



2023 Year End

ECONOMIC NEWSLETTER

for the construction industry



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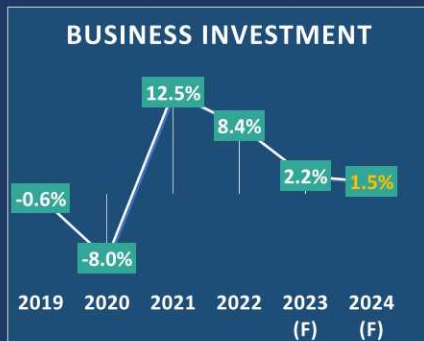
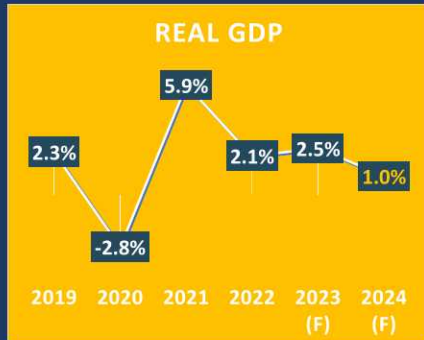


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Quarterly Economic Report

Executive Summary – 2023 Year End

Selected Indices



Big Items

Real GDP: The stunning growth in Q3 (4.9% when the expectation was for around 1.0%) was not repeated in Q4 but estimates are still calling for around 2.5% growth. There are very mixed expectations for 2024 with some calling for a shallow recession (around -1.0%) but others asserting that growth will still be close to 2.5%. The Armada models are showing more of a slowdown in the second half of the year. The keys are consumer spending and inventory build.

Raw Material Prices/Availability: Inventories are still generally low as producers are wary of demand. There was a decided surge in inventory build over the last year as companies became more insecure regarding the supply chain. Now these inventory numbers are higher than normal and that has affected the re-order cycle. The lack of global demand has been a factor as well – China is not yet back to its traditional consumption patterns.

Labor Situation / Labor Costs: The construction sector Employment Cost Index showed that overall labor costs are still high and climbing. It has been growing almost exponentially for several years and is now at 158.6. At the end of the recession in 2009 the index was at 111.6. That is a substantial hike and there is no sign of it reversing any time soon. The labor shortage could worsen dramatically by the end of the decade.

Manufacturing (Materials): Global PMI data shows the US sliding further into contraction territory with a reading of 47.9. It was only a few months ago that the US was in positive territory. Mexico is still in positive territory and so is India, but 20 nations are now in contraction (most all of Europe). This suggests a slower period for manufacturing.

Risks

Recession Risk: The risk of recession has faded but the extent of that fade is a matter of debate. There is a school of thought that asserts that the US will encounter a mild recession in the first two quarters – more like a slowdown. The estimate would be a negative -0.9% in Q1 and maybe -0.7% in Q2. The other group sees growth in both Q1 and Q2 of around 2.0% but that a slowdown appears in the latter half of the year. This is what the Armada models have been suggesting. Not a deep recession is expected in either scenario.

Interest Rates: The markets seem to be either trying to influence the Fed or they are in the mood to make sunny predictions. They are suggesting that rates will start to decline as early as Q2 and that there will be at least four quarter point cuts in the course of the year. The Fed has not committed to anything but the “dot plot” suggests that these reductions will not occur until later in the year. The assumption is that rates would be near 4.5% by the end of the year in either scenario but as always, the Fed will react to any threat of inflation.

Energy Crisis: There is no expectation of an energy crisis despite the turmoil in the Middle East. There is now serious discussion around the concept of “dynamic production”. The technology now allows almost instant response to oil supply and demand. If there is a surge in the spot price there will be a corresponding surge in production and when the spot price falls, the production is limited. This means that per barrel prices will likely stay in the 70s for the bulk of the year. There are always bigger threats from hurricanes and extended geopolitical crisis but for now, stability in prices is expected. That can change if supply from the Middle East is materially impacted, but thus far, that hasn't happened.

Macroeconomic Viewpoints

- Dr. Chris Kuehl

Mixed Reviews for 2024's Economy: There is always something happening in the economy guaranteed to make a fool of economists. After all, the only function of economic forecasting is to make astrology look respectable. Most of last year the predictions were some versions of gloom and doom and every quarter there was further evidence of growth (4.9% in Q3 and around 2.4% for Q4). Now there is debate over what to expect in 2024. There are those that are calling for a shallow recession in the first half of the year (-0.9% in Q1 and -0.7% in Q2). On the other hand, there are those that see decent growth in the first half of the year but a slower end to 2024. The Armada models seem to be favoring that latter interpretation.

There have been four drivers of growth over the last few quarters. These have been responsible for the performance in Q3 and Q4 of last year and seem to be factors now as well. The fear is that two of the four are already showing signs of retreat and the other two will be facing some challenges as well. These are also significant as drivers for the construction business. The first is consumer spending, it has been performing well above the twenty-year trend line despite the fact consumer debt is sitting at record levels (\$7 trillion in credit card debt and \$20 trillion in overall debt). The latest retail numbers were far better than expected with a reading of 5.6% Y/Y and 0.6% vs. November. At the moment the bottom third of income earners are living paycheck to paycheck and the middle third is starting to feel the pinch as well with 55% living paycheck to paycheck; but the upper third is still spending aggressively. The crucial factor for consumer spending is employment. As long as people feel secure in their employment they will continue to spend and access credit. With the jobless rate still at 3.7% there is not a lot of employment angst.

The second driver is non-residential construction. It has been growing for several years now but the industry is starting to worry about the pipeline in 2024. Many of the large projects that drove growth have been completed and there have been few new ones undertaken. There is one major factor on the horizon and it relates to the third driver for the economy – government spending. The money that flowed out of the government to cope with the pandemic has been dispersed but two years ago there was a surge in allocating money for infrastructure with the CHIPS act, Inflation Reduction Act and others. This money is now starting to flow as the states and communities have been kicking in their share. This will be a major motivator for non-residential construction as long as these projects are linked to infrastructure. There is still not much movement in office development or retail but medical development is making a comeback and the logistics business remains strong. There is also significant growth in the manufacturing sector as there is still interest in reshoring with further investment in robotics and technology.

The final piece of the growth equation is the one that has been fading fast. The supply chain chaos of the last few years convinced many that the JIT system was broken and that inventory hold was necessary. There has been a dramatic increase in inventory accumulation as businesses no longer trusted the ability to get product when they needed it. That inventory build drove Q3 expansion. Now these inventories are fleshed out and the re-order cycle has been thrown off. Business will be seeking to reduce the inventory build and may not need much replenishing until later in the year.

The fact is that factors such as a reduction in interest rates by mid-summer can alter these assessments. There can also be negative factors playing a role – surge in joblessness, higher priced commodities, further trade tensions and maybe even a reaction to the political situation in the US.

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Regional MSA Construction Potential Index

The following section shows the Construction Potential Index developed by [Armada](#) in conjunction with [Pioneer IQ](#) for the largest Metropolitan Statistical Areas (MSAs) in the country. This index measures growth potential and construction spending per capita to create a construction potential index. The score itself is not as important as the index in relation to all other markets, which is important in understanding and the index incorporates both residential and nonresidential construction potential.

Rank	MSA	Construction Scoring System			Change in Gross Construction GDP		BEA Region
		.40 Construction GDP Estimate Index	.60 Population Growth 2015-2020 Index	Construction Potential Score	Q3 2023 Q/Q Change in Gross Construction GDP	Q3 2023 Y/Y Change in Gross Construction GDP	
1	Dallas-Fort Worth-Arlington, TX	48.4	8.8	2467.1	4.5%	22.1%	SW
2	New York-Newark-Jersey City, NY-NJ-PA	85.5	-18.2	2331.5	2.5%	17.3%	ME
3	Chicago-Naperville-Elgin, IL-IN-WI	60.6	-1.7	2318.4	3.2%	23.8%	GL
4	Houston-The Woodlands-Sugar Land, TX	45.6	7.7	2287.2	4.5%	22.1%	SW
5	Washington-Arlington-Alexandria, DC-VA-MD-WV	50.9	3.4	2241.6	3.1%	24.4%	ME
6	Los Angeles-Long Beach-Anaheim, CA	54.6	-2.4	2043.6	3.4%	11.0%	FW
7	Phoenix-Mesa-Scottsdale, AZ	32.1	7.0	1705.4	4.4%	32.4%	SW
8	Atlanta-Sandy Springs-Roswell, GA	31.6	5.8	1611.1	3.6%	28.3%	SE
9	Miami-Fort Lauderdale-West Palm Beach, FL	30.0	2.9	1372.8	3.1%	24.3%	SE
10	San Francisco-Oakland-Hayward, CA	31.6	1.4	1349.0	3.4%	11.0%	FW
11	Seattle-Tacoma-Bellevue, WA	25.7	4.6	1304.9	1.7%	24.5%	FW
12	Minneapolis-St. Paul-Bloomington, MN-WI	25.8	2.2	1162.0	3.8%	20.9%	GL
13	Boston-Cambridge-Newton, MA-NH	26.1	1.9	1155.8	3.5%	14.4%	NE
14	Las Vegas-Henderson-Paradise, NV	22.5	2.9	1070.6	3.4%	27.9%	FW
15	Denver-Aurora-Lakewood, CO	22.1	2.9	1056.5	2.1%	21.0%	RM
16	Baltimore-Columbia-Towson, MD	25.4	0.0	1019.4	3.7%	24.7%	ME
17	Riverside-San Bernardino-Ontario, CA	19.8	3.0	975.8	3.4%	11.0%	FW
18	Portland-Vancouver-Hillsboro, OR-WA	19.6	1.9	900.3	2.5%	23.4%	FW
19	Orlando-Kissimmee-Sanford, FL	16.2	4.2	897.2	3.1%	24.3%	SE
20	Austin-Round Rock, TX	15.9	4.3	889.7	4.5%	22.1%	SW
21	Tampa-St. Petersburg-Clearwater, FL	15.2	4.1	854.7	3.1%	24.3%	SE
22	Salt Lake City, UT	17.5	1.2	772.0	3.1%	22.7%	RM
23	Nashville-Davidson-Murfreesboro-Franklin, TN	15.0	2.0	718.6	3.2%	25.8%	SE
24	Indianapolis-Carmel-Anderson, IN	15.3	1.6	709.8	3.0%	23.5%	GL
25	Sacramento-Roseville-Arden-Arcade, CA	14.9	1.7	695.5	3.4%	11.0%	FW
26	Charlotte-Concord-Gastonia, NC-SC	10.5	4.0	659.2	2.4%	24.7%	SE
27	San Diego-Carlsbad, CA	15.1	0.7	647.9	3.4%	11.0%	FW
28	St. Louis, MO-IL	16.3	-0.2	641.9	3.2%	23.7%	P
29	Detroit-Warren-Dearborn, MI	15.0	0.2	611.9	2.8%	22.6%	GL
30	Raleigh, NC	11.7	2.2	598.6	2.4%	24.7%	SE
31	Columbus, OH	12.1	1.9	596.1	4.0%	18.6%	GL
32	San Antonio-New Braunfels, TX	9.9	3.1	585.4	4.5%	22.1%	SW
33	San Jose-Sunnyvale-Santa Clara, CA	12.7	0.3	522.2	3.4%	11.0%	FW
34	Kansas City, MO-KS	10.7	1.3	507.2	3.0%	21.5%	P
35	Cincinnati, OH-KY-IN	10.8	1.2	503.0	4.1%	22.4%	GL
36	Jacksonville, FL	8.9	2.1	478.5	3.1%	24.3%	SE
37	Baton Rouge, LA	10.9	0.5	465.1	2.5%	31.1%	SE
38	Provo-Orem, UT	7.7	1.2	377.7	3.1%	22.7%	RM
39	Charleston-North Charleston, SC	7.5	1.1	363.4	3.7%	25.9%	SE



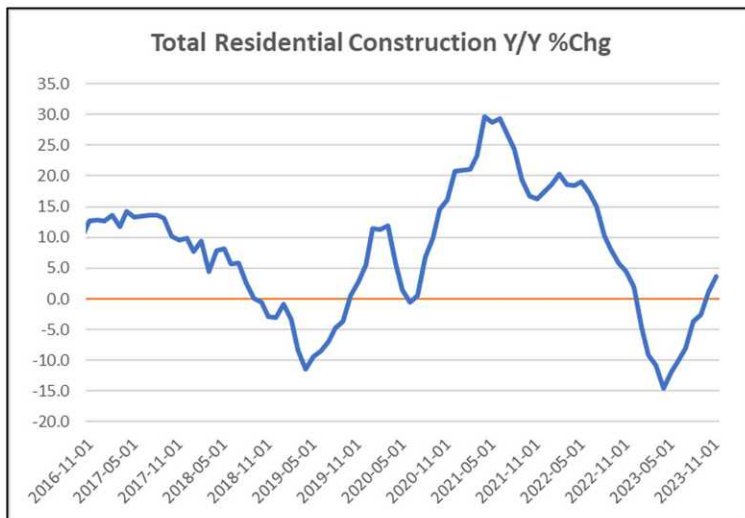
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40	Boise City, ID	7.0	1.4	361.6	3.9%	29.8%	RM
41	Richmond, VA	7.7	0.4	330.0	2.7%	25.1%	SE
42	Louisville-Jefferson County, KY-IN	8.4	-0.3	322.9	4.1%	26.2%	SE
43	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	6.6	0.6	301.9	3.2%	20.2%	ME
44	Reno, NV	6.8	0.5	300.6	3.4%	27.9%	FW
45	Grand Rapids-Wyoming, MI	6.3	0.7	296.3	2.8%	22.6%	GL
46	North Port-Sarasota-Bradenton, FL	5.4	1.3	294.0	3.1%	24.3%	SE
47	Cape Coral-Fort Myers, FL	5.2	1.3	286.3	3.1%	24.3%	SE
48	Urban Honolulu, HI	7.7	-0.5	279.2	2.5%	22.4%	FW
49	Ogden-Clearfield, UT	5.8	0.8	276.4	3.1%	22.7%	RM
50	Milwaukee-Waukesha-West Allis, WI	6.9	0.0	274.3	3.2%	21.7%	GL
51	Greenville-Anderson-Mauldin, SC	5.2	0.9	261.4	3.7%	25.9%	SE
52	New Orleans-Metairie, LA	6.3	0.1	260.3	2.5%	31.1%	SE
53	Des Moines-West Des Moines, IA	4.3	1.4	257.0	1.2%	13.7%	P
54	Oklahoma City, OK	4.8	0.9	249.2	3.3%	21.9%	SW
55	Colorado Springs, CO	4.8	0.9	244.9	2.1%	21.0%	RM
56	Omaha-Council Bluffs, NE-IA	4.4	0.6	213.7	2.2%	16.6%	P
57	Columbia, SC	4.5	0.5	210.3	3.7%	25.9%	SE
58	Lakeland-Winter Haven, FL	2.9	1.4	200.4	3.1%	24.3%	SE
59	Durham-Chapel Hill, NC	2.2	1.7	192.9	2.4%	24.7%	SE
60	Memphis, TN-MS-AR	4.7	0.0	191.2	2.9%	24.3%	SE
61	Tucson, AZ	3.7	0.7	191.2	4.4%	32.4%	SW
62	Myrtle Beach-Conway-North Myrtle Beach, SC-NC	2.8	1.2	184.3	2.8%	25.1%	SE
63	Birmingham-Hoover, AL	6.2	-1.0	183.9	3.5%	17.9%	SE
64	Tulsa, OK	4.0	0.3	179.7	3.3%	21.9%	SW
65	Madison, WI	3.8	0.4	178.5	3.2%	21.7%	GL
66	Fresno, CA	3.5	0.5	167.9	3.4%	11.0%	FW
67	Greensboro-High Point, NC	3.6	0.4	164.9	2.4%	24.7%	SE
68	Albuquerque, NM	3.7	0.2	161.5	4.4%	26.6%	SW
69	Naples-Immokalee-Marco Island, FL	3.2	0.5	160.0	3.1%	24.3%	SE
70	Deltona-Daytona Beach-Ormond Beach, FL	2.7	0.8	159.3	3.1%	24.3%	SE
71	Stockton-Lodi, CA	2.8	0.7	153.5	3.4%	11.0%	FW
72	Albany-Schenectady-Troy, NY	3.9	0.0	152.6	1.9%	16.4%	ME
73	Lancaster, PA	3.5	0.2	151.7	2.8%	16.2%	ME
74	Palm Bay-Melbourne-Titusville, FL	2.8	0.6	150.7	3.1%	24.3%	SE
75	Fayetteville-Springdale-Rogers, AR-MO	3.1	0.4	148.4	2.8%	22.8%	SE
76	Greeley, CO	2.6	0.7	148.3	2.1%	21.0%	RM
77	Bridgeport-Stamford-Norwalk, CT	3.7	-0.1	143.1	4.7%	15.8%	NE
78	Augusta-Richmond County, GA-SC	3.0	0.4	140.4	3.6%	27.6%	SE
79	Knoxville, TN	3.3	0.1	139.5	3.2%	25.8%	SE
80	Santa Rosa, CA	3.7	-0.1	139.5	3.4%	11.0%	FW
81	Rochester, NY	3.8	-0.2	139.5	1.9%	16.4%	ME
82	Little Rock-North Little Rock-Conway, AR	3.0	0.2	132.5	2.7%	27.6%	SE
83	Bakersfield, CA	2.8	0.3	130.8	3.4%	11.0%	FW
84	Lexington-Fayette, KY	2.7	0.3	127.2	6.4%	32.0%	SE
85	Salisbury, MD-DE	2.5	0.4	123.8	3.6%	24.2%	ME
86	Fort Collins, CO	2.4	0.4	122.4	2.1%	21.0%	RM
87	Oxnard-Thousand Oaks-Ventura, CA	3.2	-0.1	121.1	3.4%	11.0%	FW
88	Huntsville, AL	2.2	0.5	120.0	2.5%	31.1%	SE
89	Corpus Christi, TX	3.6	-0.4	118.4	4.5%	22.1%	SW
90	Spokane-Spokane Valley, WA	2.3	0.4	115.0	1.7%	24.5%	FW
91	Pensacola-Ferry Pass-Brent, FL	2.1	0.5	113.2	3.1%	24.3%	SE
92	Vallejo-Fairfield, CA	2.5	0.2	112.4	3.4%	11.0%	FW
93	Port St. Lucie, FL	1.6	0.6	104.2	3.1%	24.3%	SE
94	Wichita, KS	2.7	-0.1	103.2	3.3%	22.4%	P
95	Anchorage, AK	2.6	-0.1	98.4	2.5%	27.1%	FW
96	Savannah, GA	2.0	0.3	95.5	3.6%	28.3%	SE
97	Fargo, ND-MN	2.0	0.2	95.2	4.1%	18.9%	P
98	Kennewick-Richland, WA	1.8	0.4	95.1	1.7%	24.5%	FW
99	Killeen-Temple, TX	1.5	0.6	94.0	4.5%	22.1%	SW



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100	Sioux Falls, SD	1.8	0.3	88.5	6.2%	37.7%	P
101	McAllen-Edinburg-Mission, TX	1.4	0.5	87.5	4.5%	22.1%	SW
102	Modesto, CA	1.7	0.2	80.9	3.4%	11.0%	FW
103	Santa Maria-Santa Barbara, CA	1.7	0.0	71.4	3.4%	11.0%	FW
104	Lafayette, LA	1.5	0.0	59.0	2.5%	31.1%	SE
105	Visalia-Porterville, CA	1.0	0.1	46.2	3.4%	11.0%	FW

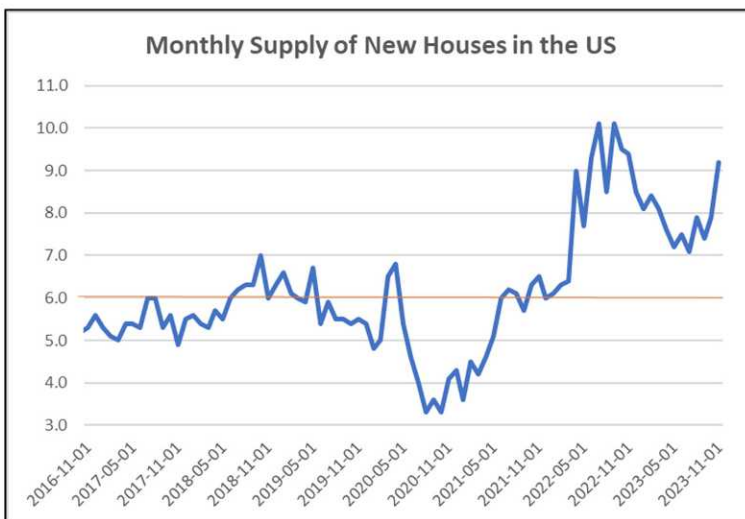
Residential Construction

The following section includes viewpoints on factors in the residential construction sector.



Residential Construction Spending (PRRECONS)

- Total residential construction has been climbing again – \$896.8B annual rate, compared to \$887.3 in October. These are still short of the peak in May when it hit \$969.6 but most assumed there would be a continued drop.
- Outlook:** The performance of the housing sector has been a bit of a surprise of late. There has been consistent activity in the multi-family category as it is still growing by over 20% but single-family building was slipping. That is not the case at the moment as starts are up 4.3% over November and up 7.6% over what they were a year ago.
- The driver of this unexpected activity seems to be slightly lower mortgage rates. Granted, they are still high at around 7.0% for a thirty-year loan but this is down from the 9.0% that was noted just a few months ago. There is considerable regional variation as shown in this report but nationally there has been progress in both multi-family and single family.



Monthly Supply of Homes (MSACSR)

- The monthly supply of homes came in at 9.2 and that is down from the 7.9 registered last month. It is also still slightly below the 9.4 registered a year ago. A balanced market would be roughly 6 months of inventory on hand.
- Outlook:** New home builders are avoiding spec homes, and they are having more challenges in terms of financing them. The majority of the new homes are in the upper income levels as the upper third of earners are still in the mood to buy while the lower third is living paycheck to paycheck (85% of them). The key issue for home purchasing remains confidence in the job market. As long as the unemployment rate is near record lows people are willing to take out mortgages.

Month	United States				
	Total	1 unit	2 units	3 to 4 units	5 units or more
Nov 2022	102.5	55.6	2.5	1.4	43.0
Dec 2022	104.4	50.2	2.3	1.0	50.9
Jan 2023	101.0	53.1	2.5	1.3	44.1
Feb 2023	110.9	58.7	2.1	1.2	49.0
Mar 2023	131.3	79.4	3.1	1.7	47.2
Apr 2023	117.6	75.1	2.8	1.9	37.8
May 2023	139.6	88.9	3.3	1.5	45.8
Jun 2023	135.7	91.0	3.1	1.9	39.7
Jul 2023	118.7	77.8	2.4	1.4	37.1
Aug 2023	141.8	88.3	3.5	2.1	47.9
Sep 2023	116.7	76.5	2.3	1.7	36.2
Oct 2023	125.3	79.8	2.8	1.7	41.0
Nov 2023	108.8	69.6	2.3	1.4	35.5

Housing Permits (<https://www.census.gov/construction/bps/>)

- Housing Permits were up 1.9% over the levels in November (latest available) and 6.1% over what they were in November of 2022. The construction sector has been a bit more cautious but remains active.
- Looking Ahead:** Permit activity shifts quite a bit from one season to another and generally slows during the winter months. The fact that population has been moving to the southeast and southwest has made seasonality a little less crucial and now the issue is where these moves are taking people. The high growth states have been Texas, Arizona, Tennessee, North Carolina and South Carolina. Permit numbers have been strong here.

The following section shows housing permits authorized by region for total, single-family, and multi-family.

Month	Northeast											
	Total	Y/Y	3-Month Moving Avg.	M/M	1 unit	Y/Y	3-Month Moving Avg.	M/M	5 unit	Y/Y	3-Month Moving Avg.	M/M
Nov 2022	9.8	-21.6%	-3.7%	18.1%	4.0	-20.0%	-8.0%	-7.0%	5.8	-22.7%	1.9%	45.0%
Dec 2022	10.6	-58.3%	2.3%	8.2%	3.9	-33.9%	-9.4%	-2.5%	6.7	-65.6%	13.5%	15.5%
Jan 2023	7.5	-27.2%	-1.0%	-29.2%	3.7	-19.6%	-4.9%	-5.1%	3.8	-33.3%	5.7%	-43.3%
Feb 2023	7.3	-36.0%	-7.9%	-2.7%	3.3	-28.3%	-6.1%	-10.8%	4.0	-41.2%	-7.5%	5.3%
Mar 2023	12.6	-20.8%	13.6%	72.6%	4.5	-15.1%	6.8%	36.4%	8.1	-23.6%	21.5%	102.5%
Apr 2023	8.5	-33.6%	12.5%	-32.5%	4.7	-11.3%	10.0%	4.4%	3.8	-49.3%	18.2%	-53.1%
May 2023	12.3	12.8%	28.3%	44.7%	5.5	-5.2%	19.3%	17.0%	6.8	33.3%	42.8%	78.9%
Jun 2023	10.5	-30.9%	-0.8%	-14.6%	5.8	9.4%	9.0%	5.5%	4.7	-52.5%	-1.7%	-30.9%
Jul 2023	8.9	-31.5%	4.9%	-15.2%	4.5	-16.7%	0.0%	-22.4%	4.4	-42.1%	13.9%	-6.4%
Aug 2023	11.0	-3.5%	-2.1%	23.6%	5.2	0.0%	-0.5%	15.6%	5.8	-6.5%	-1.8%	31.8%
Sep 2023	8.4	-18.4%	-5.1%	-23.6%	4.6	-13.2%	-6.1%	-11.5%	3.8	-24.0%	-3.0%	-34.5%
Oct 2023	10.5	26.5%	8.3%	25.0%	4.9	14.0%	3.5%	6.5%	5.6	40.0%	14.9%	47.4%
Nov 2023	7.1	-27.6%	-10.3%	-32.4%	4.3	7.5%	-5.8%	-12.2%	2.8	-51.7%	-12.4%	-50.0%

Month	Midwest											
	Total	Y/Y	3-Month Moving Avg.	M/M	1 unit	Y/Y	3-Month Moving Avg.	M/M	5 unit	Y/Y	3-Month Moving Avg.	M/M
Nov 2022	15.6	-10.3%	-7.2%	-21.6%	7.3	-31.1%	-12.3%	-24.7%	8.3	22.1%	-1.5%	-18.6%
Dec 2022	11.5	-36.8%	-16.0%	-26.3%	5.5	-42.7%	-18.1%	-24.7%	6.0	-30.2%	-13.7%	-27.7%
Jan 2023	9.8	-32.4%	-20.9%	-14.8%	4.8	-39.2%	-20.7%	-12.7%	5.0	-24.2%	-21.0%	-16.7%
Feb 2023	10.6	-20.9%	-11.0%	8.2%	5.9	-28.9%	-4.8%	22.9%	4.7	-7.8%	-16.8%	-6.0%
Mar 2023	17.6	-18.5%	19.8%	66.0%	9.3	-24.4%	22.6%	57.6%	8.3	-10.8%	18.0%	76.6%
Apr 2023	15.2	-34.8%	20.2%	-13.6%	10.0	-22.5%	29.4%	7.5%	5.2	-50.0%	11.1%	-37.3%
May 2023	19.0	-14.4%	25.8%	25.0%	11.4	-12.3%	26.4%	14.0%	7.6	-17.4%	28.5%	46.2%
Jun 2023	18.9	-1.0%	3.6%	-0.5%	11.5	-5.0%	7.5%	0.9%	7.4	5.7%	2.1%	-2.6%
Jul 2023	15.4	-13.5%	2.0%	-18.5%	10.2	-1.9%	1.2%	-11.3%	5.2	-29.7%	4.6%	-29.7%
Aug 2023	20.4	2.5%	4.5%	32.5%	11.6	5.5%	1.1%	13.7%	8.8	-1.1%	12.3%	69.2%
Sep 2023	17.2	-13.6%	-0.6%	-15.7%	10.5	2.9%	-2.4%	-9.5%	6.7	-30.9%	5.2%	-23.9%
Oct 2023	16.6	-16.6%	4.4%	-3.5%	10.6	9.3%	1.7%	1.0%	6.0	-41.2%	11.6%	-10.4%
Nov 2023	14.9	-4.5%	-9.8%	-10.2%	8.6	17.8%	-9.1%	-18.9%	6.3	-24.1%	-9.8%	5.0%



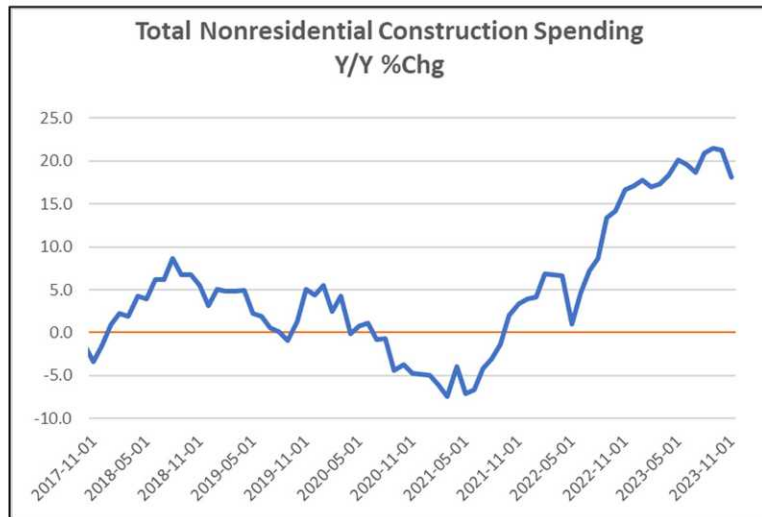
Month	South											
	Total	Y/Y	3-Month Moving Avg.	M/M	1 unit	Y/Y	3-Month Moving Avg.	M/M	5 unit	Y/Y	3-Month Moving Avg.	M/M
Nov 2022	55.4	-17.7%	-9.6%	-18.0%	33.4	-28.3%	-10.7%	-14.8%	22.0	6.3%	-7.7%	-22.5%
Dec 2022	56.1	-21.8%	-6.2%	1.3%	30.7	-35.6%	-9.2%	-8.1%	25.4	5.8%	-1.4%	15.5%
Jan 2023	62.2	-17.7%	-2.0%	10.9%	34.4	-33.5%	-3.6%	12.1%	27.8	16.3%	0.8%	9.4%
Feb 2023	65.5	-9.5%	5.8%	5.3%	37.8	-29.5%	4.6%	9.9%	27.7	47.3%	8.2%	-0.4%
Mar 2023	71.8	-19.8%	8.6%	9.6%	49.0	-23.4%	17.2%	29.6%	22.8	-10.6%	-2.9%	-17.7%
Apr 2023	65.9	-22.0%	2.2%	-8.2%	45.3	-21.9%	10.7%	-7.6%	20.6	-22.3%	-9.2%	-9.6%
May 2023	76.0	-6.4%	5.6%	15.3%	52.6	-4.9%	12.7%	16.1%	23.4	-9.7%	-4.6%	13.6%
Jun 2023	73.3	-11.6%	1.2%	-3.6%	53.5	-0.7%	3.4%	1.7%	19.8	-31.7%	-3.8%	-15.4%
Jul 2023	66.5	-9.4%	0.8%	-9.3%	46.3	5.5%	1.5%	-13.5%	20.2	-31.5%	0.1%	2.0%
Aug 2023	76.5	1.1%	0.7%	15.0%	52.5	11.5%	0.5%	13.4%	24.0	-16.1%	1.8%	18.8%
Sep 2023	64.1	-6.8%	-3.5%	-16.2%	45.7	10.9%	-4.3%	-13.0%	18.4	-33.3%	-0.8%	-23.3%
Oct 2023	70.6	4.4%	3.0%	10.1%	47.8	21.9%	1.7%	4.6%	22.8	-19.7%	6.5%	23.9%
Nov 2023	56.2	1.4%	-8.8%	-20.4%	41.1	23.1%	-7.5%	-14.0%	15.1	-31.4%	-11.1%	-33.8%

Housing and Interest Rate Forecast, 01/04/2023							
	2018	2019	2020	2021	2022	2023	2024
Housing Activity (000)							
Total Housing Starts	1,247	1,291	1,395	1,605	1,542	1,135	1,299
Single Family	871	889	1,002	1,131	997	744	925
Multifamily	376	402	393	474	545	391	374
New Single Family Sales	614	683	831	769	597	508	681
Existing Single-Family Home Sales	4,736	4,746	5,059	5,418	4,569	3,850	4,257
Interest Rates							
Federal Funds Rate	1.83%	2.16%	0.36%	0.08%	1.75%	4.77%	4.33%
Fixed Rate Mortgages	4.54%	3.94%	3.11%	2.96%	5.46%	7.16%	6.23%
Prime Rate	4.90%	5.28%	3.54%	3.25%	5.90%	11.93%	10.55%

For more forecast details, visit www.nahb.org.

Month	West											
	Total	Y/Y	3-Month Moving Avg.	M/M	1 unit	Y/Y	3-Month Moving Avg.	M/M	5 unit	Y/Y	3-Month Moving Avg.	M/M
Nov 2022	21.6	-37.6%	-12.1%	-13.6%	10.8	-40.7%	-15.1%	-14.3%	10.8	-34.1%	-7.5%	-12.9%
Dec 2022	26.3	-30.4%	-3.4%	21.8%	10.1	-44.2%	-10.5%	-6.5%	16.2	-17.8%	4.1%	50.0%
Jan 2023	21.5	-32.6%	-3.4%	-18.3%	10.2	-46.6%	-6.6%	1.0%	11.3	-11.7%	2.3%	-30.2%
Feb 2023	27.4	-19.9%	10.3%	27.4%	11.6	-43.7%	2.7%	13.7%	15.8	16.2%	19.9%	39.8%
Mar 2023	29.3	-30.2%	5.4%	6.9%	16.6	-35.7%	19.3%	43.1%	12.7	-21.6%	-3.3%	-19.6%
Apr 2023	28.0	-22.2%	10.0%	-4.4%	15.2	-31.2%	16.1%	-8.4%	12.8	-7.9%	7.0%	0.8%
May 2023	32.2	-6.9%	5.8%	15.0%	19.5	-8.5%	21.0%	28.3%	12.7	-4.5%	-6.5%	-0.8%
Jun 2023	32.9	-17.8%	4.2%	2.2%	20.2	0.0%	7.8%	3.6%	12.7	-35.9%	0.0%	0.0%
Jul 2023	27.8	-7.9%	0.6%	-15.5%	16.8	5.7%	5.0%	-16.8%	11.0	-23.1%	-4.7%	-13.4%
Aug 2023	33.9	5.9%	2.9%	21.9%	19.0	7.3%	0.0%	13.1%	14.9	4.2%	7.4%	35.5%
Sep 2023	27.1	-11.4%	-4.5%	-20.1%	15.7	11.3%	-7.0%	-17.4%	11.4	-30.9%	-0.5%	-23.5%
Oct 2023	27.6	10.4%	1.2%	1.8%	16.5	31.0%	0.3%	5.1%	11.1	-10.5%	3.1%	-2.6%
Nov 2023	30.6	41.7%	-2.4%	10.9%	15.6	44.4%	-5.9%	-5.5%	15.0	38.9%	3.0%	35.1%

Nonresidential Construction



Total Non-Residential Construction (TLNRESCONS)

- Total Non-Residential Construction activity in November continued to show solid gains (\$1.142T annually) – far more than in previous years. It has been steadily gaining month over month. Overall spending has been rising for the last several years after surging in the wake of the recession in 2020.
- Outlook:** Nonresidential construction continues to build momentum, but the emphasis areas have been changing. Office buildings and retail are still down but the medical sector is building back. Logistics and warehousing are still dominant, but some signs of tapering are starting to manifest. The driver this year is likely to be infrastructure as there is considerably more money available this year than last.

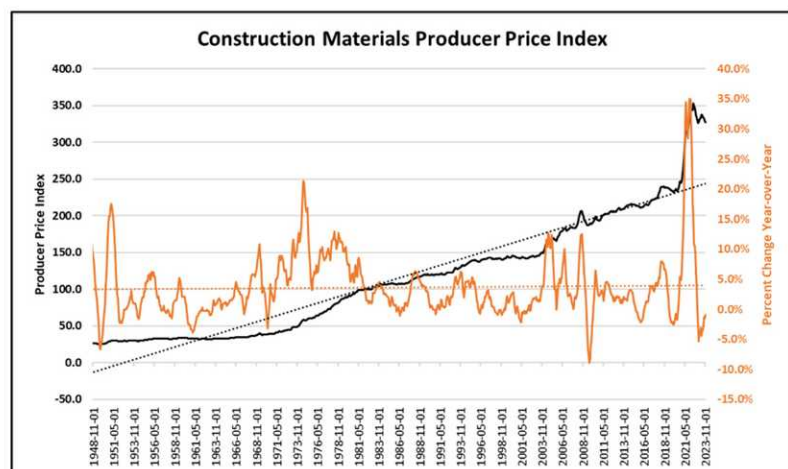
Type of Construction	Nov 2023 ^P	Oct 2023 ^F	Nov 2022	Percent change Nov 2023 from -	
				Oct 2023	Nov 2022
Total Construction	2,050,058	2,042,518	1,842,206	0.4	11.3
Residential	907,395	898,151	874,829	1.0	3.7
New single family	422,579	410,546	400,397	2.9	5.5
New multifamily	135,630	135,544	119,431	0.1	13.6
Nonresidential	1,142,663	1,144,367	967,377	-0.1	18.1
Manufacturing	209,778	208,756	131,816	0.5	59.1
Religious	3,585	3,657	2,735	-2.0	31.1
Sewage and waste disposal	43,819	44,316	34,619	-1.1	26.6
Public safety	14,181	14,481	11,574	-2.1	22.5
Water supply	29,301	29,496	24,393	-0.7	20.1
Power	128,115	127,461	109,430	0.5	17.1
Educational	123,033	123,285	105,446	-0.2	16.7
Highway and street	136,972	136,512	118,786	0.3	15.3
Health care	63,348	63,323	56,724	0.0	11.7
Transportation	64,355	64,769	59,958	-0.6	7.3
Amusement and recreation	33,370	33,521	31,446	-0.5	6.1
Office	100,945	100,924	95,466	0.0	5.7
Lodging	23,156	23,941	21,956	-3.3	5.5
Commercial	131,982	132,610	126,631	-0.5	4.2
Communication	25,373	25,404	25,002	-0.1	1.5
Conservation	11,351	11,911	11,394	-4.7	-0.4

Non-Residential Spending By Sector

(<https://www.census.gov/construction/c30/c30index.html>)

- The fastest growing non-residential construction sector has continued to be connected to manufacturing. It is still growing at a 60% pace year over year. This has been driven by factors such as reshoring and the need to add technological capacity. The move to robotics requires new facilities. There has also been new expansion in manufacturing that hugs new transportation corridors.
- Lodging and entertainment have resumed their pace of growth but the majority of this has been aimed at the luxury sector – more resort activity and less development for the standard business traveler.
- Commercial also continues to be strong. Most aspects of commercial are growing in high growth regions as suburban development creates demand for retail and multi-use construction. Much of the retail expansion has been linked to warehouse and distribution as opposed to consumer centric development.
- Infrastructure development is expected to accelerate rapidly as the money that was allocated a year or so ago has finally started to clear the barriers. States and cities are kicking in their share. Much of this will be traditional repair but projects oriented to alternative energy will get more attention.
- The driver in health care is decentralization and the demand is for smaller facilities located in communities closer to where people live – suburbs and exurbs. The larger hospital complexes have slowed somewhat although these have expanded in areas of high population growth. There has also been a great deal of attention focused on technological upgrades.

Raw Materials



Construction Materials Price Index (WPUSI012011)

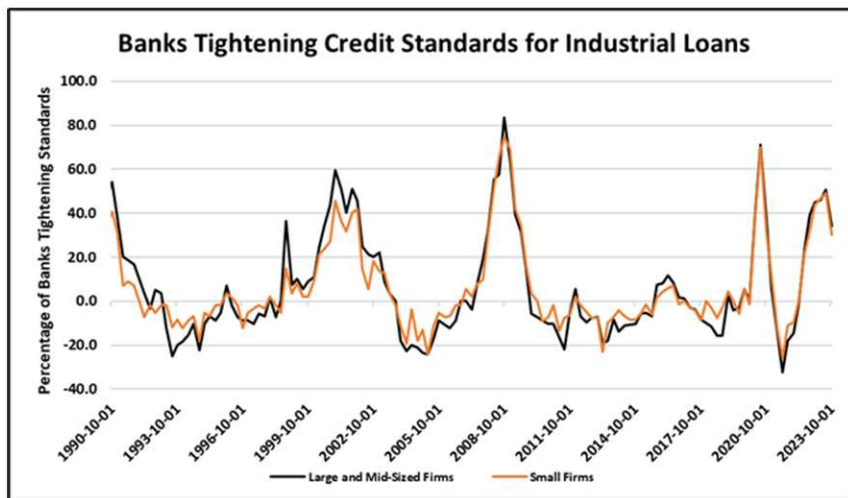
- The Producer Price Index for Construction Materials grew at 0.6% M/M and 0.8% Y/Y through December, which was about where the numbers have remained for the last several months. The peak in the index was 349 in May of 2022, this month's index was 328.
- Outlook:** The data has been showing elevated prices for some time although they have fallen somewhat from that peak in 2022. There have been some reductions in some commodity areas but producers have been reluctant to boost output as long as there are questions about the potential for a slowdown in the first half of the year. The inventory levels for these materials are still low and there is no real pressure to bring them up.

Banking Credit and Finance

Producer Price Index - Key Industry Products						
Category	PPI Code	Dec-24	Nov-23	M/M% Chg	Dec-22	Y/Y % Chg
Core Materials						
Cement	PCU327320327320	378.0	379.3	-0.4%	350.6	7.8%
Copper	WPUSI019011	517.0	505.8	2.2%	506.0	2.2%
Lumber	WPU081	240.1	240.4	-0.1%	264.4	-9.2%
Nickel	WPU102504	214.1	214.6	-0.2%	223.4	-4.2%
Pipe, Valves and Fittings						
Metal valves, except fluid power	WPU114902	442.1	442.1	0.0%	423.4	4.4%
Gates, globes, angles and check valves	WPU114902011	165.8	165.8	0.0%	159.6	3.9%
Ball valves	WPU11490202	590.0	590.0	0.0%	558.3	5.7%
Butterfly valves (formerly W2421490203)	WPU11490203	306.1	306.1	0.0%	292.0	4.8%
Industrial plug valves	WPU11490204	308.7	308.7	0.0%	297.7	3.7%
Plumbing and heating valves (low pressure)	WPU11490205	389.8	389.8	0.0%	376.4	3.6%
Solenoid valves	WPU11490208	372.2	372.2	0.0%	372.2	0.0%
Other industrial valves, including nuclear	WPU11490209	414.6	414.6	0.0%	392.4	5.7%
Automatic valves	WPU11490211	260.9	260.9	0.0%	248.9	4.8%
Metal pipe fittings, flanges and unions	WPU11490301	477.1	477.1	0.0%	476.0	0.2%
Steel pipe and tube	WPU101706	384.0	383.1	0.2%	468.4	-18.0%
Steel pipe and tube, alloy	WPU10170673	109.5	109.5	0.0%	109.5	0.0%
Steel pipe and tube, stainless	WPU10170674	141.5	142.9	-1.0%	153.5	-7.8%
Copper & copper-base alloy pipe and tube	WPU10250239	329.1	330.9	-0.5%	357.0	-7.8%
Plastic pipe	WPU07210603	189.5	192.8	-1.7%	215.1	-11.9%
Plastic pipe fittings and unions	WPU07210604	314.1	315.5	-0.5%	325.1	-3.4%
Plumbing Fixtures, Fittings and Trim						
Bath and shower fittings	WPU10540211	286.7	286.7	0.0%	286.7	0.0%
Lavatory and sink fittings	WPU10540218	204.6	204.6	0.0%	197.3	3.7%
Enameled iron and metal sanitary ware	WPU1056	290.6	281.6	3.2%	288.3	0.8%
Steam and Hot Water Equipment						
Cast iron heating boilers, radiators and convectors	WPU10610106	289.7	289.7	0.0%	279.2	3.8%
Domestic water heaters	WPU106601	570.6	570.6	0.0%	569.4	0.2%
Electric water heaters	WPU10660101	564.3	564.3	0.0%	569.4	-0.9%
Non-electric water heaters	WPU10660114	347.7	347.7	0.0%	346.7	0.3%
Warehousing, Storage and Related Services						
	WPU321	136.8	137.7	-0.6%	131.8	3.8%

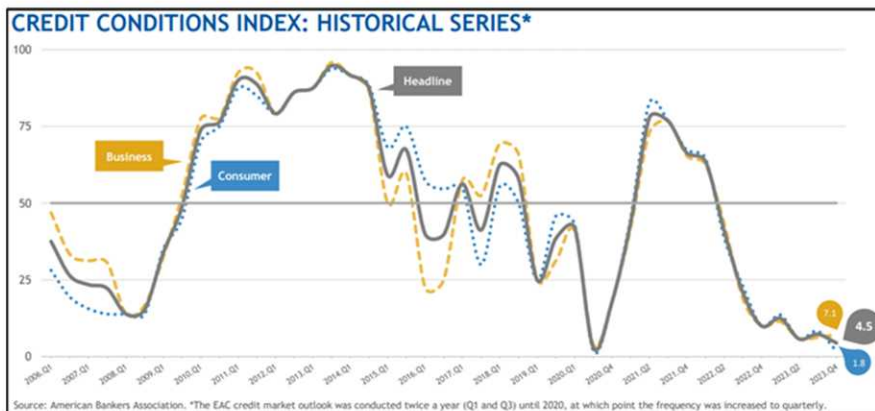
Overall Observations: There is a fairly hot debate regarding the Fed's intentions. The markets have concluded the Fed is on the cusp of a series of rate cuts that will start in the second quarter. The prediction is for four quarter point reductions. The problem is that the Fed has not indicated this is yet likely and there have been assertions that inflation is far from defeated and that rates should stay "higher for longer". There is some consensus on the assertion that rates will come down this year but the Fed's comments seem to suggest that these would come in Q3 or even Q4. The expectation of a rate cut has many waiting to take on additional debt until they see what happens.

Developer Insights: The growth in 2023 was indeed respectable but throughout the year there was a sense that the 2024 pipeline of projects had slowed – at least in certain sectors. The drivers for non-residential construction had been a combination of manufacturing expansion and the need for more logistics support. These are both likely to slow down a bit, but infrastructure investment is gearing up as all that government support cash starts to make its way into the marketplace. Little has been spent from the Inflation Reduction Act thus far (which was all about alternative energy) but that money is slated to appear this year.



Banks Tightening Conditions (DRTSCILM; DRTSCIS)

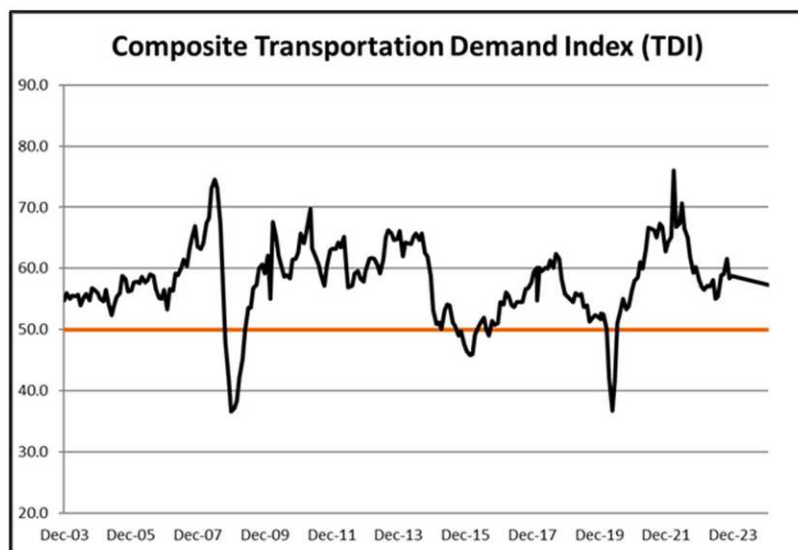
- The latest view of the number of banks tightening credit standards fell a bit to 39.9 in Q4 after sitting at 50.8% in Q3. The highest point recently was reached in 2020 with a 71.2 reading (the all-time high was in Q4, 2008 when it hit 83.6).
- Outlook:** The banks are starting to relax just a bit as they need to start booking business. It is their job to loan and they can't profit without it. The most important inhibitor has been the regulatory system but there has been a bit more flexibility as more banks are passing their "stress tests". There is also a sense that rates will fall later this year and that affects loan decisions made now. The tightest conditions have been seen with mid-sized banks and the loosest have been with the largest banks.



ABA Credit Conditions (ABA)

- The American Bankers Association's Business Credit Conditions Index was unchanged in the latest data. This suggests that credit remains tight but has started to show some early signs of thaw.
- Outlook:** The improved outlook is not dramatic, but it shows that two of the major concerns have started to fade. The "bank crisis" of a few months ago was blown out of proportion and has not had a long-lasting impact. The other issue is rates and the consensus is that they will be coming down this year – but exactly when remains a guess. The markets are convinced this will happen in the second quarter but the Fed itself seems to point towards Q3 at the earliest.

Supply Chain and Transportation Situation



Transportation Demand Normalizing

- The Transportation Demand Index shows the current demand environment for freight services deteriorated slightly but remains in the expansion zone with a reading of 57.3 as compared to 58.80 the month prior.
- Outlook:** The capacity glut was dealt with by the arrival of some 65,000 new operations. That took the number of loads per truck from 14 to 2.5. That has led to the exit of many of those recent entries. The sector has been feeling the pinch of the maritime slowdowns due to attacks in the Red Sea and the drought in the Panama Canal. There are now issues developing in the Black Sea as well and that further complicates shipping as it affects the ports that will be favored.

Mode Demand Slowing

- Each mode of transportation continued showing signs of decelerating demand, which was also pulling pricing lower. A reading over 50 here shows an expanding market, a reading under 50 is contracting. Every mode still had indexes above normal; demand is stable. At the same time these numbers are showing strain and that affects follow-on logistics decisions. Those that had been planning development of new warehouse capacity are not sure where they should be focusing their efforts with the indefinite inhibitions on the Panama Canal.

	23-Dec	23-Nov	22-Dec	Y/Y Change %	M/M Change %
Composite	57.3	58.8	57.1	0.4%	-2.6%
Rail	55.5	56.8	54.7	1.5%	-2.3%
Trucking	57.2	58.8	57.4	-0.3%	-2.7%
Air	64.7	65.9	59.9	8.0%	-1.8%
Maritime	62.9	64.4	57.7	9.0%	-2.3%

What we are Watching in Transportation Relative to Construction

The Maritime Crisis – This has been front page news for weeks and there seems no real end in sight. The Houthi rebels in Yemen are backed by Iran and the Iranian government backs both the Hamas terrorists in Gaza as well as the Hezbollah in Lebanon. The Houthi have no real stake in either Israel or Gaza but the Iranians are using them as a proxy army. Shipping has all ceased in the region as nobody can obtain insurance and the military efforts to bring the attacks to an end have failed. The Panama Canal was running an average of 35 ships a day but that number has fallen to around 20 due to the drought. This may be a problem for the rest of the year. Even the Black Sea has been affected as Russia has been mining a passage that was supposed to be open. A Norwegian ship hit one of these mines and now insurance is not available here either.

The prime issue for construction as it relates to transportation is where the activity will be expected. The merger of Canadian Pacific and Kansas City Southern created CPKC and the plan is to move freight through Vancouver and Lazaro Cardenas as opposed to the congested Pacific ports. This is expected to bring upwards of 800,000 to 1.3 million additional containers to the middle of the US. That has been provoking additional interest in warehouse and logistics support all along the I-35 corridor. Manufacturers are starting to migrate to that corridor if they need expanded rail access. Kansas City and Chicago are already the two largest rail yards in the country, and this will expand both of them.

Construction Industry Outlook

	2023				2024				2019	2020	2021	2022	2023	2024	2025
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4							
Real GDP	1.1	2.4	5.2	2.5	-0.9	-0.7	1.5	1.8	2.3	-2.8	5.9	2.1	2.1	0.8	1.8
Unemployment rate (%)	3.5	3.6	3.8	4.0	4.5	4.5	4.4	4.3	3.7	8.1	5.4	3.6	3.8	4.0	4.0
PCE Inflation (%Y/Y)	4.6	3.6	3.1	3.1	3.1	2.5	2.1	2.0	1.5	1.1	4.0	5.6	3.1	2.4	2.0
Core PCE Inflation (%Y/Y)	4.7	4.3	3.8	3.5	3.1	2.5	2.1	2.0	1.7	1.3	3.5	4.8	3.5	2.2	2.0
Fed Funds Rate	4.9	5.1	5.3	5.4	5.4	5.2	4.7	4.7	1.6	0.1	0.1	4.4	5.4	4.7	3.0
Canada Real GDP	2.1	1.1	0.6	-	-	-	-	-	1.8	-5.2	4.5	3.4	1.3	1.5	-
Unemployment rate (%)	5.0	5.2	5.6	-	-	-	-	-	5.8	9.5	7.4	5.3	5.7	6.0	-
Mexico Real GDP	3.7	3.5	-	-	-	-	-	-	-1.8	-8.2	5.0	2.7	1.6	2.1	-
Unemployment rate (%)	2.9	2.9	-	-	-	-	-	-	3.6	4.4	4.1	3.3	3.4	3.3	-

As the Fed starts to consider a reduction in interest rates sometime this year there are implications for the residential as well as non-residential sectors. There are basically three questions. When will the rate cuts take place? How long will it take for the Fed to reach its new goals? How much will the rates be reduced? The timing has been a major question as the markets seem to think the first of these reductions will be seen in the second quarter. This is not what the Fed decision makers are saying at this point – they seem to be orienting towards the end of Q3 at the earliest. The sense is that the Fed would make three or four quarter point cuts by the end of the year. But at the same time the Fed has warned that the factors that have reduced inflation are volatile and these could reverse at any point.

There is still a lot of speculation regarding the demand for housing and it varies with the demographics. Some assert the US is facing a shortage of over 5 million homes and others put that number at less than 10% of that. The difference in the assumptions is based on the behavior of the different age cohorts. The higher number assumes that Gen-Z and millennials will want the same housing as Gen-X and Boomers and that at some point they will start to buy single family homes. Those that favor the lower number assert that these cohorts are not interested in that option or simply can't afford it. The polls show that Gen-Z people are willing to stay in their parent's home until their 30s and even 40s.

Non-residential markets are showing strength. The model at right shows that the predictive outlook continues to outpace the long-term growth trend. This model uses 18-20 different economic metrics modeled over 20 years to build the outlook and although this is a volatile industry, the model has performed well in the past (96% accuracy 6 months in advance).

Non-residential construction will likely see some slowdown in some sectors although this slowing is likely to be gradual. Manufacturing is still expanding but the rush to reshore has slowed and much of the adjustment to technology and robotics has taken place. The office building market remains moribund and there is not a lot going on in traditional retail. The medical sector has begun to recover and so has interest in entertainment and travel.

