



December 1, 2023

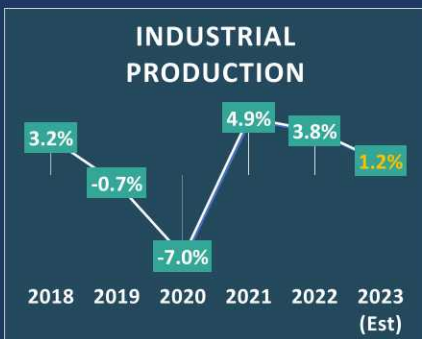
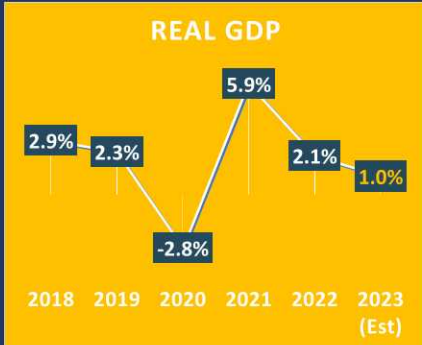
ECONOMIC NEWSLETTER

for the construction industry



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Selected Indices



Big Items

Real GDP: The latest GDP numbers came as a real shock and contradicted most of the assumptions that had been made regarding the advance of recession. The expectation for Q3 had been growth of around 1.0% and it came in at 4.9% based almost entirely on a major consumer surge. The Q4 estimates are not as robust but they have been trending up and are currently at 2.1%

Raw Material Prices/Availability: Inventories of raw material continue to be at multi-decade lows in global LME warehouses. The impact of this low supply continues to be blunted by the slowdown in the global economy. A surge in inflation or a sudden recovery in demand could reverse that trend quickly. The Baltic Dry Index dropped considerably during the summer but has been rebounding since as companies start to address those depleted stockpiles.

Labor Situation / Labor Costs: The construction sector Employment Cost Index showed that overall labor costs are still at or near all-time highs. The latest reading has it at 158.7 (Q3 of this year). Job openings in the construction sector have increased and are now at 431,000 (as of September). This was still down versus the peak hit last year when it hit 488,000 but job openings are coming back up.

Manufacturing (Materials): Global PMI data shows the US barely in expansion territory with a reading of 50.0 but this is trending in the right direction. Mexico is at 52.7 and that is the best reading in nearly a year. Canada is still in the contraction zone at 48.6 but the data improved from 47.5 that was notched the previous month. At present there are 22 nations that have PMI numbers that are under 50, suggesting that their manufacturing sectors are contracting.

Risks

Recession Risk: Recession has been avoided in the US for over a year despite a whole series of potential headwinds. The stunning Q3 GDP numbers contradicted the assumptions of most economists but the expectation is that Q4 will be less robust (but still growing at 2.1%). The big question is what happens in 2024. The assertion is that there will be a mild recession in the first two quarters (-1.0% in Q1 and -0.7% in Q2) but that growth resumes in Q3 and Q4 and leaves an annual growth rate between 2.0% and 2.5%.

Interest Rates: The assertion that 2024 will start with a recession has changed the conversation regarding interest rates and the policies of the Fed. The question is whether the Fed will decide to start lowering rates in order to boost the economy out of the downturn. Thus far the Fed has not indicated that it is ready to do this as they still see a distinct threat from inflation. The rate of inflation has indeed fallen to 3.8% as measured by the PCE but the goal remains to have inflation at 2.0%. Given the fact that unemployment is still below 4.0% the Fed has room to keep fighting inflation. The betting is that the Fed holds rates where they are until the second half of 2024 – “higher for longer”.

Energy Crisis: Thus far there is no evidence of an energy crisis despite the turmoil in the Middle East. It was expected that the Hamas War would trigger reactions from OPEC that would drag prices towards \$90 per barrel or even \$100. That has not happened, and the prices have remained in the 80s for both Brent Crude and West Texas Intermediate. Now we are heading into the winter, and this is when demand for gas peaks. It appears there is plenty of fuel available, but the US oil supply is at a very low point and any disruption would send prices soaring.

Macroeconomic Viewpoints

- Dr. Chris Kuehl

An End of the Year Big Picture - This issue is a trip down the black hole of economic theory! I know you readers can barely control your excitement at this point. Takes you back to those fun-filled hours in Econ 101, doesn't it? In truth there are some key issues that are a bit easier to understand if one is aware of what economists think this all means. These include the question of which is worse – inflation or recession? Then there is the debate over what the “neutral” rate of the Fed Funds Rate is. Another important conversation is over what to make of the gloom merchants that predict the end of the world by 2030. There are even lively debates over whether a low rate of joblessness is a good thing or not.

To start with, it is important to understand that economists are fundamentally philosophers as opposed to scientists. This is why we have the joke of putting five economists in a room and getting five opinions (six if one is from Harvard). We all look at the same data but reach different conclusions based on our philosophical position. In the interests of full-disclosure I can reveal that I am a devotee of Milton Friedman and the Chicago school. In other words: conservative, free-market, capitalist. Take the issue of unemployment. It would seem a good thing to have that rate low, as that means that there are more consumers with money to drive an economy that relies on consumption for roughly 70% of its GDP. But low levels of unemployment have a cost as well – higher wages. The driver of inflation right now is wages as there is a worker shortage. We have seen very active unions and will continue to see this. It is hard to hire people and hard to motivate. Employees are more expensive and less productive than has been the case in years. How to reverse some of these trends? Perhaps a lot of layoffs that make people a lot more grateful for having a job. Too much unemployment and the consumption levels plummet - so a balance must be struck.

Which is worse – recession or inflation? Most economists and most central bankers will assert that it is inflation. The reality is that recession doesn't hurt everybody and often benefits some companies and people. If your business is well run and comes into the recession with cash there is an opportunity to buy up competitors or expand or develop opportunities upstream and downstream. A full 60% of the Fortune 100 expanded or started in a recession. Individuals with cash find lower prices everywhere.

Inflation clobbers everyone as money loses its buying power. The poor get hit the hardest but the rich suffer as well. Everybody loses in an inflation surge and that means that central banks will ALWAYS pursue lower inflation with rate hikes even if it means inviting a recession.

Finally – what to do with the doom merchants chanting dirges for the end of the decade? Let's be clear. Economists can't predict to next Tuesday – much less six or seven years from now. Why do it then? These are less forecasts than they are warnings – the economist is trying to get our attention. The real message is that there are major problems, and if they are not addressed, the likelihood is a major economic crisis. We have six to seven years for the powers that be to deal with a massive government debt that could be as high as 150% of our GDP, the retirement of the entire Boomer generation (all 76 million of us), the massive shortfall in infrastructure maintenance (we get a D--- from the civil engineers), the impact of climate change (regardless of who and what to blame we know we are seeing change), chronic worker shortage and so on. If these are not dealt with, the economy very likely hits that wall so these strident assertions of a massive economic collapse are actually pleas to do something now to avert that fate. The cynic in me is not willing to hold my breath and hope that our leaders do much to avoid this pain.

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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. (Note: Q2 was the latest data available from the BEA).

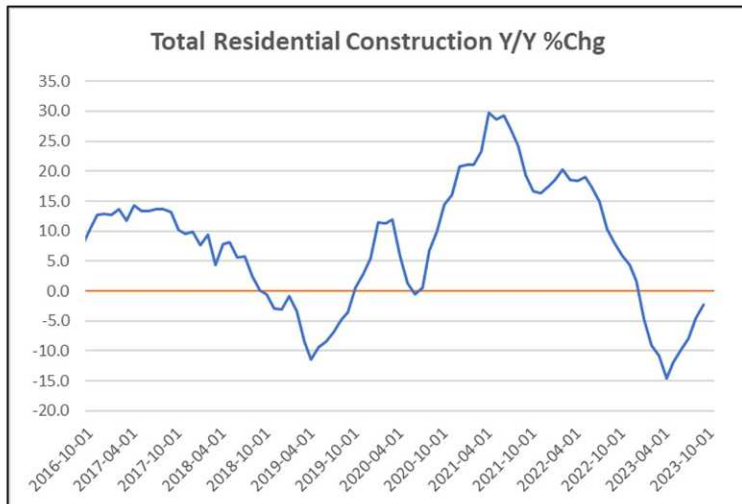
Rank	MSA	Construction Scoring System			Change in Gross Construction GDP		BEA Region
		.40 Construction GDP Estimate Index	.60 Population Growth 2015-2020 Index	Construction Potential Score	Q2 2023 Q/Q Change in Gross Construction GDP	Q2 2023 Y/Y Change in Gross Construction GDP	
1	Dallas-Fort Worth-Arlington, TX	42.3	8.8	2224.2	1.8%	9.7%	SW
2	Houston-The Woodlands-Sugar Land, TX	39.9	7.7	2058.3	1.8%	9.7%	SW
3	New York-Newark-Jersey City, NY-NJ-PA	78.1	-18.2	2032.8	0.4%	7.9%	ME
4	Chicago-Naperville-Elgin, IL-IN-WI	51.8	-1.7	1966.1	1.3%	8.0%	GL
5	Washington-Arlington-Alexandria, DC-VA-MD-WV	43.4	3.4	1940.8	0.9%	8.2%	ME
6	Los Angeles-Long Beach-Anaheim, CA	51.0	-2.4	1899.1	0.7%	6.2%	FW
7	Phoenix-Mesa-Scottsdale, AZ	25.4	7.0	1438.2	0.9%	8.2%	SW
8	Atlanta-Sandy Springs-Roswell, GA	26.7	5.8	1416.7	1.4%	10.0%	SE
9	San Francisco-Oakland-Hayward, CA	29.5	1.4	1265.4	0.7%	6.2%	FW
10	Miami-Fort Lauderdale-West Palm Beach, FL	25.6	2.9	1196.9	1.6%	8.6%	SE
11	Seattle-Tacoma-Bellevue, WA	21.7	4.6	1144.2	0.1%	7.6%	FW
12	Boston-Cambridge-Newton, MA-NH	24.2	1.9	1079.8	0.1%	8.0%	NE
13	Minneapolis-St. Paul-Bloomington, MN-WI	22.8	2.2	1041.9	1.3%	9.8%	GL
14	Las Vegas-Henderson-Paradise, NV	19.6	2.9	956.5	3.2%	16.1%	FW
15	Denver-Aurora-Lakewood, CO	18.8	2.9	926.4	1.3%	5.3%	RM
16	Riverside-San Bernardino-Ontario, CA	18.5	3.0	923.3	0.7%	6.2%	FW
17	Baltimore-Columbia-Towson, MD	21.3	0.0	854.7	0.2%	6.4%	ME
18	Austin-Round Rock, TX	13.9	4.3	810.2	1.8%	9.7%	SW
19	Orlando-Kissimmee-Sanford, FL	13.8	4.2	802.1	1.6%	8.6%	SE
20	Portland-Vancouver-Hillsboro, OR-WA	16.9	1.9	793.9	1.0%	9.5%	FW
21	Tampa-St. Petersburg-Clearwater, FL	13.0	4.1	765.6	1.6%	8.6%	SE
22	Salt Lake City, UT	15.6	1.2	694.5	3.1%	13.3%	RM
23	Sacramento-Roseville-Arden-Arcade, CA	13.9	1.7	656.2	0.7%	6.2%	FW
24	Nashville-Davidson-Murfreesboro-Franklin, TN	13.2	2.0	645.7	3.8%	12.2%	SE
25	Indianapolis-Carmel-Anderson, IN	13.4	1.6	633.5	2.3%	10.0%	GL
26	San Diego-Carlsbad, CA	14.1	0.7	607.9	0.7%	6.2%	FW
27	Charlotte-Concord-Gastonia, NC-SC	9.1	4.0	600.9	2.3%	10.1%	SE
28	Columbus, OH	11.0	1.9	554.7	2.1%	10.4%	GL
29	Detroit-Warren-Dearborn, MI	13.3	0.2	542.4	0.3%	10.3%	GL
30	St. Louis, MO-IL	13.7	-0.2	538.2	0.2%	6.2%	P
31	San Antonio-New Braunfels, TX	8.7	3.1	535.6	1.8%	9.7%	SW
32	Raleigh, NC	10.1	2.2	534.2	2.3%	10.1%	SE
33	San Jose-Sunnyvale-Santa Clara, CA	11.8	0.3	488.7	0.7%	6.2%	FW
34	Cincinnati, OH-KY-IN	9.5	1.2	453.0	2.0%	10.0%	GL
35	Kansas City, MO-KS	9.3	1.3	451.0	0.5%	7.9%	P
36	Jacksonville, FL	7.6	2.1	426.5	1.6%	8.6%	SE
37	Baton Rouge, LA	8.9	0.5	382.9	0.3%	6.7%	SE
38	Provo-Orem, UT	6.8	1.2	343.7	3.1%	13.3%	RM
39	Boise City, ID	5.9	1.4	318.1	2.5%	12.2%	RM

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37	Baton Rouge, LA	8.9	0.5	382.9	0.3%	6.7%	SE
38	Provo-Orem, UT	6.8	1.2	343.7	3.1%	13.3%	RM
39	Boise City, ID	5.9	1.4	318.1	2.5%	12.2%	RM
40	Charleston-North Charleston, SC	6.3	1.1	318.0	1.6%	8.5%	SE
41	Richmond, VA	6.6	0.4	286.7	1.5%	9.9%	SE
42	Louisville-Jefferson County, KY-IN	7.2	-0.3	273.9	2.0%	9.5%	SE
43	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	5.8	0.6	269.6	0.4%	7.3%	ME
44	Grand Rapids-Wyoming, MI	5.6	0.7	267.1	0.3%	10.3%	GL
45	Reno, NV	6.0	0.5	266.0	3.2%	16.1%	FW
46	North Port-Sarasota-Bradenton, FL	4.6	1.3	262.1	1.6%	8.6%	SE
47	Cape Coral-Fort Myers, FL	4.5	1.3	255.6	1.6%	8.6%	SE
48	Des Moines-West Des Moines, IA	4.1	1.4	252.1	1.2%	12.1%	P
49	Ogden-Clearfield, UT	5.1	0.8	251.0	3.1%	13.3%	RM
50	Milwaukee-Waukesha-West Allis, WI	6.1	0.0	241.4	2.0%	10.4%	GL
51	Urban Honolulu, HI	6.6	-0.5	237.9	1.6%	7.6%	FW
52	Greenville-Anderson-Mauldin, SC	4.5	0.9	229.4	1.6%	8.5%	SE
53	Oklahoma City, OK	4.2	0.9	226.9	0.0%	10.3%	SW
54	Colorado Springs, CO	4.1	0.9	216.8	1.3%	5.3%	RM
55	New Orleans-Metairie, LA	5.1	0.1	213.0	0.3%	6.7%	SE
56	Omaha-Council Bluffs, NE-IA	4.2	0.6	207.6	2.2%	14.6%	P
57	Lakeland-Winter Haven, FL	2.5	1.4	183.4	1.6%	8.6%	SE
58	Columbia, SC	3.8	0.5	183.2	1.6%	8.5%	SE
59	Durham-Chapel Hill, NC	1.9	1.7	180.5	2.3%	10.1%	SE
60	Memphis, TN-MS-AR	4.2	0.0	169.1	3.2%	11.4%	SE
61	Myrtle Beach-Conway-North Myrtle Beach, SC-NC	2.4	1.2	168.5	2.1%	9.6%	SE
62	Tulsa, OK	3.5	0.3	161.2	0.0%	10.3%	SW
63	Madison, WI	3.3	0.4	160.3	2.0%	10.4%	GL
64	Tucson, AZ	3.0	0.7	160.1	0.9%	8.2%	SW
65	Birmingham-Hoover, AL	5.5	-1.0	159.4	0.9%	9.0%	SE
66	Fresno, CA	3.3	0.5	158.6	0.7%	6.2%	FW
67	Stockton-Lodi, CA	2.6	0.7	146.0	0.7%	6.2%	FW
68	Greensboro-High Point, NC	3.1	0.4	145.2	2.3%	10.1%	SE
69	Deltona-Daytona Beach-Ormond Beach, FL	2.3	0.8	143.4	1.6%	8.6%	SE
70	Albany-Schenectady-Troy, NY	3.6	0.0	141.4	0.2%	8.2%	ME
71	Naples-Immokalee-Marco Island, FL	2.7	0.5	141.1	1.6%	8.6%	SE
72	Lancaster, PA	3.3	0.2	140.9	0.7%	9.3%	ME
73	Albuquerque, NM	3.2	0.2	138.9	0.7%	11.0%	SW
74	Palm Bay-Melbourne-Titusville, FL	2.4	0.6	134.2	1.6%	8.6%	SE
75	Greeley, CO	2.2	0.7	133.0	1.3%	5.3%	RM
76	Fayetteville-Springdale-Rogers, AR-MO	2.7	0.4	131.0	0.5%	7.9%	SE
77	Santa Rosa, CA	3.5	-0.1	129.7	0.7%	6.2%	FW
78	Bridgeport-Stamford-Norwalk, CT	3.4	-0.1	129.4	0.8%	6.4%	NE
79	Rochester, NY	3.6	-0.2	128.3	0.2%	8.2%	ME
80	Knoxville, TN	2.9	0.1	123.6	3.8%	12.2%	SE
81	Bakersfield, CA	2.6	0.3	123.5	0.7%	6.2%	FW
82	Augusta-Richmond County, GA-SC	2.5	0.4	122.1	1.4%	9.6%	SE
83	Little Rock-North Little Rock-Conway, AR	2.5	0.2	113.8	1.7%	9.0%	SE
84	Oxnard-Thousand Oaks-Ventura, CA	2.9	-0.1	112.8	0.7%	6.2%	FW
85	Fort Collins, CO	2.0	0.4	108.3	1.3%	5.3%	RM
86	Salisbury, MD-DE	2.1	0.4	107.7	0.2%	6.4%	ME
87	Lexington-Fayette, KY	2.2	0.3	107.0	1.5%	8.6%	SE
88	Vallejo-Fairfield, CA	2.3	0.2	105.8	0.7%	6.2%	FW
89	Huntsville, AL	1.8	0.5	103.2	0.3%	6.7%	SE
90	Pensacola-Ferry Pass-Brent, FL	1.8	0.5	100.7	1.6%	8.6%	SE
91	Spokane-Spokane Valley, WA	1.9	0.4	100.7	0.1%	7.6%	FW
92	Corpus Christi, TX	3.2	-0.4	100.2	1.8%	9.7%	SW
93	Port St. Lucie, FL	1.4	0.6	94.6	1.6%	8.6%	SE
94	Wichita, KS	2.4	-0.1	89.7	1.5%	8.8%	P
95	Killeen-Temple, TX	1.3	0.6	86.3	1.8%	9.7%	SW
96	Anchorage, AK	2.3	-0.1	86.3	2.0%	15.8%	FW
97	Fargo, ND-MN	1.8	0.2	84.7	-3.0%	6.7%	P
98	Kennewick-Richland, WA	1.5	0.4	83.8	0.1%	7.6%	FW
99	Savannah, GA	1.7	0.3	83.2	1.4%	10.0%	SE

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100	McAllen-Edinburg-Mission, TX	1.3	0.5	80.3	1.8%	9.7%	SW
101	Modesto, CA	1.6	0.2	76.5	0.7%	6.2%	FW
102	Sioux Falls, SD	1.3	0.3	72.2	2.3%	9.1%	P
103	Santa Maria-Santa Barbara, CA	1.6	0.0	66.8	0.7%	6.2%	FW
104	Lafayette, LA	1.2	0.0	47.6	0.3%	6.7%	SE
105	Visalia-Porterville, CA	0.9	0.1	43.6	0.7%	6.2%	FW

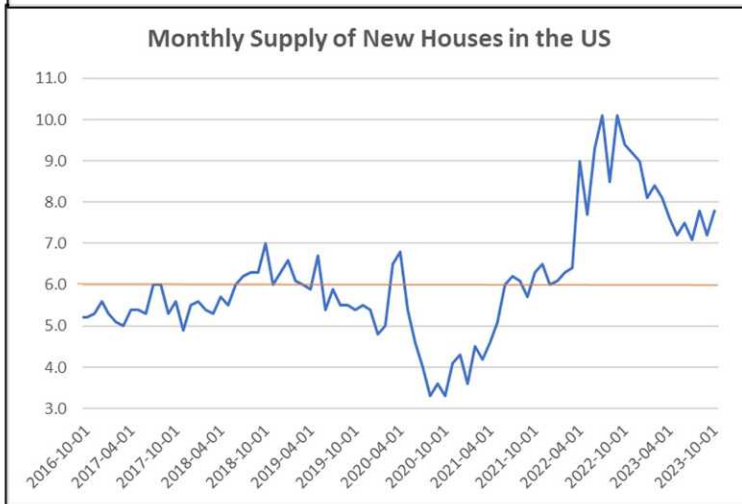
Residential Construction

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



Residential Construction Spending (PRRESCONS)

- Total residential construction in September (latest available), was slightly up from August (872,038 compared to 866,550) but still down from the peak in May of 2022 (969,943).
- Outlook: Most sources are still reporting that housing demand for “units” (whether single-family or multi-family housing) is still above 2 million units. Most of these potential buyers would like to purchase a single-family home but are unable to because of cost barriers to entry. But private construction is finding a way to work around higher interest rates by reducing building costs, shrinking square footage, and reducing the level of materials being used in projects (to reduce material costs). There was also some slightly worrisome slowing of multi-family projects in the last two months. Some of this is seasonal softening, but a lot of it is due to lack of banking support for certain projects in certain geographies according to anecdotes.



Monthly Supply of Homes (PRRESCONS)

- The monthly supply of homes came in at 7.8 months of inventory on hand, far from the long-term average of 6% (which is a “balanced” market).
- Outlook: The factors which determine the monthly supply of homes will vary considerably because they are impacted by builder confidence and the ability of existing homeowners to sell. Even though the monthly supply of homes is lower than it was in 2022 and early in 2023, they are still slightly elevated from what is “normal”. The problem is that the housing market is highly regionalized, and this macro data does not always represent tight market conditions that still exist in some markets. Generally, existing home prices remain elevated while new home prices are coming down (down 22% from their peak in 2022).

Month	United States				
	Total	1 unit	2 units	3 to 4 units	5 units or more
Oct 2022	120.8	65.9	2.7	1.9	50.4
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

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

- Housing Permits at a national level are indicative of what to expect in the coming months. Permits were up by 1.8% sequentially between September and October but were down 3.7% Y/Y. Single family permits were up 14% Y/Y and multi-family permits were down 26% Y/Y. Multi-family projects can be volatile based on the size of some projects.
- Looking Ahead:** Builders are finding it more difficult to help private residential buyers with creative financing, and prices of homes are coming down. Reducing the square footage of homes and reducing some of the material quality being used is one tactic to get overall costs down. There is still demand for homes, but higher interest rates are pushing many potential buyers (especially first-time home buyers) to sit on the sidelines. As home prices move lower, that helps close the buyer gap and pull people into the market.

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
Oct 2022	8.3	-21.0%	-13.8%	-19.4%	4.3	-21.8%	-6.9%	-18.9%	4.0	-20.0%	-19.3%	-20.0%
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%

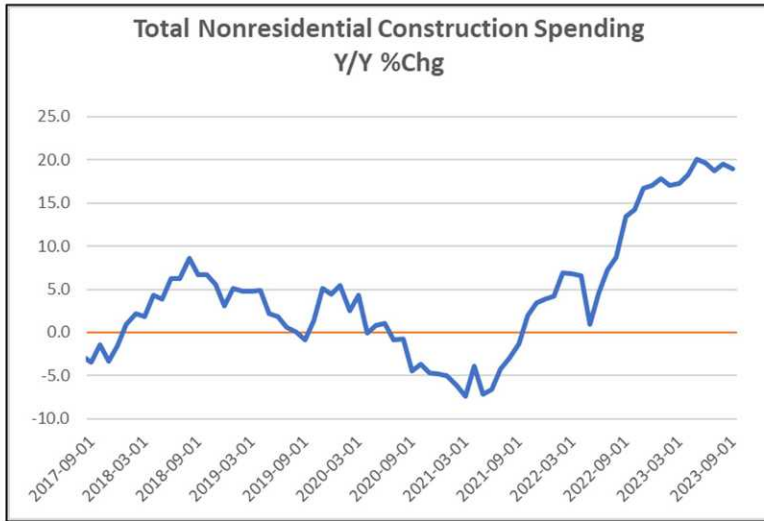
Month	Midwest											
	Total	Y/Y	3-Month Moving Avg.	M/M	1 unit	Y/Y	3-Month Moving Avg.	M/M	5 unit	Y/Y	3-Month Moving Avg.	M/M
Oct 2022	19.9	-11.9%	3.9%	0.0%	9.7	-18.5%	-2.1%	-4.9%	10.2	-4.7%	11.5%	5.2%
Nov 2022	15.6	-10.3%	-7.2%	-21.6%	7.3	-31.1%	-12.3%	-24.7%	8.3	22.1%	-1.5%	-18.6%
Dec 2022	11.5	-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%

Month	South											
	3-Month Moving				1 unit	Y/Y	3-Month Moving		5 unit	Y/Y	3-Month Moving	
	Total	Y/Y	Avg.	M/M			Avg.	M/M			Avg.	M/M
Oct 2022	67.6	-1.3%	-2.6%	-1.7%	39.2	-21.1%	-3.4%	-4.9%	28.4	51.1%	-1.2%	2.9%
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%

Month	West											
	3-Month Moving				1 unit	Y/Y	3-Month Moving		5 unit	Y/Y	3-Month Moving	
	Total	Y/Y	Avg.	M/M			Avg.	M/M			Avg.	M/M
Oct 2022	25.0	-28.2%	-5.6%	-18.3%	12.6	-31.9%	-6.6%	-10.6%	12.4	-23.9%	-3.2%	-24.8%
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%

Housing and Interest Rate Forecast, 11/07/2023							
	2019	2020	2021	2022	2023	2024	2025
Housing Activity (000)							
Total Housing Starts	1,292	1,397	1,606	1,551	1,380	1,333	1,429
Single Family	889	1,003	1,132	1,004	912	946	1,027
Multifamily	403	394	474	547	467	386	403
New Single Family Sales	685	833	769	637	678	714	792
Existing Single-Family Home Sales	4,746	5,057	5,420	4,530	3,700	3,957	4,452
Interest Rates							
Federal Funds Rate	2.16%	0.36%	0.08%	1.68%	5.06%	5.38%	4.05%
Treasury Yield:							
Ten Year Maturity	2.14%	0.89%	1.44%	2.95%	4.02%	4.32%	3.63%
Freddie Mac Commitment Rate:							
Fixed Rate Mortgages	3.94%	3.11%	2.96%	5.34%	6.88%	7.04%	5.81%
Prime Rate	5.28%	3.54%	3.25%	4.85%	9.33%	12.42%	9.86%
For more forecast details, visit www.nahb.org.							

Nonresidential Construction



Total Non-Residential Construction (TLNRESCONS)

- Total Non-Residential Construction spending in September hit a \$1.1 billion annual pace – 19% higher than spending rates a year ago. On a sequential basis, total nonresidential spending was 0.3% higher month-over-month.
- Outlook:** As is noted in later sections of this quarter’s briefing, there are some pressures building in the banking sector. Nearly 70% of the delayed project starts are now due to lack of financing, and less about supply chain disruptions or labor shortages. However, project planning and design activity as well as construction spending and starts are still trending well above historical norms, and that is expected to continue across several sectors as mentioned in the write-up below.

Type of Construction	Sep 2023 ^p	Aug 2023 ^r	Jul 2023 ^r	Jun 2023	May 2023	Sep 2022	Percent change Sep 2023 from -	
							Aug 2023	Sep 2022
Total Construction	1,996,525	1,988,312	1,969,005	1,956,226	1,946,733	1,836,930	0.4	8.7
Residential	882,325	877,171	865,747	870,655	864,027	900,993	0.6	-2.1
New single family	402,319	397,249	390,679	379,422	371,929	427,625	1.3	-5.9
New multifamily	135,650	135,847	134,484	133,850	130,516	110,911	-0.1	22.3
Nonresidential	1,114,201	1,111,141	1,103,258	1,085,571	1,082,705	935,937	0.3	19.0
Manufacturing	198,926	199,765	197,225	192,970	200,258	122,877	-0.4	61.9
Conservation and Dev	11,678	11,533	10,900	11,585	11,559	9,155	1.3	27.6
Sewage and waste disposal	42,127	42,295	41,523	41,591	39,486	33,367	-0.4	26.3
Educational	118,221	116,109	114,881	112,990	112,404	99,494	1.8	18.8
Public safety	13,156	13,212	13,340	13,415	13,080	11,364	-0.4	15.8
Power	123,236	122,080	120,906	117,274	118,003	106,593	0.9	15.6
Health care	62,296	62,568	62,282	61,848	61,852	54,079	-0.4	15.2
Amusement and recreation	33,592	33,171	33,179	32,978	31,994	29,221	1.3	15.0
Lodging	24,266	24,430	24,132	23,520	23,145	21,177	-0.7	14.6
Water supply	27,780	27,870	27,545	27,506	26,204	24,878	-0.3	11.7
Highway and street	132,132	132,228	131,712	130,025	129,654	119,677	-0.1	10.4
Office	99,937	99,742	99,215	98,346	96,838	91,727	0.2	9.0
Commercial	134,118	133,129	134,614	129,768	127,761	124,415	0.7	7.8
Transportation	64,331	64,562	63,502	64,014	62,987	60,297	-0.4	6.7
Religious	3,155	3,233	3,329	3,216	2,998	2,993	-2.4	5.4
Communication	25,252	25,213	24,974	24,527	24,483	24,624	0.2	2.6

Non-Residential Spending By Sector

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

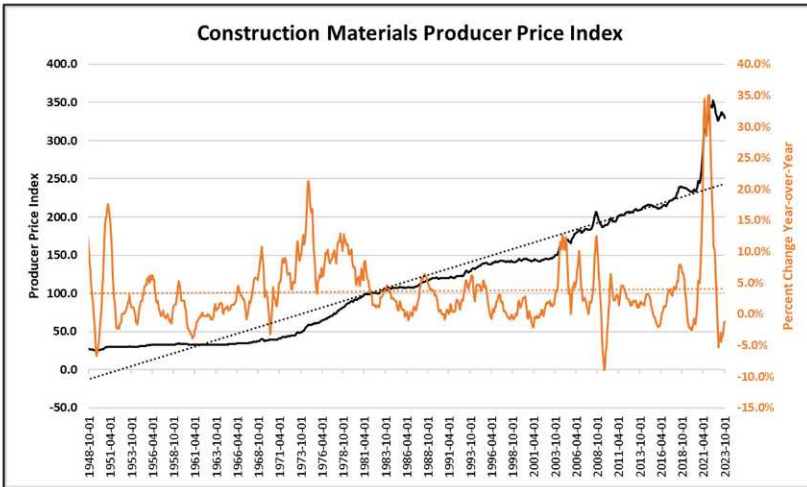
- A continuation of prior quarterly themes continued in the fastest growing non-residential construction sector: the manufacturing complex. This has continued to be motivated by two factors. The first is reshoring as almost 90% of sourcing managers report an effort to diversify. The other factor is the expansion of robotics and automation as these machines often require different space.
- New efforts by the Biden Administration to secure supply chain activity for critical industries will also continue to push more nonresidential construction growth.
- Also as mentioned later in the briefing, government spending under the CHIPS Act and Inflation Reduction Act (IRA) will kick-in in 2024 and will supplement the Infrastructure Bill (which is adding roughly \$50 billion in supplemental spending annually for the next 4 years).
- Many of the sectors in the chart at left are showing double-digit annual growth rates. If we look at each of them independently, they clearly continue to exceed historical spending levels.
- Health care spending has started to emerge from the pandemic doldrums as elective surgeries return. The drive 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. Better profitability will help expand more spending in these ancillary areas in 2024. Developers are focusing heavily on private investments into bioscience and health care related projects.

Raw Materials

Construction Materials Price Index

(WPUSI012011)

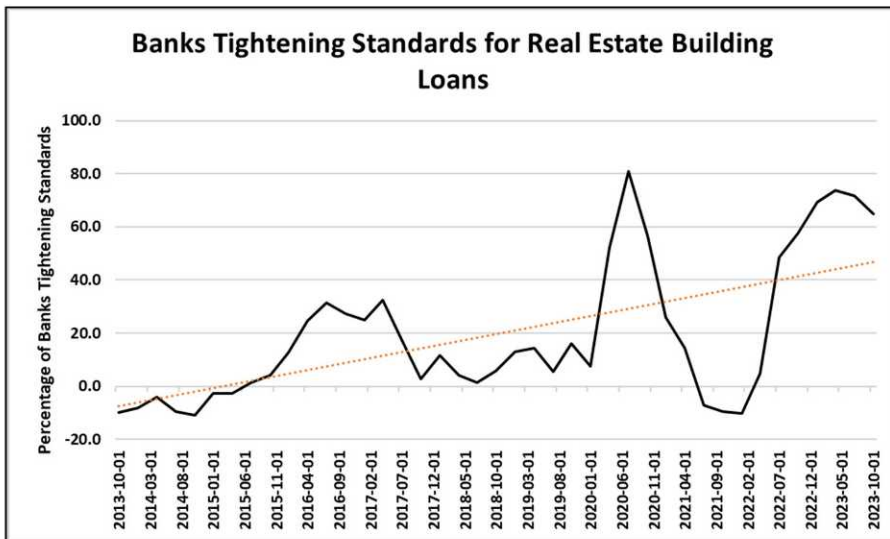
- The Producer Price Index for Construction Materials was 1.2% lower year-over-year in October (the latest available; down 1.3% last month). Prices for the construction sector were also down 0.8% M/M (down 0.5% last month).
- Outlook:** Despite prices overall starting to decelerate, the price index continues to hover near all-time highs and remains significantly higher than the period prior to the pandemic and the long-term trendline. Some inflation is involved in this data, but rates continue to remain higher at a time when global supplies of raw materials are higher, transportation costs are lower, and overall construction costs should be easing.



Producer Price Index - Key Industry Products						
Category	PPI Code	Oct-23	Sep-23	M/M% Chg	Oct-22	Y/Y % Chg
Core Materials						
Cement	PCU327320327320	382.4	382.2	0.1%	344.2	11.1%
Copper	WPUSI019011	492.2	499.9	-1.5%	472.7	4.1%
Lumber	WPU081	284.0	251.8	12.8%	282.9	0.4%
Nickel	WPU102504	214.6	220.1	-2.5%	227.2	-5.5%
Pipe, Valves and Fittings						
Metal valves, except fluid power	WPU114902	443.1	437.1	1.4%	418.8	5.8%
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%	545.6	8.1%
Butterfly valves (formerly W2421490203)	WPU11490203	306.1	306.1	0.0%	285.3	7.3%
Industrial plug valves	WPU11490204	308.7	308.7	0.0%	283.0	9.1%
Plumbing and heating valves (low pressure)	WPU11490205	389.8	393.4	-0.9%	376.4	3.6%
Solenoid valves	WPU11490208	372.2	372.2	0.0%	372.2	0.0%
Other industrial valves, including nuclear	WPU11490209	416.5	406.7	2.4%	391.5	6.4%
Automatic valves	WPU11490211	261.5	249.1	5.0%	248.3	5.3%
Metal pipe fittings, flanges and unions	WPU11490301	477.9	477.9	0.0%	475.7	0.5%
Steel pipe and tube	WPU101706	383.1	383.5	-0.1%	473.1	-19.0%
Steel pipe and tube, alloy	WPU10170673	109.5	109.5	0.0%	109.5	0.0%
Steel pipe and tube, stainless	WPU10170674	142.9	143.7	-0.6%	155.1	-7.9%
Copper & copper-base alloy pipe and tube	WPU10250239	349.9	366.5	-4.5%	378.7	-7.6%
Plastic pipe	WPU07210603	192.9	196.6	-1.9%	217.3	-11.2%
Plastic pipe fittings and unions	WPU07210604	315.6	316.9	-0.4%	328.1	-3.8%
Plumbing Fixtures, Fittings and Trim	WPU105402	395.0	395.0	0.0%	388.5	1.7%
Bath and shower fittings	WPU10540211	286.7	286.7	0.0%	282.8	1.4%
Lavatory and sink fittings	WPU10540218	204.6	204.6	0.0%	197.3	3.7%
Enameled iron and metal sanitary ware	WPU1056	290.6	283.5	2.5%	288.0	0.9%
Steam and Hot Water Equipment	WPU1061	428.5	428.5	0.0%	404.5	5.9%
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%	569.2	0.2%
Electric water heaters	WPU10660101	564.3	564.3	0.0%	563.9	0.1%
Non-electric water heaters	WPU10660114	347.7	347.7	0.0%	346.5	0.3%
Warehousing, Storage and Related Services	WPU321	137.8	138.4	-0.4%	132.2	4.2%

Overall Observations: The Federal Reserve continues to keep a close eye on inflation before adjusting interest rate policy. At this time, average inflation is trending at 3.8% (trimmed mean personal consumption expenditures) and wages are growing at roughly 4.1%. Although the Fed’s target inflation rate is 2%, if wages are outpacing inflation, it has the wherewithal to pause rate hikes. Given that inflation continues to trend downward, this may signal the end of the Fed’s rate hike cycle. Some estimates by the Fed suggest that some easing of rates could start in the second half of 2024, but much will go into the decision to start easing interest rate policy.

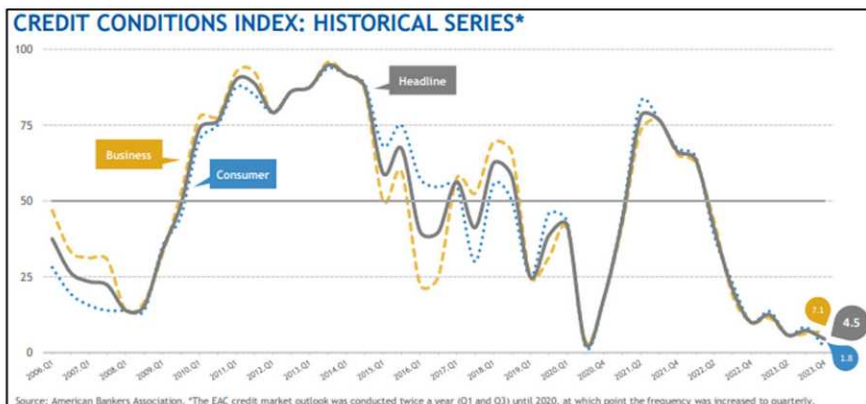
The banking sector is still looking for opportunities but is finding it more difficult finding projects that they can pursue. The Fed’s estimate on bank credit being extended fell by 0.7% year-over-year through October, that was the second year-over-year contraction since 1975. The prior period was in 2009 during the financial crisis.



Banks Tightening Conditions

(DRTSCILM; DRTSCIS)

- The latest view of the number of banks tightening credit standards for building loans has eased slightly to 64.9%, but they remain in their second highest cycle going back 20 years or more. Roughly 34% of banks are tightening loan standards for commercial and industrial loans to large and middle market firms; 30.4% are tightening standards to small firms.
- **Outlook:** Credit lending overall has hit its second lowest levels since the 1970’s. The only other time when the amount of credit being lent was weaker was in 2009 during the Great Recession and Global Financial Crisis. The banking community is seeking opportunities to lend, but regulatory pressures are limiting some of the flexibility that they have in lending.

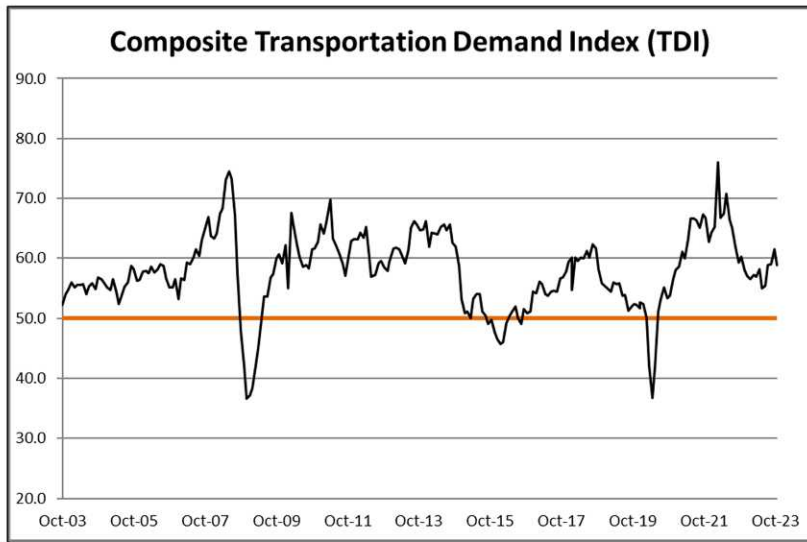


ABA Credit Conditions

(ABA)

- The American Bankers Association’s Credit Conditions Index for business credit fell 0.9 points to just 7.1 in early Q4. The ABA mentioned that an index reading below 50 suggests that quality conditions and credit availability will continue to worsen over the next 6 months.
- **Outlook:** Some of what we are hearing is that a year ago, 70% of construction project delays were due to labor shortages or supply chain challenges and product shortages. Today, some product shortages still exist and that is holding up some projects, but 63% of project start delays are now due to lack of financing. The ABA data would suggest that these conditions are likely to continue for the next two quarters at a minimum.

Supply Chain and Transportation Situation



Transportation Demand Weaker

- The Transportation Demand Index shows the current demand environment for freight services below 60, yet still at a historically stable level. Overall, the composite metric came in at 58.9 in October, 4.2% lower than levels at this time last year.
- **Outlook:** Transportation services activity will be radically different depending on the mode a shipper chooses to use. Rail and Less-than-Truckload rates are still elevated above what would otherwise be expected (given current demand and loose capacity environments), but for different reasons. LTL is higher because of a major trucking bankruptcy, and rail volumes are picking up and rates are elevated because demand is a bit higher. Truckload rates, however, are still 13-18% lower than they were a year ago and capacity is loose. The Load-to-Truck-Ratio for TL is still at historically low levels (suggesting that capacity is widely available).

	23-Oct	23-Sep	22-Oct	Y/Y Change %	M/M Change %
Composite	58.9	61.5	60.3	-2.3%	-4.2%
Rail	56.9	58.8	57.8	-1.6%	-3.2%
Trucking	59.1	61.9	60.6	-2.5%	-4.5%
Air	63.1	64.6	63.1	0.0%	-2.3%
Maritime	61.2	62.8	61.2	0.0%	-2.5%

Mode Demand Slowing

- Each mode of transportation continued showing signs of decelerating demand, which was also pulling pricing lower. Although each mode still has some demand, it is lower than demand from a year ago. Business inventories are still very high across most industries, and that chokes off the upstream portion of the entire supply chain (movement or raw materials, use of energy, hiring of assembly line labor). And that has overall transportation and freight activity lower – which provides construction firms with an opportunity to negotiate on price.

What we are Watching in Transportation Relative to Construction

- **Global Pressures Index Hits All-Time Low.** The New York Fed publishes a Global Supply Chain Pressures Index and it just hit an all-time low. This means that supply chain bottlenecks and congestion on a global basis are at their lowest levels in the history of the index (dating well before the 1990's). Although areas of concern continue (mentioned in the item below), supply chain managers largely can plan their order cycle times and transit times with more accuracy. For many purchasing managers, this allows them to trim inventories and avoid risking stockouts in the process. This also allows them to reduce cost of capital carrying costs.
- **Three Areas of Concern Worldwide.** There are three areas still causing some concern in the global supply chain. First, the Panama Canal is still facing drought conditions in a feeder lake that provides water for the lock system. This is causing transit delays and fewer ships can transit the canal than in a normal year. Some cargo is being shifted to alternative ports – and that is a factor affecting US distribution. The other concern is the Mississippi River and the movement of some commodities between upper Midwest/Great Lakes region and the Gulf. Commodities are being impacted and transportation costs for bulk commodities are higher as a result. Lastly, the war in Gaza is placing some strains on the Suez Canal and risks of transits through the region are pushing some insurance costs higher for transits using the area. It is also rising security risks and forcing higher operating costs to keep crews safe.

Construction Industry Outlook

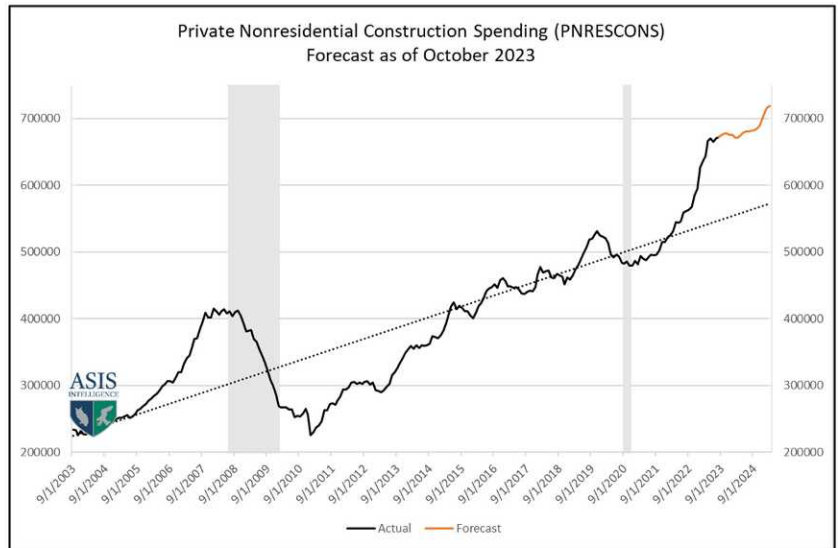
	2023				2024				2019	2020	2021	2022	2023	2024	2025
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4							
Real GDP	1.1	2.4	2.5	1.0	-1.0	-0.7	2.2	2.3	2.3	-2.8	5.9	2.1	2.1	0.7	1.8
Unemployment rate (%)	3.5	3.6	3.8	4.0	4.5	4.5	4.4	4.3	3.7	8.1	5.4	3.6	3.8	4.3	4.5
PCE Inflation (%Y/Y)	4.6	3.6	3.1	3.1	3.1	2.5	2.1	2.0	1.5	1.1	4.0	5.6	3.1	2.2	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	5.6	5.6	5.2	4.7	4.0	1.6	0.1	0.1	4.4	5.5	4.0	3.1

Although growth is expected to be lackluster in the first half of the year, the economy is expected to continue to be propped up by stable consumer spending, government investments, and most importantly for CICPAC, construction activity. Although some pressures are building in the banking sector and funding of projects is slowing in some regions, most areas of the country are still seeing strong construction project work, especially in the manufacturing/industrial sector. There is no doubt that activity is slowing from its blistering pace of growth over the past two years, but on a historical basis, it remains stable.

Non-residential markets are showing strength. The model at right shows that the predictive outlook continues to outpace the long-term growth trend by a strong amount.

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.

Government spending from the Infrastructure Act, Inflation Reduction Act, and CHIPS Act will add more spending to the construction sector next year. Most nonresidential construction activity is still showing growth of more than 19% on \$1.1 billion in annual spending.



Manufacturing construction spending is still the fastest growing with more than 62% annual growth on nearly \$200 billion in annual spending. Infrastructure spending is now running double-digit growth rates across conservation and development, sewage and waste disposal, power systems, water supply, and highway and street construction.

Health care is starting to gain some momentum and should see more growth in 2024 as hospitals come out from under their Covid restrictions and move to increase profitability by moving higher profit operations into structures that are isolated from pandemic risks.