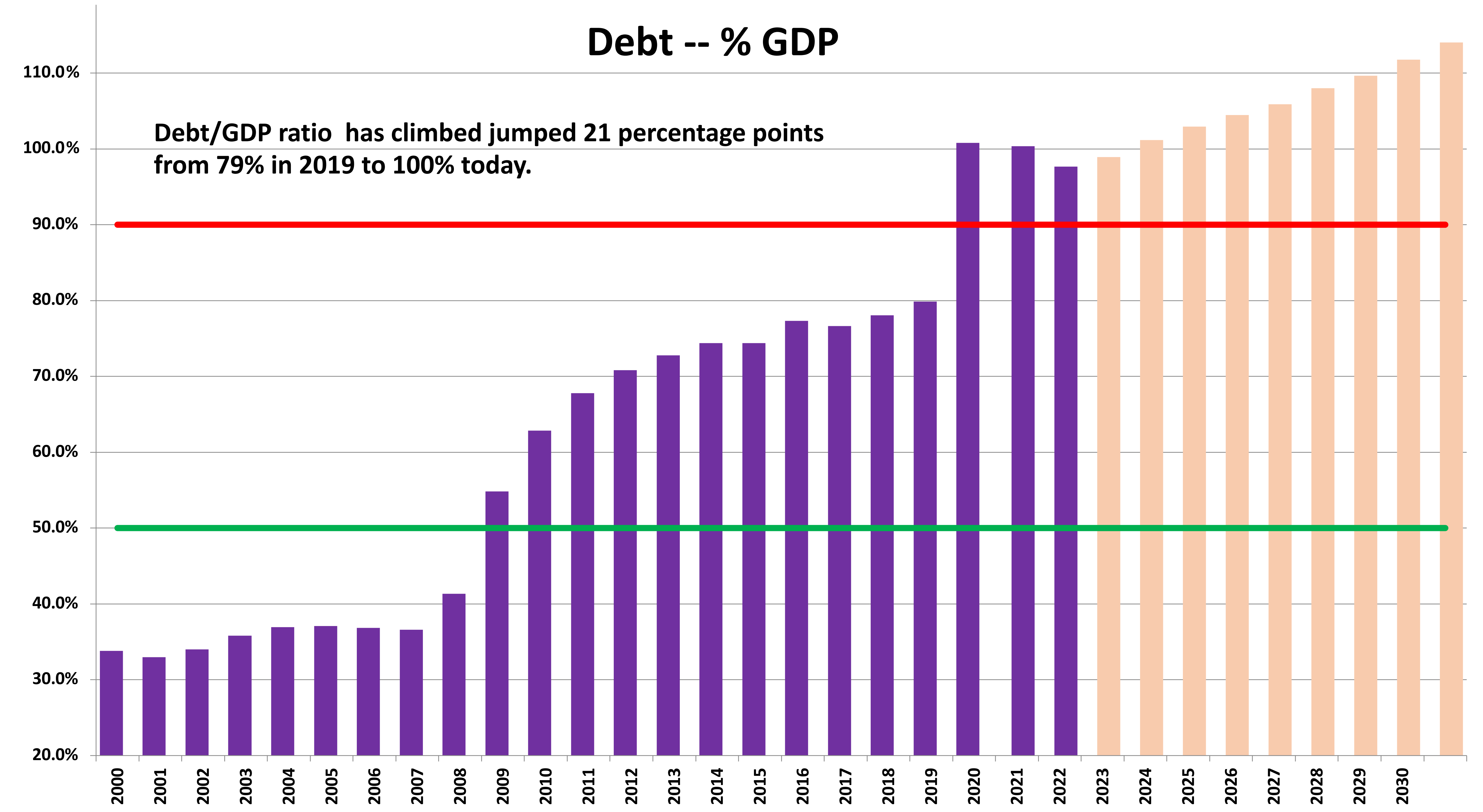
2029
2030
2031
2032


Debt -- % GDP
Debt/GDP ratio has climbed jumped 21 percentage points
from 79% in 2019 to 100% today.
110.0%
100.0%
90.0%
80.0%
70.0%
60.0%
50.0%
40.0%
30.0%
20.0%
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
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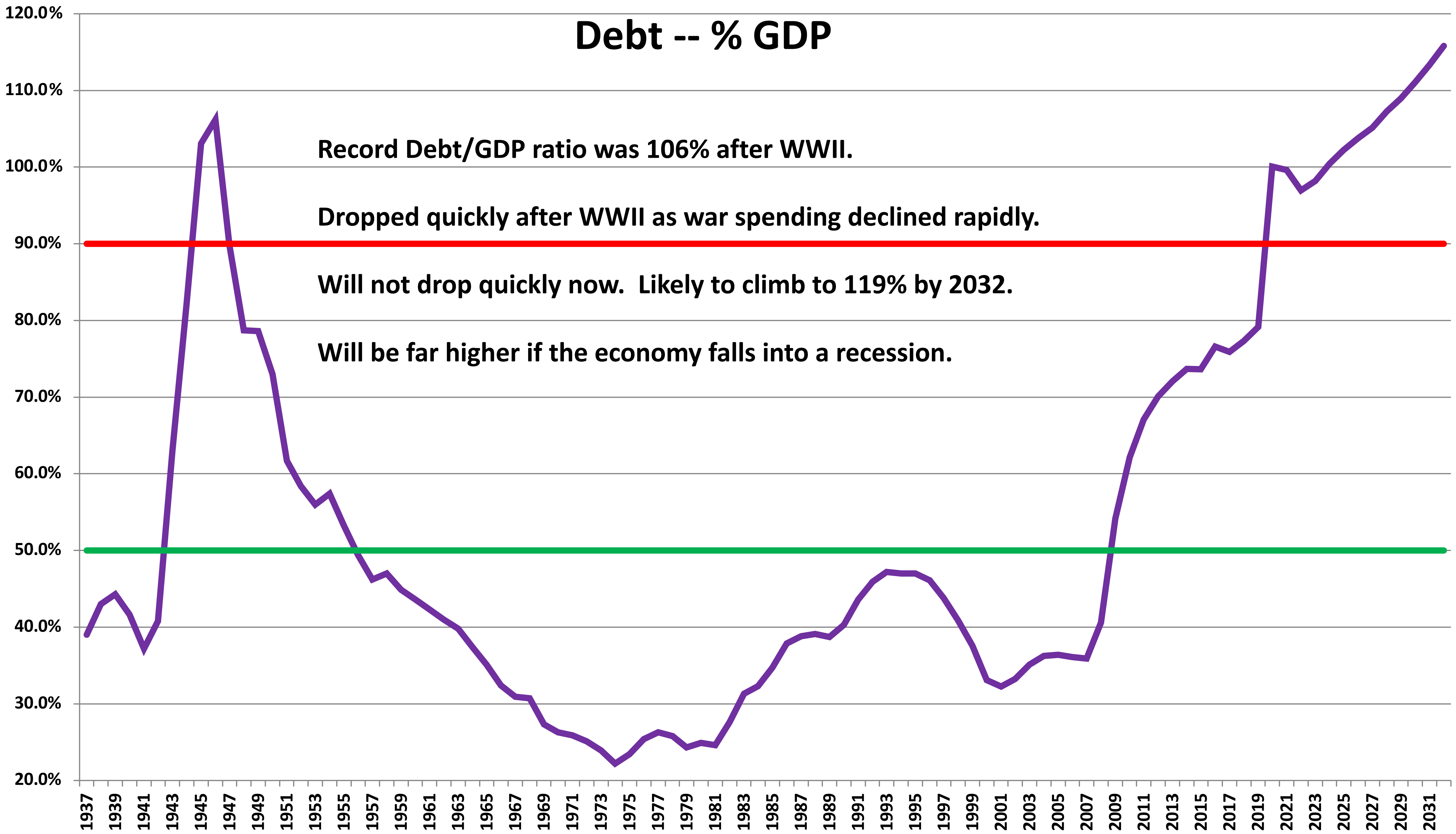
2030


Debt -- % GDP
Record Debt/GDP ratio was 106% after WWII.
Dropped quickly after WWII as war spending declined rapidly.
Will not drop quickly now.  Likely to climb to 119% by 2032.
Will be far higher if the economy falls into a recession.
120.0%
110.0%
100.0%
90.0%
80.0%
70.0%
60.0%
50.0%
40.0%
30.0%
20.0%
1937
1939
1941
1943
1945
1947
1949
1951
1953
1955
1957
1959
1961
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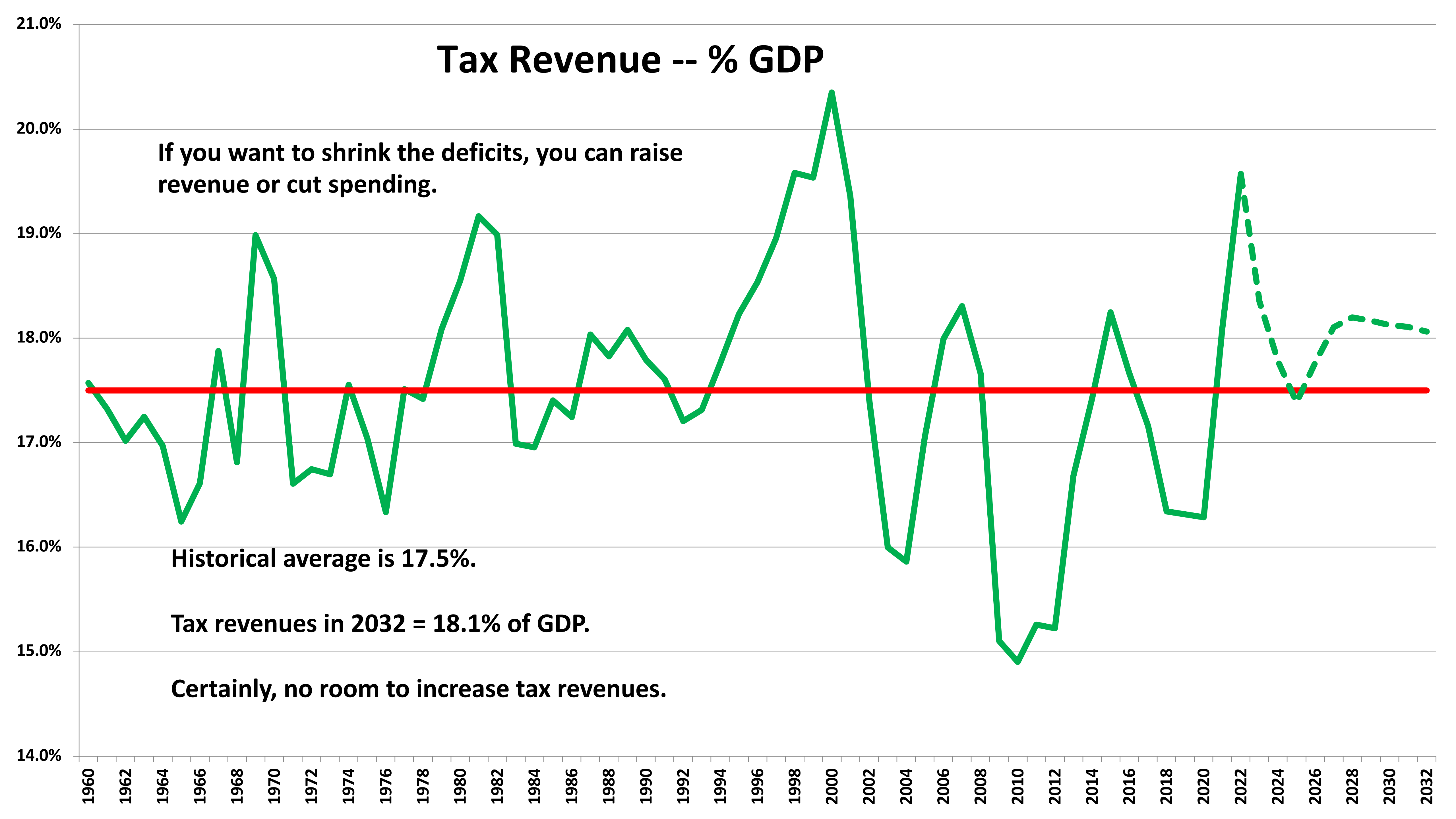
Tax Revenue -- % GDP
If you want to shrink the deficits, you can raise revenue or cut spending.
Historical average is 17.5%.
Tax revenues in 2032 = 18.1% of GDP.
Certainly, no room to increase tax revenues.
21.0%
20.0%
19.0%
18.0%
17.0%
16.0%
15.0%
14.0%
1960
1962
1964
1966
1968
1970
1972
1974
1976
1978
1980
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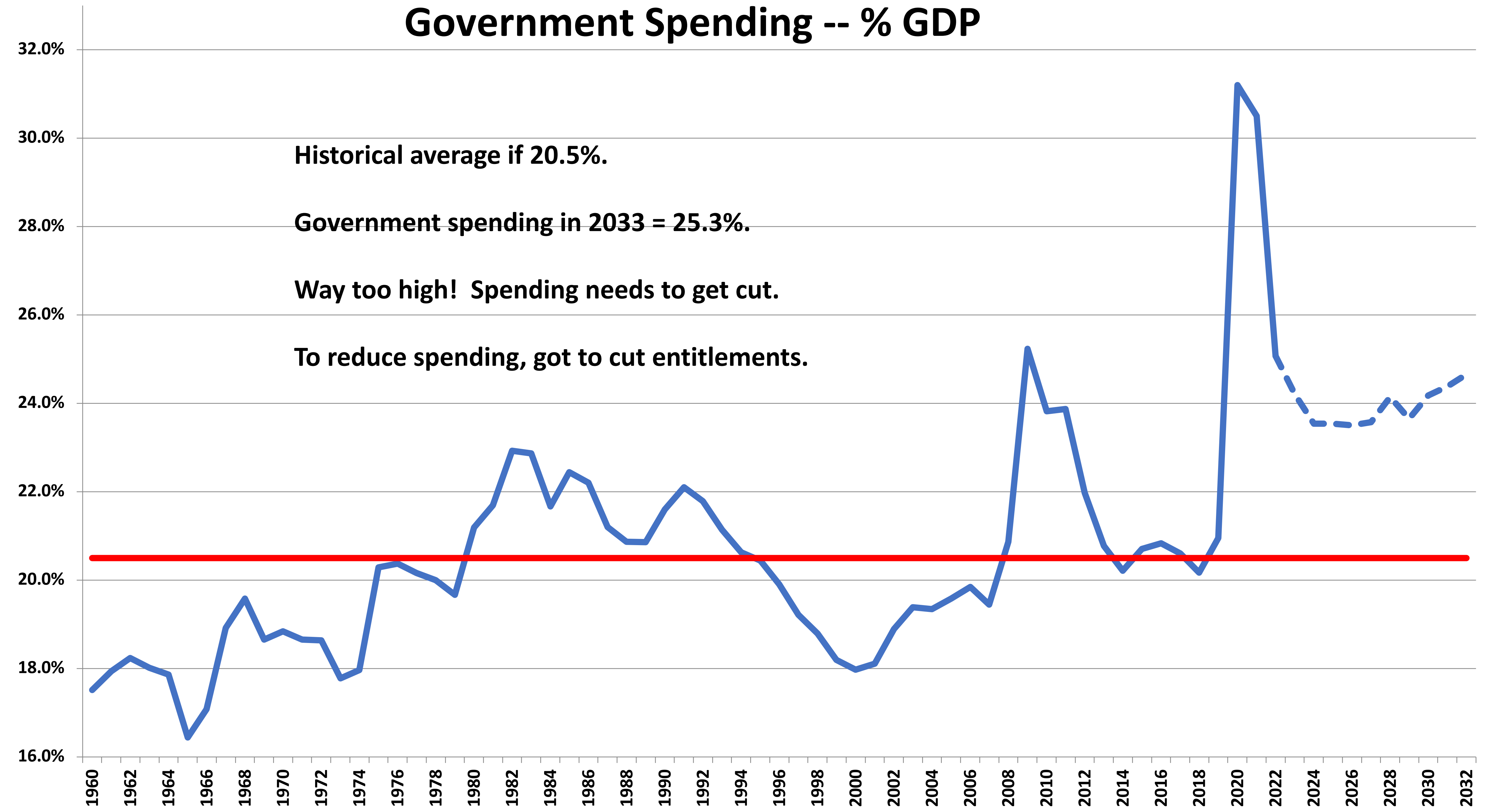
2026
2028
2030
2032



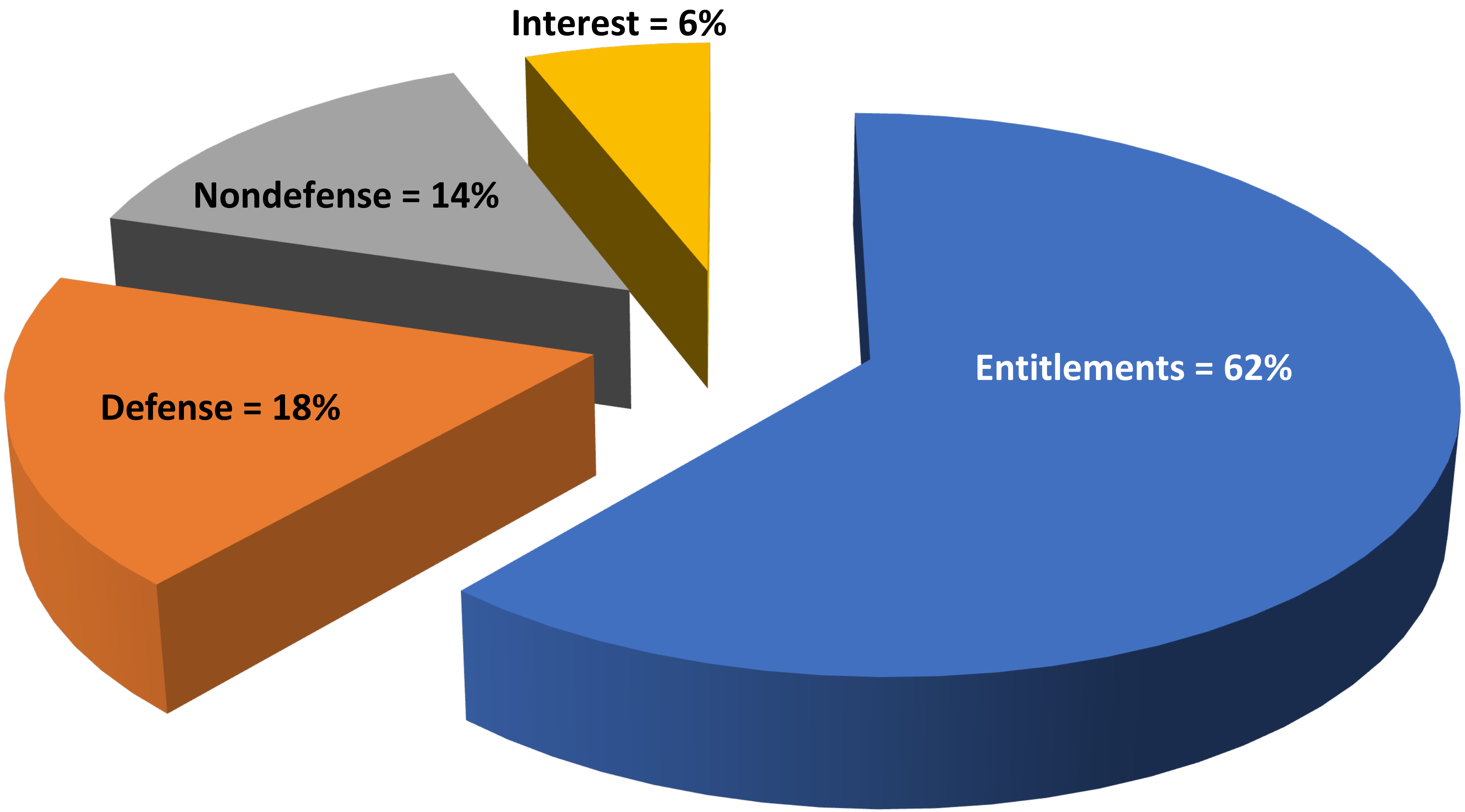
Government Spending -- % GDP
Historical average if 20.5%.
Government spending in 2033 = 25.3%.
Way too high! Spending needs to get cut.
To reduce spending, got to cut entitlements.
32.0%
30.0%
28.0%
26.0%
24.0%
22.0%
20.0%
18.0%
16.0%
1960
1962
1964
1966
1968
1970
1972
1974
1976
1978
1980
1982
1984
1986
1988
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020
2022
2024
2026
2028
2030
2032

# What are Entitlements?

## Government payments to boost income.

1. Social Security
2. Medicare
3. Medicaid
4. Welfare Benefits
5. Unemployment Benefits

# Government Spending




**Entitlements such as Social Security, Medicare, and Medicaid are 62% or 2/3 of the pie.**

**They never disappear.  No politician wants to cut entitlements. But it is inevitable.  Why?**

# Medicare will be insolvent by 2031 –
# 8 years from now.

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# Social Security will be insolvent by 2033 – 10 years from now.

# If Social Security and Medicare become insolvent:

1. A 10% cut in Medicare benefits in 2028.

2. A 23% cut in Soc Sec benefits in 2034.

# We know how to solve the problems.

# To fix Social Security we could:

1. Gradually raise retirement age.

2. Cut payments to high income earners.

3. Increase max income subject to tax.

4. Trim cost-of-living adjustments.

# All that is missing is the will to do so.

Nobody is talking about it.

Little chance of any meaningful legislation being passed with a divided government.

Economics. Explained.

# The Debt Problems are Imminent

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