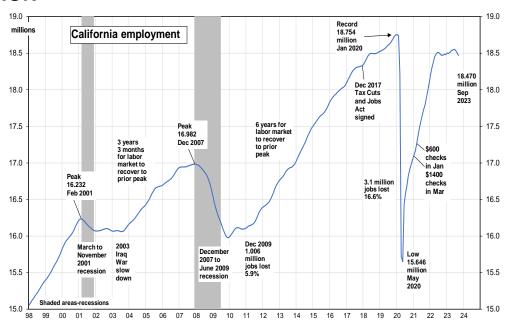


10 NOVEMBER 2023

Christopher S. Rupkey, CFA Chief Economist crupkey@fwdbonds.com

CALIFORNIA RECESSION

If a nationwide economic recession is when unemployment rate jumps 0.5 percentage points, California has that beat for months now. The California unemployment rate was 3.8% in August 2022 and was 4.4% in February 2023 which triggers a recessionlevel job loss for the Golden Still State. going. The California unemployment



rate was 4.7% in September and the October data are due 10am ET Friday, November 17. State-level unemployment data are often volatile, and trends get reversed, but California is the largest state in the union and rising unemployment there in 2007 led the way in forecasting the December 2007-June 2009 recession in part because California was one of the key subprime housing crisis states. What did Bernanke say at the time: "The proximate cause of the erisis [recession] was the turn of the housing cycle in the United States and the associated rise in

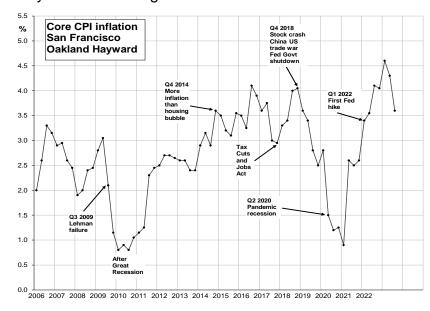
California Labo	or Mark	et Tren	d-5 m	onths
Thousands	Apr 23	Sep 23	Change	% Chg
Employment	18,537	18,471	-66	-0.4
Unemployed	868	914	46	5.2
Rate	4.5	4.7	0.2	
Payroll employment	18,040	18,109	69	0.4
Mining/Logging	20.1	19.9		
Construction	912.4	933.8	21.4	2.3
Manufacturing	1,344.1	1,332.9	-11.2	-0.8
Trade/Trans/Utilities	3,151.7	3,148.9	-2.8	-0.1
Information	600.6	571.0	-29.6	-4.9
Financial activities	849.1	846.6	-2.5	-0.3
Professional/Business	2,908.1	2,884.5	-23.6	-0.8
Education/Health	3,062.9	3,129.7	66.8	2.2
Leisure/Hospitality	2,036.6	2,066.1	29.5	1.4
Other Services	580.3	589.7	9.4	1.6
Government	2,574.2	2,585.9	11.7	0.5

delinquencies on subprime mortgages, which imposed substantial losses on many financial institutions and shook investor confidence in credit markets."

Jobs growth is slowing. The Fed's restrictive monetary policy set a 5% rate at the March meeting. Maybe that was enough for a high-flying state like California. However, interest-sensitive construction jobs are booming, as are education and health jobs. Information jobs are the weakest, down 4.9%,

which is due to the "Hollywood strikes." In the nationwide payroll jobs count, motion picture and sound recording industries lost 9K in June, 11K in July and 15K in August.

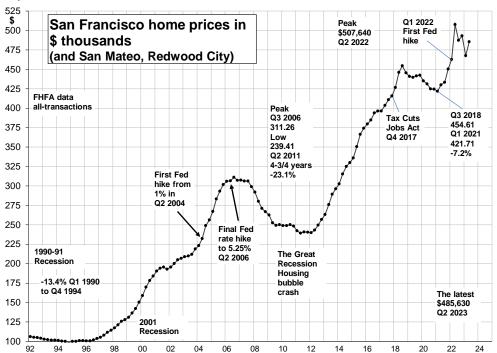
The economy needs to slow to limit inflation pressures for the nation, but it does not look like every area of the country produces inflation the same way. Core CPI inflation in San Francisco was hotter before the pandemic than it was during the housing bubble back in 2004-06. Starting at the end of 2014, inflation was a steady 3 to 4 percent rate before tumbling during the pandemic. Inflation recovered to pre-pandemic levels around the time of the first Fed hike in March



fwd: Bonds

2022, and was about 3.5% year-year in the latest Q3 2023 numbers.

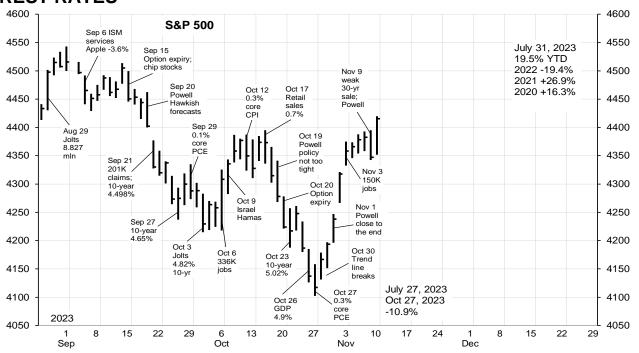
Home prices are reacting oddly, and nothing like the response to the Great Recession's Fed rate hikes to 5.25% when prices fell 23.1% for nearly five years from Q3 2006 to Q2 2011. Prices did fall 7.2% from the second half of 2018 when the Fed pushed rates to 2.5%, a China-US trade war all year, a stock market Federal crash, and а government shutdown. But



San Francisco home prices came back after the short pandemic recession ended. The recession ended Q2 2020 and the Fed kept going, leaving interest rates at zero until Q1 2022 and did not announce its QE tapering until November 2021. It is hard to read the current trend, but mortgage rates are higher than before the Great Recession and yet no housing crash. The trend is hard to read due to the outsized 9.7% jump in Q2 2022 to the peak of \$507,640.

To conclude, the largest state in the union is showing slower jobs growth, but inflation is about the same as it was before the pandemic and home prices are elevated despite falling the last several quarters. Stay tuned. The unemployment rate is signaling a recession out West. Time will tell.

INTEREST RATES



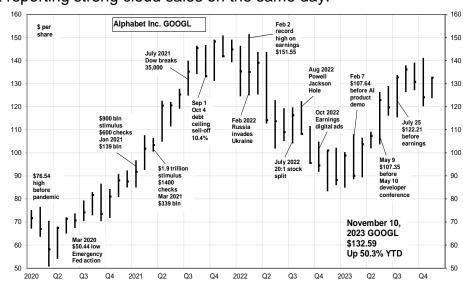
fwd: Bonds

Quiet week until Thursday and Friday. The stock market fell apart Thursday, mostly with the less than solid 30-year Treasury auction results at 1pm ET, higher yields, lower stocks, especially tech, and then Powell's comments at 2pm ET kicked bond and stock prices even lower. Looked like the rally since Halloween was failing, even got the Michigan Consumer Sentiment data Friday at 10am ET where the public thinks long run inflation expectations (5 to 10 years from now, how could they know?) were the worst since 2011, data Fed Chair Powell says they look at very carefully. But it was a big so what, and the stock market rally just kept going, forcing more and more shorts to cover. SPX filled the gap at 4,400, trying to shake off the downtrend since July 27... ahead of a Federal government shutdown. On Friday, 10-yr yields closed at 4.65%, and the S&P 500 is up 15.0% YTD.

Alphabet, Inc. (GOOGL) up 50.3% YTD

Google was \$138.81 on Tuesday, October 24 before earnings after the bell, and collapsed 9.5% the next day to \$125.61. The stock recovered with the overall market from the low on the last Friday of October, but remains short of the gap left at \$133.95. Analysts were disappointed by slowing Cloud revenues made worse by Microsoft reporting strong cloud sales on the same day.

MIn \$ Revenue Advertising Cloud Incom Q3 2023 76,693 59,647 8,411 21,34 Q2 2023 74,604 58,143 8,031 21,83 Q1 2023 69,787 54,548 7,454 17,41 Q4 2022 76,048 59,042 7,315 18,16 Q3 2022 69,092 54,482 6,868 17,13 Q2 2022 69,685 56,288 6,276 19,45	Calendar				
Q3 2023 76,693 59,647 8,411 21,34 Q2 2023 74,604 58,143 8,031 21,83 Q1 2023 69,787 54,548 7,454 17,41 Q4 2022 76,048 59,042 7,315 18,16 Q3 2022 69,092 54,482 6,868 17,13 Q2 2022 69,685 56,288 6,276 19,45	Year				Operating
Q2 2023 74,604 58,143 8,031 21,83 Q1 2023 69,787 54,548 7,454 17,41 Q4 2022 76,048 59,042 7,315 18,16 Q3 2022 69,092 54,482 6,868 17,13 Q2 2022 69,685 56,288 6,276 19,45	Mln \$	Revenue	Advertising	Cloud	<u>Income</u>
Q1 2023 69,787 54,548 7,454 17,41 Q4 2022 76,048 59,042 7,315 18,16 Q3 2022 69,092 54,482 6,868 17,13 Q2 2022 69,685 56,288 6,276 19,45	Q3 2023	76,693	59,647	8,411	21,343
Q4 2022 76,048 59,042 7,315 18,16 Q3 2022 69,092 54,482 6,868 17,13 Q2 2022 69,685 56,288 6,276 19,45	Q2 2023	74,604	58,143	8,031	21,838
Q3 2022 69,092 54,482 6,868 17,13 Q2 2022 69,685 56,288 6,276 19,45	Q1 2023	69,787	54,548	7,454	17,415
Q2 2022 69,685 56,288 6,276 19,45	Q4 2022	76,048	59,042	7,315	18,160
	Q3 2022	69,092	54,482	6,868	17,135
Q1 2022 68.011 54.661 5.821 20.09	Q2 2022	69,685	56,288	6,276	19,453
	Q1 2022	68,011	54,661	5,821	20,094
Q4 2021 75,325 61,239 5,541 21,88	Q4 2021	75,325	61,239	5,541	21,885
Q3 2021 65,118 53,130 4,990 21,03	Q3 2021	65,118	53,130	4,990	21,031



Economic and Markets Research

FEDERAL RESERVE POLICY

The Fed meets December 12-13, 2023 to consider its monetary policy. Maybe Powell thought he gave the market the wrong impression late in the FOMC press conference on November 1 saying they were close to the end of the cycle. Because on Thursday he said they were not confident that policy was sufficiently restrictive to bring inflation down to 2%.

He also gave another defense of missing the forecast on the worst outbreak of inflation since the 1980s, dragging in others that he said, they too missed it. Thinking inflation was transitory during the pandemic supply disruptions is one thing. Not

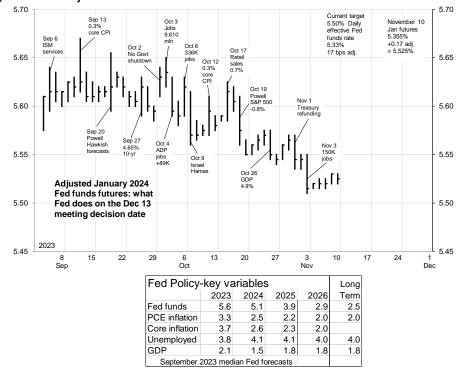
Selected Fed assets and	liabilitie	es				Change
Fed H.4.1 statistical release						from
billions, Wednesday data	8-Nov	1-Nov	25-Oct	18-Oct	3/11/20*	3/11/20
Factors adding reserves						to Nov 8
U.S. Treasury securities	4872.914	4872.601	4912.200	4913.457	2523.031	2349.883
Federal agency debt securities	2.347	2.347	2.347	2.347	2.347	0.000
Mortgage-backed securities (MBS)	2462.907	2462.907	2462.907	2479.652	1371.846	1091.061
Repurchase agreements	0.000	0.001	0.001	0.000	242.375	-242.375
Primary credit (Discount Window)	2.229	2.951	3.170	2.962	0.011	2.218
Bank Term Funding Program	112.935	109.070	109.068	108.818		
FDIC Loans to banks via Fed	35.229	46.790	48.256	53.156		
Paycheck Protection Facility	4.244	4.343	4.495	4.633		
Main Street Lending Program	19.167	19.144	19.038	19.011		
Municipal Liquidity Facility	5.646	5.643	5.641	5.638		
Term Asset-Backed Facility (TALF II)	1.020	1.019	1.223	1.222		
Central bank liquidity swaps	0.236	0.246	0.252	0.231	0.058	0.178
Federal Reserve Total Assets	7911.5	7917.2	7958.6	7983.9	4360.0	3551.440
3-month Libor % SOFR %	5.32	5.32	5.30	5.30	1.15	4.170
Factors draining reserves						
Currency in circulation	2326.282	2325.298	2323.027	2324.467	1818.957	507.325
Term Deposit Facility	0.000	0.000	0.000	0.000	0.000	0.000
U.S. Treasury Account at Fed	763.459	753.008	847.717	841.103	372.337	391.122
Treasury credit facilities contribution	13.358	13.358	13.358	13.358		
Reverse repurchases w/others	1024.451	1079.462	1100.617	1150.781	1.325	1023.126
Federal Reserve Liabilities	4551.040	4602.528	4694.586	4733.636	2580.036	1971.004
Reserve Balances (Net Liquidity)	3360.426	3314.630	3263.971	3250.230	1779.990	1580.436
Treasuries within 15 days	61.587	82.056	84.484	83.503	21.427	40.160
Treasuries 16 to 90 days	246.781	203.839	237.526	240.051	221.961	24.820
Treasuries 91 days to 1 year	580.625	603.077	584.783	584.932	378.403	202.222
Treasuries over 1-yr to 5 years	1671.662	1671.544	1682.776	1682.577	915.101	756.561
Treasuries over 5-yrs to 10 years	807.928	807.863	818.580	818.473	327.906	480.022
Treasuries over 10-years	1504.332	1504.222	1504.050	1503.922	658.232	846.100
Note: QT starts June 1, 2022	Change	11/8/2023	6/1/2022			
U.S. Treasury securities	-897.865	4872.914	5770.779			
Mortgage-backed securities (MBS)	-244.539	2462.907	2707.446			
**March 11, 2020 start of coronavirus I	ockdown of	country				

fwd: Bonds

altering monetary policy and setting it back at least to neutral was the Fed's historic error. When inflation picked up, and there was uncertainty if it would last, policymakers should have stopped QE and started raising the Fed funds rate to 2.5% neutral at the very least. And in the next go-round, the current policymakers should raise their estimates of where neutral rates are, especially if you think 5.5% may not be restrictive. The Fed's first forecast for neutral under Bernanke in 2012 was 4.25%, so do not lower rates beyond this level again unless there is a recession coming that looks like the Great Depression with double-digit unemployment rate job losses.

No change in Fed expectations this year, if Powell was trying to communicate something. Fed funds futures see no rate hike in December, and see one rate cut (to 5.25%) over the May, June, July meetings next year. Last week they had discounted two rate cuts by the middle of 2024.

Fed funds futures call Fed hikes									
Current target: November 10 5.50%									
Rate+0.17 Contract Fed decision dates									
5.525 Jan 2024 Dec 13									
5.525 Apr 2024 Jan 31, Mar 20									
5.190 Aug 2024 May 1, Jun 12, Jul 31									
Last trade, not settle	ement price								



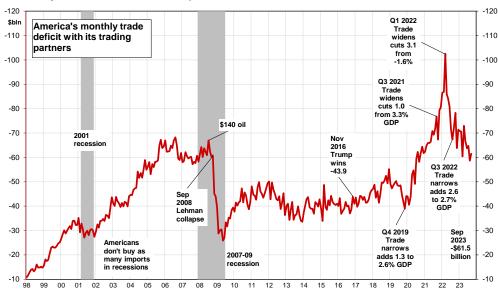
Next up: October CPI inflation report Tuesday, November 14															
Monthly	2023								2023	2022					2022
% Changes	Sep	Aug	<u>Jul</u>	<u>Jun</u>	May	Apr	Mar	Feb	<u>Jan</u>	Dec	Nov	Oct	Sep	Aug	<u>Jul</u>
Core CPI inflation	0.3	0.3	0.2	0.2	0.4	0.4	0.4	0.5	0.4	0.4	0.3	0.3	0.6	0.6	0.3
Core PCE inflation	0.3	0.1	0.2	0.2	0.3	0.3	0.3	0.4	0.5	0.4	0.3	0.3	0.5	0.5	0.2
Core PCE YOY	3.7	3.8	4.3	4.3	4.7	4.8	4.8	4.8	4.9	4.9	5.1	5.3	5.5	5.2	5.0
Core CPI YOY	4.1	4.3	4.7	4.8	5.3	5.5	5.6	5.5	5.6	5.7	6.0	6.3	6.6	6.3	5.9

OTHER ECONOMIC NEWS

Trade deficit widens with import demand (Tuesday)

Breaking economy news. The trade deficit red ink increased to \$61.5 billion in September from \$58.7 billion in August. The deficit had been \$64.7 billion in July, so the data have been volatile. Exports continue to rebound and not all of it is due to the brief increase in oil prices. Exports were \$261.1 billion in September, an increase of 2.2% for the month, but only 0.5% higher than a year ago. Imports were \$322.7 billion in September, an increase of 2.7% for the month, but 2.7% lower than a year ago. The trade deficit had no material impact on third quarter 4.9% real GDP growth because in real terms, the increase in exports was offset by the increase in imports.

China's economy grew through exports the last two decades. While US imports from China increased to \$40.3 billion in September from \$36.7 billion in August, imports are 18.2% lower than a year ago, making some wonder if Christmas coming this year for the USA.



fwd: Bonds

Net, net, America's demand for imported goods surged at the end of the third quarter which is not consistent with a recession outlook. The only time American consumers do not want imported goods is when overall economic demand plummets in recessions. Consumer goods increased, and almost all of it was cell phones and other household goods. There is a standoff between exports and imports at the moment even if the trade deficit widened marginally this month, but one thing we can be sure of is that recession was not on the radar in September with consumers snapping up imported foreign

goods.

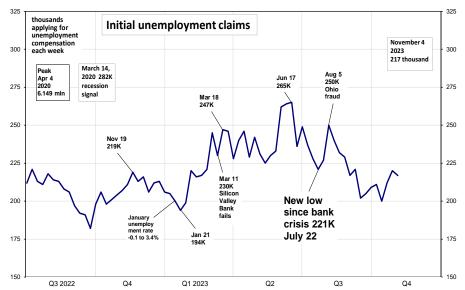
	GDP			Trade						
Real	contri-			deficit		Quarter				
GDP %	<u>bution</u>	Quarter		\$mln	Exports	average	Pct %	Imports	Quarter	Pct %
-0.6	0.56	-83,647	Jun 2022			255,487			339,135	
		Q3	July	-71,672	260,684			332,356		
			August	-67,315	261,575			328,890		
2.7	2.58	-70,238	September	-71,726	259,849	260,703	2.0	331,575	330,940	-2.4
		Q4	October	-78,329	255,500			333,829		
2.6	0.26		November	-63,818	252,737			316,555		
		-71,178	December	-71,386	250,323	252,853	-3.0	321,709	324,031	-2.1
		Q1	Jan 2023	-70,776	258,519			329,295		
2.2	0.58		February	-70,619	252,974			323,593		
		-67,266	March	-60,403	257,726	256,406	1.4	318,129	323,672	-0.1
		Q2	April	-73,013	249,306			322,319		
2.1	0.04		May	-66,782	247,855			314,637		
		-67,838	June	-63,718	247,740	248,300	-3.2	311,458	316,138	-2.3
		Q3	July	-64,718	251,885			316,602		
4.9	-0.08		August	-58,657	255,436			314,092		
		-61,639	September	-61,542	261,113	256,145	3.2	322,656	317,783	0.5
	Trade ha	s minor co	ntribution to	growth	the last t	wo quart	ers			

fwd: Bonds

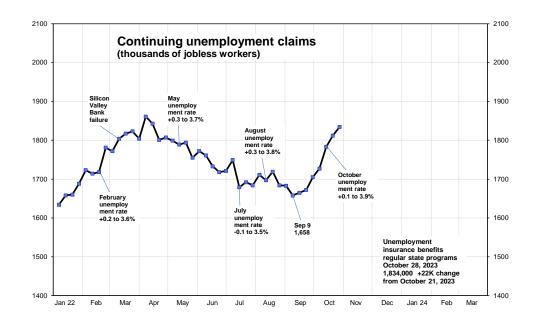
More join the unemployment rolls (Thursday)

Breaking economy news. First time jobless claims from new layoffs fell 3K to 217K in the November 4 week from a higher revised level. The more disturbing trend is that the number of Americans on the unemployment rolls receiving benefits keeps moving up. Continuing unemployment claims rose 22K

to 1.834 million in the October 28 week. Total claims moved higher in the same way in October of 2022 for a few months without the labor market falling apart and the economy dropping like recession so we cannot rule out some sort of statistical quirk in the data. Generally, the first-time jobless claims showing current layoffs need to move up as well to confirm conditions that are deteriorating.



Net, net, the labor market does not appear to be as strong as we thought as the total number of jobless workers on the nation's unemployment rolls keeps climbing perhaps because the job openings are less than advertised or maybe many lack the qualifications for hire. If this trend persists it would provide evidence that the Federal Reserve's interest rate hikes have overshot, so labor market conditions need to be monitored closely. The jobless claims data are worrisome enough for the outlook to keep Fed officials from hiking rates again this year at the final meeting in December.

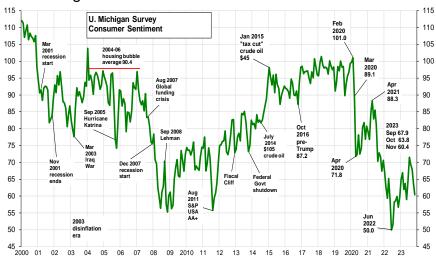


University of Michigan says inflation is the one (Friday)

Breaking economy news. The Michigan survey of consumer sentiment slipped to 60.4 in November from 63.8 in October. Fed Chair Powell is warning the inflation battle will take time and he got that right with consumers now saying inflation will remain higher for longer. Long-run inflation expectations rose from 3.0% in September to 3.2% in October which is the highest reading since 2011.

Much has been written about why consumers are so downbeat, but the worry over inflation has been there all the time. Washington can continue to crow about strong economic growth and jobless rates near the lowest since the 1960s, but it is inflation that consumers cannot stop talking about, the same inflation that has turned over Congress and the White House over the decades if something cannot be done about it. It would be ironic if Washington takes the fall for inflation because of too much government spending because the real cause historically has been the Federal Reserve's easy money policies, keeping rates too low for too long.

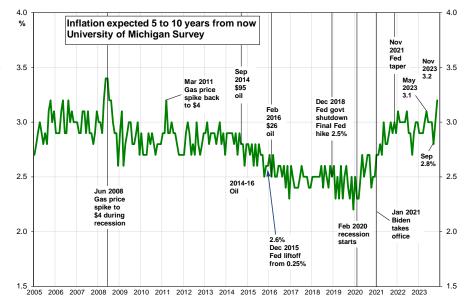
Net, net, no wonder consumers' spirits are so pessimistic with the worries they have about the inflation outlook continuing to worsen. Inflation will be higher for longer and this has put consumers in a somber mood that may yet take a toll on retail sales and economic growth in the final months of 2023. Consumers may be spending like drunken sailors lately, but that isn't going to continue



fwd: Bonds

if the prices of goods on store shelves keep moving higher and higher. Inflation is a worry that simply won't go away because prices rarely fall, they simply go up less quickly. It is inflation from the past seen in the rearview mirror that continues to weigh on the confidence of Americans and make them

believe the economy broadly speaking is bad. The cost-of-living crisis in America is getting worse. Bet on it. The American consumer is.



Economic and Markets Research

Analyst Certification

The views expressed in this report accurately reflect the personal views of the research staff at FWDBONDS LLC, the primary analysts responsible for this report, about the subject securities or issuers referred to herein, and no part of such analysts' compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed herein.

fwd: Bonds

The information herein is provided for information purposes only, and is not to be used or considered as an offer or the solicitation of an offer to sell or to buy or subscribe for securities or other financial instruments. Neither this nor any other communication prepared by FWDBONDS LLC should be construed as investment advice, a recommendation to enter into a particular transaction or pursue a particular strategy, or any statement as to the likelihood that a particular transaction or strategy will be effective in light of your business objectives or operations. Before entering into any particular transaction, you are advised to obtain such independent financial, legal, accounting and other advice as may be appropriate under the circumstances. In any event, any decision to enter into a transaction will be yours alone, not based on information prepared or provided by FWDBONDS LLC. FWDBONDS LLC hereby disclaims any responsibility to you concerning the characterization or identification of terms, conditions, and legal or accounting or other issues or risks that may arise in connection with any particular transaction or business strategy. While FWDBONDS LLC believes that any relevant factual statements herein and any assumptions on which information herein are based, are in each case accurate, FWDBONDS LLC may have issued, and may in the future issue, other reports that are inconsistent with or that reach conclusions different from the information set forth herein. Such other reports, if any, reflect the different assumptions, views and/or analytical methods of the analysts who prepared them, and FWDBONDS LLC is under no obligation to ensure that such other reports are brought to your attention.

Copyright 2023 FWDBONDS LLC All Rights Reserved

The articles and opinions in this publication are for general information only, are subject to change, and are not intended to provide specific investment, legal, tax or other advice or recommendations. The information contained herein reflects the thoughts and opinions of the noted authors only. We are not offering or soliciting any transaction based on this information. We suggest that you consult your attorney, accountant or tax or financial advisor with regard to your situation. Although information has been obtained from sources we believe to be reliable, neither the authors nor FWDBONDS LLC vouch for its accuracy, and such information may be incomplete or condensed. Neither the authors nor FWDBONDS LLC shall be liable for any typographical errors or incorrect data obtained from reliable sources or factual information.

Opinions, estimates, forecasts, and other views contained in this document are those of the FWDBONDS LLC research group, and does not necessarily represent the views of FWDBONDS LLC or its management. Although the Financial Markets This Week newsletter attempts to provide reliable, useful information, it does not guarantee that the information or other content in this document is accurate, current or suitable for any particular purpose. All content is subject to change without notice. All content is provided on an "as is" basis, with no warranties of any kind whatsoever. Information from this document may be used with proper attribution. Alteration of this document or its content is strictly prohibited. ©2023 by FWDBONDS LLC.

By the way, in the way of the usual disclaimers, this is a final legal reminder that there is no investment advice offered or given anywhere in this newsletter or on the fwdbonds.com website. These are just the things we would like to see before we save, invest, spend, and otherwise plan for the future, which of course is always uncertain.