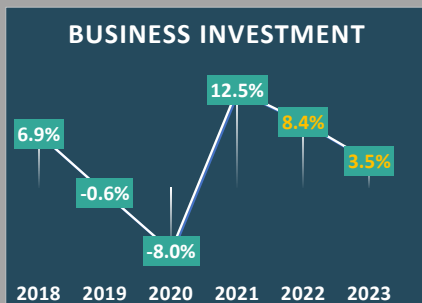
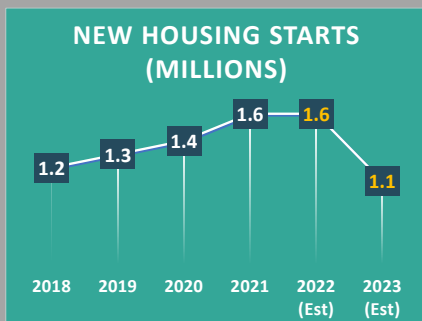
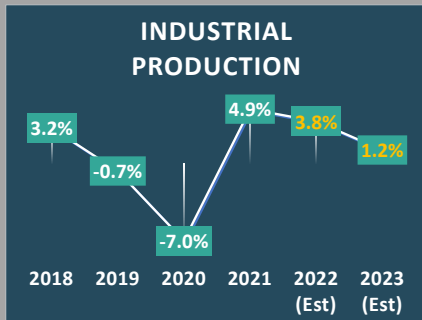
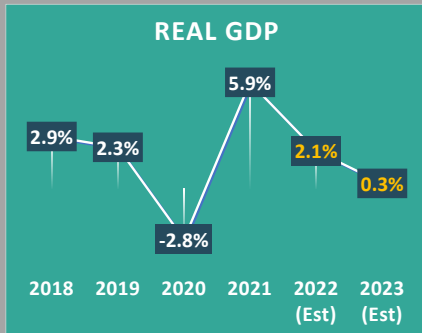


Selected Indices



Executive Summary – May '23

Big Items

GDP: The latest estimate for Q2 GDP growth coming from the GDP Now study conducted by the Atlanta Fed holds that there will be growth of 2.0%. Remember that this is a running estimate and changes almost daily. A week or so ago the estimate was at 3.2%. The Q1 numbers came in at 1.1% and that was roughly where GDP Now had them at the end of March. The final estimate from GDP Now for the second quarter will appear in about three weeks.

Industrial Production: Industrial production rose a bit in April – up by 0.5%. This was after a stagnant two months when the data basically just shifted sideways. The manufacturing sector was up by 1.0% and much of this was attributable to a surge in automotive manufacturing. If this was stripped out the gains in manufacturing were just 0.4%. There was a gain of 0.6% in the mining category and a fall in utilities of 3.1% as this is the moderate time of year for temperatures. The capacity utilization numbers rose to 79.7% and that is about where the long-term average is and very close to what is considered ideal (between 80% and 85%).

Housing Starts: Housing starts improved a little over the previous month – up 2.2%. This is encouraging to a degree, but these numbers are still 22.3% below what they were last year at this time. Single family permits were up by 1.6% over last month but are still way below what they were a year ago. There continues to be solid growth in the multi-family category – roughly twice the pace noted in the single-family category. Permits were 1.5% below the March numbers and are off by 21.1% from the pace of last year.

Home Improvement Retail: Home improvement trends are staying stable and seasonal. This is deck season and much of the improvement focus is on the outside. There is a marked slowdown in demand for home offices and apartments for seniors. Now the emphasis has been on making the home more functional for current owners as opposed to potential buyers. The major issue facing the sector is still lack of workers. Nearly all report being at no more than 60% when it comes to employee depth.

Manufacturing: The Purchasing Managers' Index continues to drop. The latest version has the numbers down to 46.9 from last month's 47.1. These are the readings that come from the Institute for Supply Management and suggest that even with some better readings from the latest industrial production data there are still lags in the manufacturing sector. These declines have been matched in most other nations – the exception has been in India where the data has been comfortably in the mid-50s. Anything over 50 suggests expansion and under 50 indicates contraction.

Big Risks

Inflation and Recession Potential: The threat of recession continues to hang over the global economy but once again the US has managed to dodge this bullet. The GDP numbers are not pointing to a Q2 recession, but inflation is still roaring along at 4.6% according to the Personal Consumption Expenditure data the Fed watches.

What to Watch

Geopolitics: There has been some effort to cool things down between the US and China. China's economy is stuttering, and they are becoming aware of how much they need the US. China now accounts for less than 50% of the consumer goods the US imports – a position they have held for close to twenty-five years.

Macroeconomic Viewpoints

- Dr. Chris Kuehl

Why Are Forecasts All Over the Place? – If you have been turning to the dismal scientists for guidance regarding the rest of 2023 and into 2024 you are likely a little frustrated and confused. One set of talking heads asserts that the world is on the precipice of total economic breakdown and the other set is urging calm as they issue reassuring predictions of a short and mild downturn. Not very helpful for those running a business. I wish I could say I have all the right answers, but I am looking at loads of contradictory data as well. Why? What is making this period so much harder to categorize? It seems to come down to two factors – the labor market and consumer behavior and their subsequent impact on inflation behavior.

Nothing has been quite as out of sync as the labor market. There have been rate hikes and a myriad of other attempts to slow the economy and yet hiring remains strong month after month, the rate of joblessness stays low and wage rates keep rising (faster than inflation). This kind of labor related stress usually occurs when the economy is booming, not when it is facing threats of recession. It is a problem that has been building for decades but little or nothing has been done to address it. There are too few workers in general due to retirement of the Boomer generation as well as factors such as the emergence of the gig economy and all the incentives to stay off payrolls in general. The expectation every month is that job growth will stall, and it doesn't. The hike in the unemployment rate was simply a matter of people in the U-6 category moving to U-3 (in February it was at 7.3% and is now at 6.4%). The U-6 measure counts the “discouraged worker” and these are the people that reenter the labor force when conditions improve.

Consumer behavior has also been unpredictable. Usually there is a reduction in retail activity when there are threats on the horizon. People who are afraid of losing their jobs become more frugal. There are signs that consumers are changing their patterns in reaction to inflation, but spending is still more robust than would be expected. Much of the rationale for this is that workers still have their jobs, and many have been getting raises that have allowed them to maintain a chosen lifestyle. As long as people are willing to spend there will be price hikes.

These two factors have impacted the potential speed of an inflation slowdown. The Fed's preferred measure of inflation is the Personal Consumption Expenditure index, and it reached a peak last December. The expectation was that it would keep falling but it stabilized at about 4.6%. This means that all the efforts from the Fed have not managed to budge the numbers. There are calls for the Fed to hike the rates again, but the bigger question is whether this will make any difference given the other factors. Thus far labor is not reacting to the rates, and neither is consumer behavior. - CK

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Reader Question of the Month

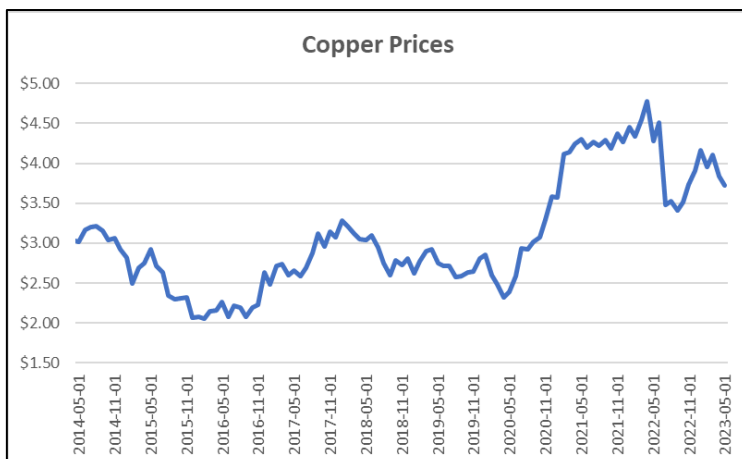
Q: With the rise of automation and artificial intelligence, what are the potential effects on employment and income inequality in the coming years?

A: The analytical community has been fascinated with the development of artificial intelligence and everyone is busy taking sides depending on whether they stand to be the winners or losers. The recent comments by the International Monetary Fund’s second in command are the most complete thus far. Gita Gopinath has compared the development of AI to the introduction of robotics and technology in the manufacturing sector. It was obvious from the start that robotics and technology would replace millions of workers in the industry (the US lost over 20 million of these jobs in the 1990s). One major assumption was made at the time of this technological revolution. It was stated that those millions of displaced workers would swiftly find other work due to the overall expansion of the economy and in one sense that was accurate. The majority of those that lost their manufacturing job did find work again – in the service economy. The problem is that these new jobs paid a fraction of what the old manufacturing job paid.

Now there is a very real threat that another wave of technological replacement is imminent. Millions of people are currently doing jobs that can be done by machines and by AI. The IMF commentary doesn’t call for the halt of AI – that would be impossible to attain. The issue is more prosaic. What is to be done when millions of people lose their jobs? The service sector absorbed the former manufacturing workers, but they collectively lost substantial parts of their income. What happens when the service sector is hollowed out by AI and technology? - CK

Key Commodity Outlook

The following section includes viewpoints on key commodities. Wherever possible, the Producer Price Index (PPI) is used as a gauge of prices for specific commodities. The PPI is derived from monthly Government surveys of those that purchase specific products and services. The PPI includes views on both spot and contract pricing for a given product or service and is more representative of general changes in street-level pricing trends.



Copper Prices (WPUSI019011)

- The price of copper has been fluctuating since last month and is trading at \$3.73/lb. (\$3.84/lb. last month).
- The Producer Price Index (PPI) for April (latest PPI available) was 528.22, down month-over-month by 0.71% (-1.09% last month). It was down 9.06% year-over-year (-6.92% last month). The ten-year index high was 572.0 in May 2022 and the low was 302.9 in 2016.
- **Looking Ahead:** Copper production concerns in South America are working as a counterbalance against what is a fairly dismal global demand environment for copper. Due to weak global demand, copper is down 16.5% over the past year and is 1.9% lower since the beginning of the year. Conditions could be such that prices don’t inflate much between now and the end of the year.

General Commodities Discussion:

Nickel:

- LME Nickel Prices have fallen over the past 30 days and were @\$9.35 per lb. (\$10.95 in the last update). Warehouse levels (subject to change as a member note in the stainless-steel section below suggests) fell again this month to 37,590 tons (40,836 tons in the last update) and are below lows not seen since November 2007 (at 42,091 tons).
- **Outlook:** With 19 countries having manufacturing sectors in contraction and European manufacturing sectors in deep recession, demand on a global basis has slipped for nickel in the short term. Long term, forecasts will still show that nickel demand is likely to outpace supply for many categories of the metal. But until this global slowdown is worked through, there is still pressure on nickel prices – which should start to help pull down input prices. Manufacturing reports in Asia were reporting slowing input price inflation.

Carbon Steel: (WPU101706)

- NYMEX Domestic Hot-rolled Coil steel prices ([CRU-HRCc1](#)) were lower over the past 30 days and were \$940 per ton in late May (\$1,067 per ton in the last update). This is down from a peak of \$1,943 hit in August of 2021.
- However, Producer Prices for steel pipe and tube continued to drop in the latest data from the end of March (latest available). They were down 0.7% month-over-month (down 0.5% last month). Year-over-year, the PPI was 13.9% lower (-13.2% Y/Y in the last update) against much more difficult comparisons.
- **Outlook:** Construction activity in non-residential applications has been strong, with some pockets of non-residential breaking records for construction spending. Other sectors that rely on carbon steel are also doing well, durable sectors like automotive, aerospace, and some infrastructure continue to see very little impact from a slowing economy. But other sectors are noticeably weaker, which is pulling down broader prices. The Producer Price Measure shows that prices for finished pipe have been relatively unchanged over the past thirty days, they are not reacting like core input prices yet.

Stainless Steel: (WPU10170674)

- The Producer Price Index for stainless pipe and tube were down in April (latest available). Producer prices for stainless pipe fell by 0.7% month-over-month (down 0.9% last month); and they were down 3.7% Y/Y (up 2.9% last month).
- **Outlook:** Weaker nickel prices and some easing of demand for finished stainless are creating softer prices. But prices overall are still significantly higher than they were prior to the pandemic with prices being reported still 39% higher than they were from 2008 to 2019.

Ferrous Metal Scrap: (PPI: PCU4299304299301)

- Producer prices for ferrous metal scrap finally dipped in April vs. the prior month, coming in with an index of 569.2 (588.8 last month). This was lower by 4.2% M/M (10.8% last month). Year-over-year it was down by 24.6% Y/Y (-22.0% in the last update). The highest producer price prior to this was in July of 2008 when the index hit 731.4 points.
Outlook: Weaker demand has finally caught up with the scrap market. And some of the recovery efforts in parts of the country like Florida and other regions are being added to metal scrap bases. And despite prices falling overall, they remain higher than any pre-pandemic period dating back to 2011.

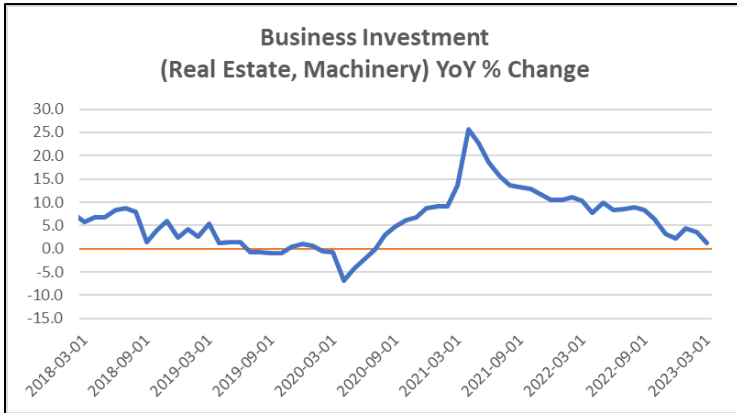
Additional commodities and finished product pricing are addressed in the Producer Price Index review on the next page.

Producer Price Index – Key Industry Products

The Producer Price Index (PPI) for key supply industry metrics is listed in the chart below including month-over-month and year-over-year comparisons. To the degree that the PPI is derived from monthly Government Surveys of actual purchasers and users of the following products, it provides a more accurate street-level pricing viewpoint. Some data is delayed and may not have been updated by the time of publication.

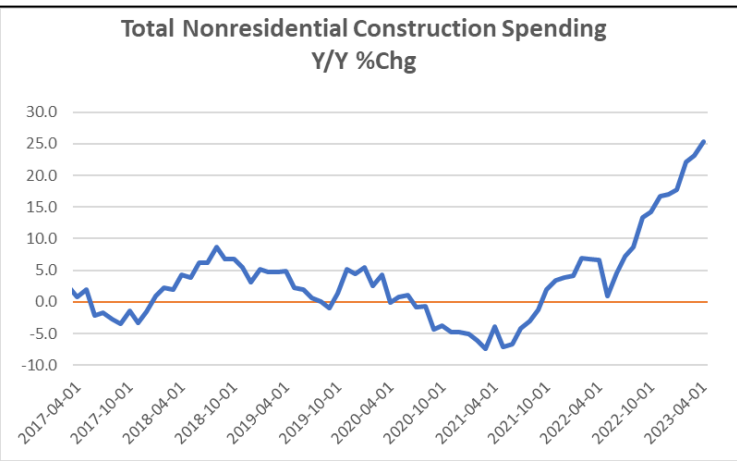
Producer Price Index - Key Industry Products						
Category	PPI Code	Apr-23	Mar-23	M/M% Chg	Apr-22	Y/Y % Chg
Pipe, Valves and Fittings						
Metal valves, except fluid power	WPU114902	430.2	429.4	0.2%	393.4	9.4%
Gates, globes, angles and check valves	WPU114902011	165.6	164.7	0.5%	154.4	7.2%
Ball valves	WPU11490202	557.9	558.3	-0.1%	491.1	13.6%
Butterfly valves (formerly W2421490203)	WPU11490203	305.6	305.6	0.0%	267.0	14.5%
Industrial plug valves	WPU11490204	297.7	297.7	0.0%	268.2	11.0%
Plumbing and heating valves (low pressure)	WPU11490205	393.4	393.4	0.0%	372.9	5.5%
Solenoid valves	WPU11490208	372.2	372.2	0.0%	372.2	0.0%
Other industrial valves, including nuclear	WPU11490209	395.9	395.5	0.1%	361.8	9.4%
Automatic valves	WPU11490211	248.9	248.9	0.0%	229.7	8.3%
Metal pipe fittings, flanges and unions	WPU11490301	491.3	486.8	0.9%	455.6	7.8%
Steel pipe and tube	WPU101706	424.4	427.5	-0.7%	492.7	-13.9%
Steel pipe and tube, alloy	WPU10170673	109.5	109.5	0.0%	109.5	0.0%
Steel pipe and tube, stainless	WPU10170674	153.2	154.4	-0.7%	159.2	-3.7%
Copper & copper-base alloy pipe and tube	WPU10250239	372.8	378.1	-1.4%	384.7	-3.1%
Plastic pipe	WPU07210603	205.9	206.9	-0.5%	211.6	-2.7%
Plastic pipe fittings and unions	WPU07210604	324.3	326.7	-0.7%	299.9	8.1%
Plumbing Fixtures, Fittings and Trim	WPU105402	394.6	394.6	0.0%	381.3	3.5%
Bath and shower fittings	WPU10540211	286.7	286.7	0.0%	286.7	0.0%
Lavatory and sink fittings	WPU10540218	203.5	203.5	0.0%	191.5	6.3%
Enameled iron and metal sanitary ware	WPU1056	290.6	290.1	0.2%	289.2	0.5%
Steam and Hot Water Equipment	WPU1061	419.7	419.7	0.0%	380.1	10.4%
Cast iron heating boilers, radiators and convectors	WPU10610106	289.7	289.7	0.0%	261.1	11.0%
Domestic water heaters	WPU106601	570.6	570.6	0.0%	567.5	0.5%
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%	344.6	0.9%
Warehousing, Storage and Related Services	WPU321	140.0	140.0	0.0%	128.0	9.3%

PHCP & PVF



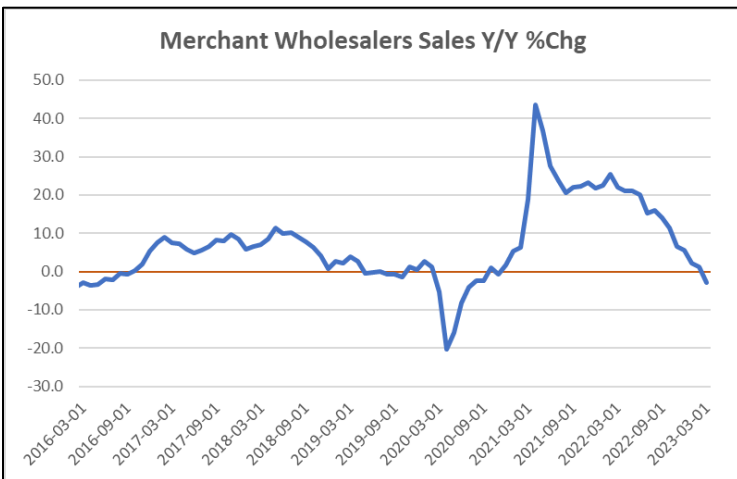
Capital Goods New Orders (NEWORDER)

- The value of manufacturers' new orders for capital goods was mixed in March (latest available), spending was down by 2.4% sequentially M/M (-0.7% last month). But they remained up by 1.2% Y/Y (up 3.6% last month) and continued to be stable overall.
- **Outlook:** Businesses were still spending at an annual rate of @\$74.3 billion in capex. But as mentioned last month, it was beginning to show the pressures of higher interest rates and tightening bank credit conditions on small and medium-sized industrial firms. Spending was rising at just a 1.2% rate year-over-year, and when adjusted for inflation, it was lower vs. 2022 levels.



Total Non-Residential Construction (TLNRECONS)

- Total Non-Residential Construction activity in April (latest available) was 25.3% higher than it was a year ago (23.2% higher last month) and was 1.9% higher M/M (1.0% in the last report). Overall spending was at a new all-time high of \$1.053T (the prior annualized run rate peak of \$900B was in September of 2022).
- **Outlook:** Nonresidential construction continues to set new records (with some inflation impact involved). But there are undoubtedly some strong trends pushing areas like industrial manufacturing construction, commercial, lodging and entertainment, and multi-family construction trends. But there is also a surge in infrastructure spending across all of those sectors as funds finally start to hit projects.



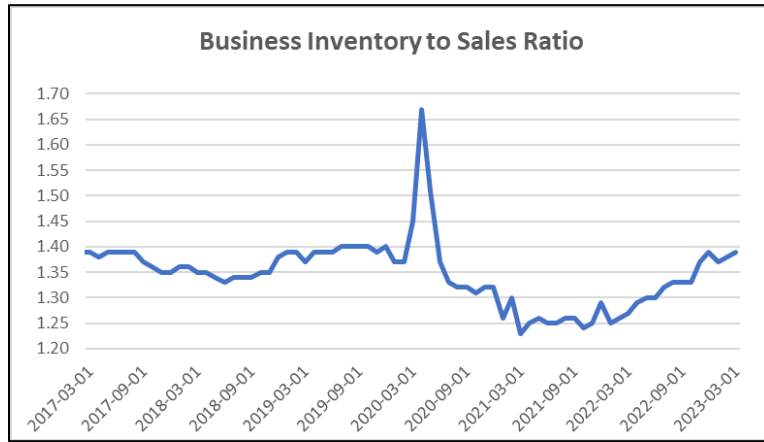
Wholesale Trade (WHLRLSMSA, WHLSLRMSA)

- Merchant wholesalers' sales were down 2.9% Y/Y through March (latest available; up 1.2% Y/Y in the last update). Month-over-month, sales were declining (down 4.1% last month).
- Wholesale inventories were up 9.1% year-over-year in March (up 12.0% last month).
- **Outlook:** Relative to sales, the inventory to sales ratio for wholesalers is 12.0% higher year-over-year (10.5% higher last month) through March (latest available). Hardware, plumbing, and heating wholesalers are still sitting 20.5% heavier with inventory than they were in the 10-year average prior to the pandemic. Construction material wholesalers were also 10.7% higher than they had in the 10-year average prior to the pandemic. Yet, some are still reporting many materials backordered 10-12 months or more, especially electronics. This is holding back growth in other areas.



Manufacturing (AMTMNO)

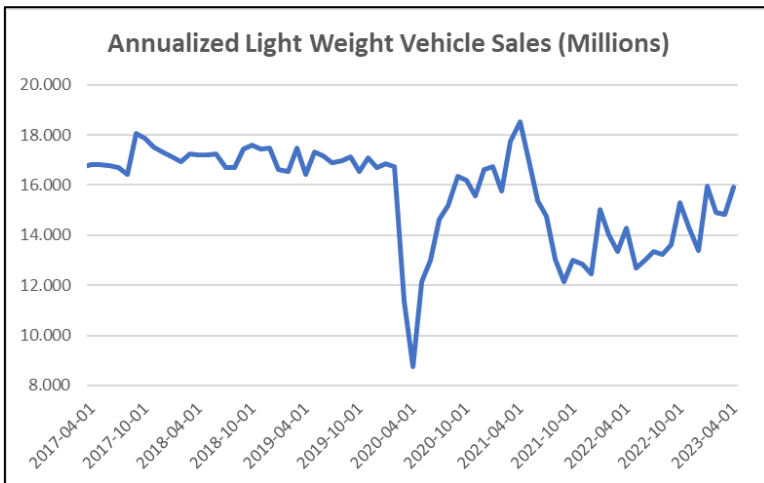
- Federal data on manufacturing was up 0.3% Y/Y (up 2.1% last month) through March (latest available). It was down sequentially by 1.8% month-over-month (-1.8% last month).
- The S&P Global US manufacturing PMI came in at 48.4 in May, down from 50.2 in April.
- **Outlook:** There was not much change month-over-month in the readings. A PMI reading over 50 is evidence of a sector that is expanding and growing, and this measure continued to contract slightly in May. New orders were pulling heavily on the overall index, new orders were still weaker in general in May. Manufacturers were also continuing to trim hiring activity and were cost cutting through attrition in what was a slow start to the first half of 2023. Some softening of input prices was noted.



Business Inventory to Sales Ratio (ISRATIO)

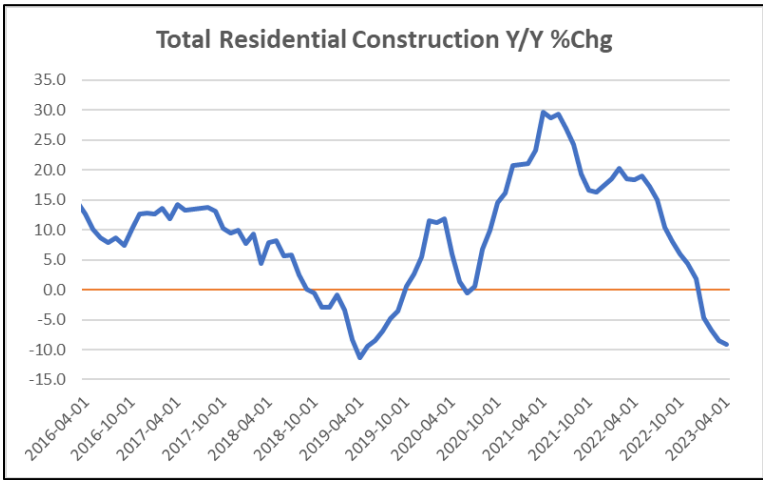
- The current inventory to sales ratio for all businesses is at 1.39 months of inventory on hand in March (latest available; 1.38 last month). Relative to sales, inventories are elevated, this month's ratio was 6.9% higher Y/Y (6.2% higher last month).
- **Outlook:** There are a lot of crosscurrents and data discrepancies right now in inventories. Although top line inventory levels appear to be outstripping sales volumes, some construction firms and automotive manufacturers, aerospace, and parts of the machinery sector are still complaining of stockouts and problems getting certain components. Electrical equipment is a significant problem and is holding back many construction projects.

PHCP



Auto Sales (ALTSALES; AISRSA)

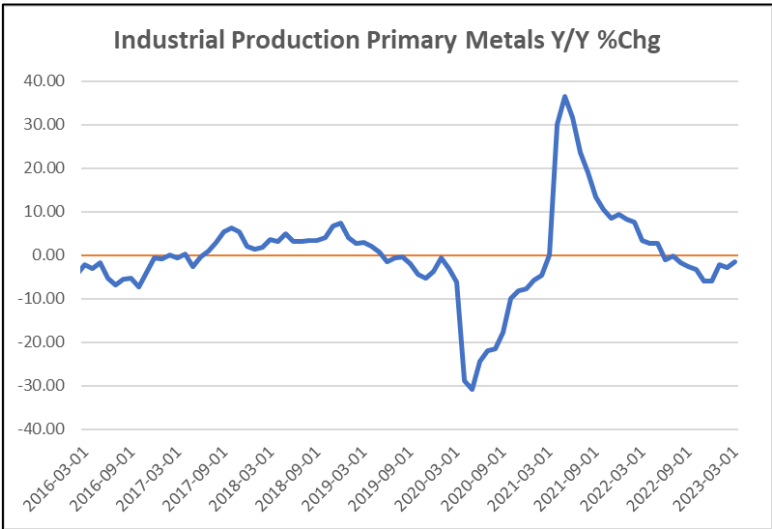
- US auto sales were trending at a 15.914-million-unit annual rate (14.840 M last month) through April (latest available). This is up 11.4% year-over-year (+9.5% in the last update).
- The domestic auto inventory to sales ratio was up 48.8% Y/Y in March (latest available). On a monthly basis, it was 5.1% lower than it was last month (53.9%).
- **Outlook:** Auto prices are still historically high, despite softening from their peaks. Rising auto prices, higher interest rates, and higher inflationary pressures on essentially household items is creating headwinds for potential buyers (in lower- and middle-income categories). But OEMs are going to continue to manufacture products until dealer inventories are fully replenished. This will keep the manufacturing side of the industry continuing to remain active through this period.



Total Residential Construction (PRRESCONS)

- Total residential construction in April (latest available), was down by 9.2% Y/Y (down 8.5% last month). It was up 0.5% M/M (flat last month).
- **Outlook:** Data on housing continues to show that lack of inventory could be having a bigger impact on the industry than rising interest rates. Certainly, homeowners that are in a mortgage below 3% have a hard time purchasing a new home if they like their current situation. Those that are being forced to move or first-time home buyers are being forced to adjust the price of home that they can afford because of rising rates, but that is not historically different than other periods when the housing sector was doing well. Too little inventory and home prices that are too high are the primary factors holding back buyers. Materials supply is also still part of that equation.

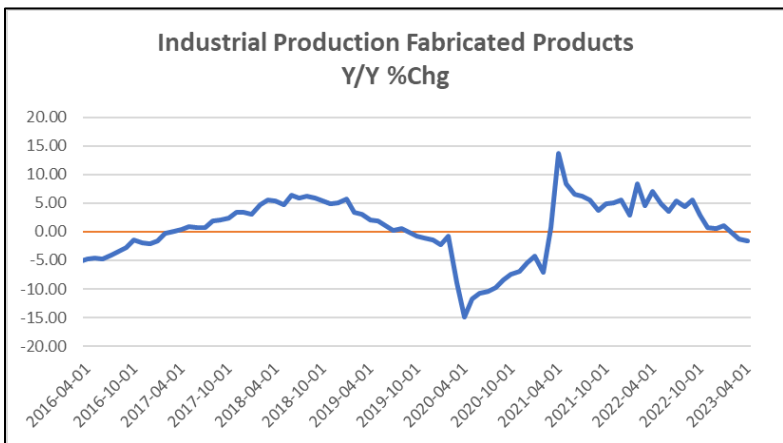
PVF



Industrial Production Primary Metals

(IPG331S)

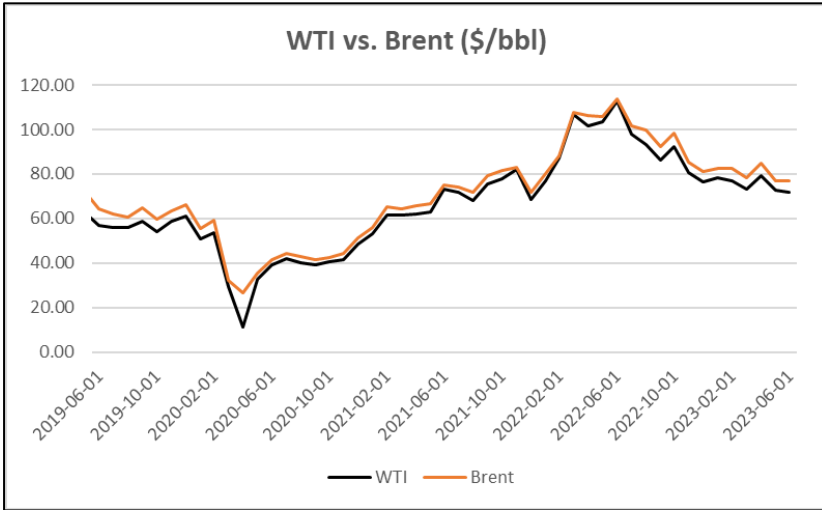
- Industrial production for primary metals was down 2.52% Y/Y through April (-2.10% in the last update). It was down 0.42% M/M (up 1.02% M/M in the last update).
- **Outlook:** Primary metals demand continued to be sluggish again this month on the back of global manufacturing slowdowns. Commodity inventories remain low however, and the reopening of China will have to be watched closely. Any surge in demand throughout Asia would have an impact on commodity prices, especially with inventories so low. The biggest question for analysts is whether the global slowdown creates enough of a headwind that inventories fully recover, or if a soft landing keeps demand stable and low inventories lead to increases in some metal prices.



Industrial Production Fabricated

Metals (IPG332S)

- Fabricated metal industrial production was down 1.53% Y/Y through April (down 1.29% last month). It was also down 1.24% on a month-over-month basis, (-1.23% in the last update).
- **Outlook:** Fabricated metal production is a key feeder into other sectors of manufacturing and there has been a noticeable drop-off in demand recently. Forecasts for the rest of 2023 show the outlook for machinery, computers, electronic equipment, and other durables weakening through Q3 and now continuing into Q4 and the end of the year.



WTI and Brent

- WTI is currently at \$71.91 a barrel (\$79.45 in the last update) and Brent is at \$76.71 (\$84.64 in the last update).
- **Outlook:** As we mentioned last month, analysts are now speculating that oil supply could be nearly 2 million barrels per day lower than expected in the second half of the year and OPEC+ has vowed to cut total output by nearly that much. OPEC is trying to adjust supply because it knows that demand is weakening on a global basis. But there could easily be a net drawdown in inventories if this relationship continues. The EIA in contrast still shows global production keeping pace with demand and perhaps outpacing it slightly. Purchasing oil to replenish the Strategic Petroleum Reserves at some point in time will consume some of the oil that would otherwise go into refineries. This will keep the price of oil in a band between \$65 and \$75 a barrel for the next one to two years.

<https://bakerhughesrigcount.gcs-web.com/rig-count-overview>

	Last Count	Count	Change from Prior Count	Change from Last Year
U.S.	2-Jun-23	696	-15	-31
Canada	2-Jun-23	97	10	-20
International	May-23	965	18	148

Rotary Rig Counts (Baker Hughes)

- Baker Hughes US active rig counts were down 31 Y/Y (up 57 in the last update) at 696 (1,049 in 2019); Canadian counts were down by 20 Y/Y (-2 in the last update). International counts are up by 148 Y/Y (+115 in the last update).
- **Outlook:** New forecasts for global oil production show it rising throughout 2023 and into 2024 and we can see the global markets outpacing the US. The US has reduced the number of active rigs, but new data suggests that total oil output is still stable, and oil inventories have now gone to the middle of the 5-year average. The EIA reported that oil production averaged 11.6 million barrels per day but will approach the 2.5 million barrels per day predicted for last year sometime in 2023.

Construction Outlook

Residential construction: 30-year national average mortgage rates reversed course and increased slightly again in May to 6.79% (6.43% in the last update). Home builder confidence moved up again M/M in May by 11.1% according to the NAHB/Wells Fargo index, it increased to 50 points (up from the April reading of 45). The all-time high was 90 points in November of 2020. Builders are still concerned about a Fed-induced recession on the back of higher interest rates. Input prices are also still elevated, and reports suggest some materials are still in short supply. But demand continues to be better than expected.

NAHB/Wells Fargo National and Regional Housing Market Index (HMI)								
NATIONAL								
(Seasonally Adjusted)	2022	2023						
	May	Jan.	Feb.	Mar.	Apr.	May	M/M	Y/Y
					Revised	Prelim.		
Housing Market Index	69	35	42	44	45	50	11.1%	-27.5%
Housing Market Index Components								
Single Family Sales: Present	78	40	47	49	51	56	9.8%	-28.2%
Single Family Sales: Next 6 Months	63	37	48	47	50	57	14.0%	-9.5%
Traffic of Prospective Buyers	53	23	28	31	31	33	6.5%	-37.7%
REGIONAL HMI								
(Seasonally Adjusted)	2022	2023						
	May	Jan.	Feb.	Mar.	Apr.	May	M/M	Y/Y
					Revised	Prelim.		
Northeast	76	34	46	46	44	45	2.3%	-40.8%
Midwest	51	32	36	36	40	42	5.0%	-17.6%
South	76	39	46	50	50	55	10.0%	-27.6%
West	74	29	37	36	40	48	20.0%	-35.1%

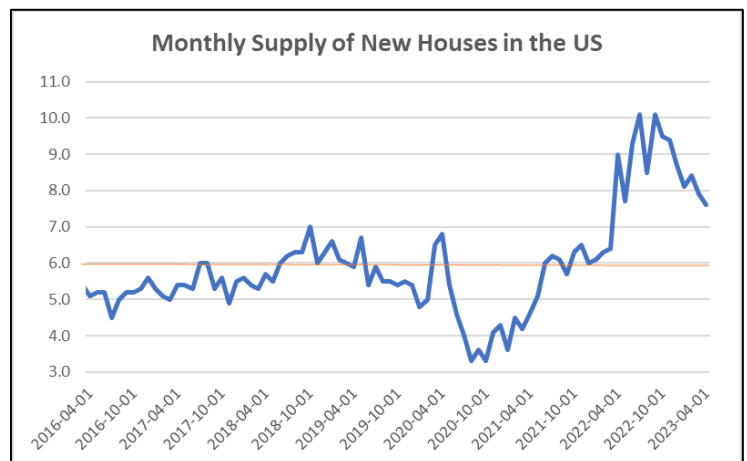
On a year-over-year basis, the NAHB/Wells Fargo Housing Market Index was down 27.5% against May of 2022 (down 41.6% last month).

Adjusted housing inventories were unchanged in April (latest available), coming in at 7.6 months of inventory on hand. This is closer to the “ideal range” of 6 months of inventory on hand and is much lower than the 9.5 months we saw in October.

The housing market is highly regionalized, and each region has different levels of housing activity, but macro demand is still being tempered by quality single-family housing inventories and steep housing prices which are only easing in some markets.

But new housing starts came in at a 1.401-million-unit rate on an annualized basis (down slightly from last month’s 1.420 million annual rate); but the outlook for the rest of 2023 is obviously still weaker on interest rate pressures.

Single family starts were up in April by 1.6% M/M (latest available) but were down 28.1% Y/Y. Multi-family starts are volatile and were up 5.2% M/M but remained 11.7% higher Y/Y.



National Outlook: With the banking crisis calmer and the debt ceiling crisis now behind the country, the Fed is looking harder at economic fundamentals. Some still expect the Fed Peak to touch 5.25%. Estimates also suggest that banks taking independent action to tighten their own credit standards (to reduce default risk) will work much like a 25 to 50 basis point hike in Federal Reserve interest rates. This could keep the Fed in a more dovish position moving forward, and some estimates from the Fed still show the potential for rate easing in 2024 a high likelihood.

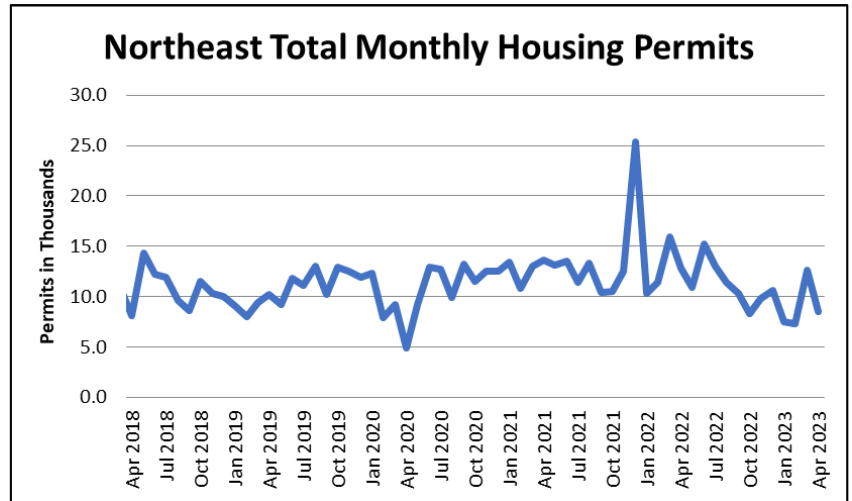
Housing and Interest Rate Forecast, 04/10/2023							
	2019	2020	2021	2022	2023	2024	2025
Housing Activity (000)							
Total Housing Starts	1,291	1,395	1,605	1,554	1,241	1,289	1,488
Single Family	889	1,002	1,131	1,007	795	923	1,063
Multifamily	402	393	474	547	446	366	425
New Single Family Sales	683	831	769	641	653	739	811
Existing Single-Family Home Sales	4,746	5,057	5,420	4,530	3,924	4,308	4,543
Interest Rates							
Federal Funds Rate	2.16%	0.36%	0.08%	1.68%	5.05%	4.62%	3.20%
Fixed Rate Mortgages	3.94%	3.11%	2.96%	5.34%	6.56%	6.07%	5.49%
Prime Rate	5.28%	3.54%	3.25%	4.85%	10.82%	10.69%	8.69%

[For more forecast details, visit www.nahb.org.](http://www.nahb.org)

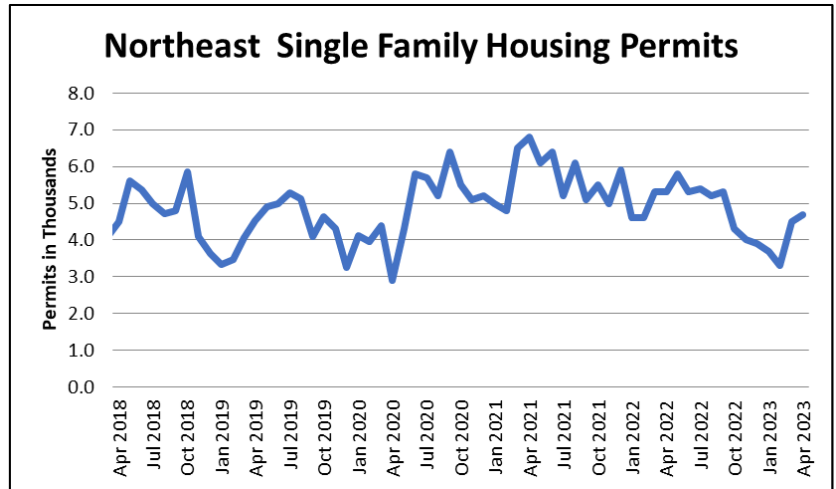
The following section provides monthly housing permit data for each major region in total, single family, and multi-family units.

Regional market outlook: Northeast

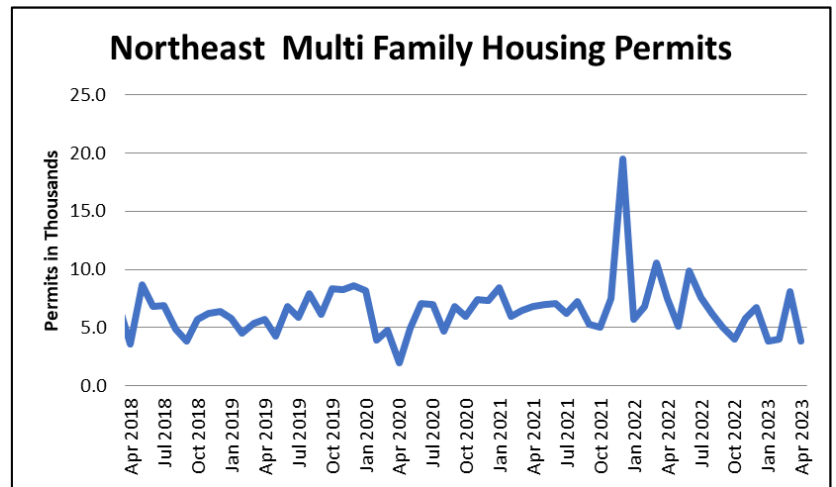
- Northeast total housing units authorized for construction were down in April by 32.5% M/M (72.6% last month). April was the latest regional data available throughout this series.
- The 3-month moving monthly average was up 12.5% (13.6% last month).
- On a year-over-year basis, permits were down 33.6% (-20.8% in the last update).



- Month-over-month single family permits were up 4.4% (36.4% last month).
- On a 3-month moving average basis, permits were up 10.0% (6.8% last month).
- Year-over-year permits were down 11.3% (-15.1% last month).

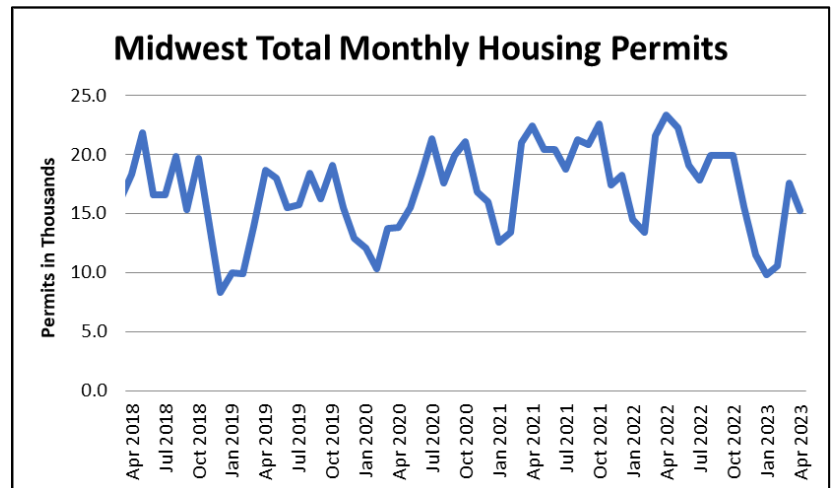


- Multi-family housing permits authorized for construction were down 53.1% M/M (+102.5% in the last update).
- They were up 18.2% on a rolling 3-month average (21.5% last month).
- On a year-over-year basis, they were down 49.3% (-23.6% in the last update).
- These figures are based on a small number of units so the percentages can seem higher and more volatile.

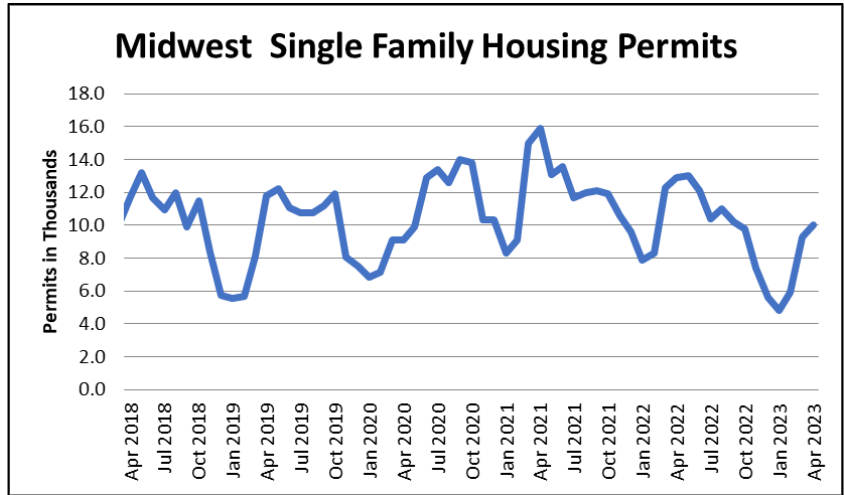


Regional market outlook: Midwest

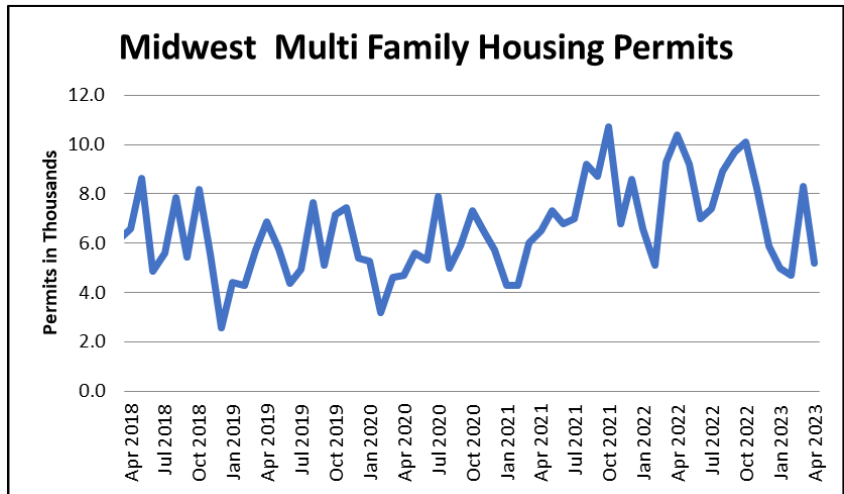
- Midwest total housing permits were down 13.6% month-over-month (+66.0% in the last update).
- The 3-month average was up 20.2% (19.8% in the last update).
- On a year-over-year basis, permits were down 34.8% (-18.5% in the last update).



- M/M permit volumes were up 7.5% (+57.6% last month).
- The 3-month rolling average shows that permits were up 29.4% (22.6% in the last update).
- Year-over-year, single family homes authorized by permits were down 22.5% (-18.5% in the last update).

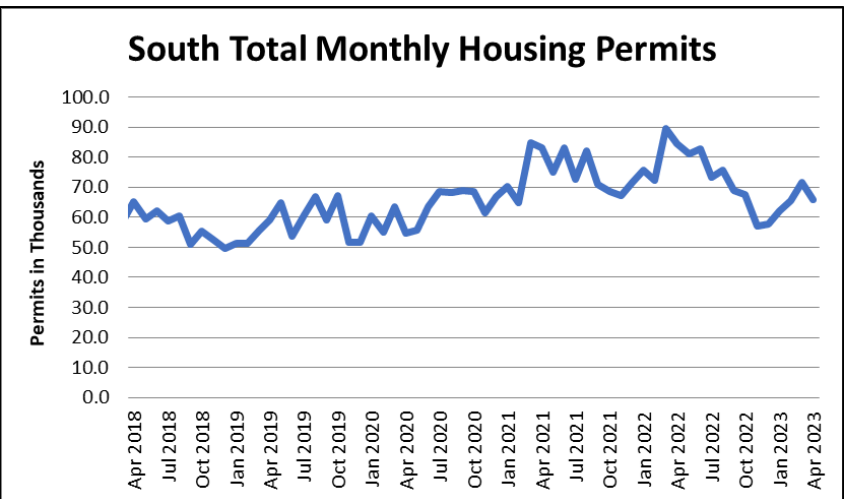


- Multi-family housing permits, again, are volatile month-over-month. This month, they were down 37.3% (76.6% last month).
- On a 3-month rolling average basis, they were up 11.1% (18.0% in the last update).
- On a year-over-year basis, permits were down 50.0% (-10.8% in the last update).

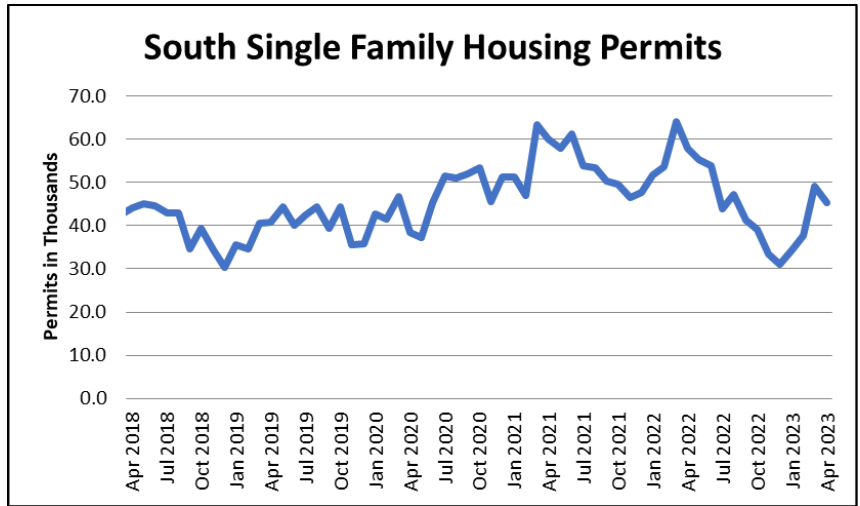


Regional market outlook: South

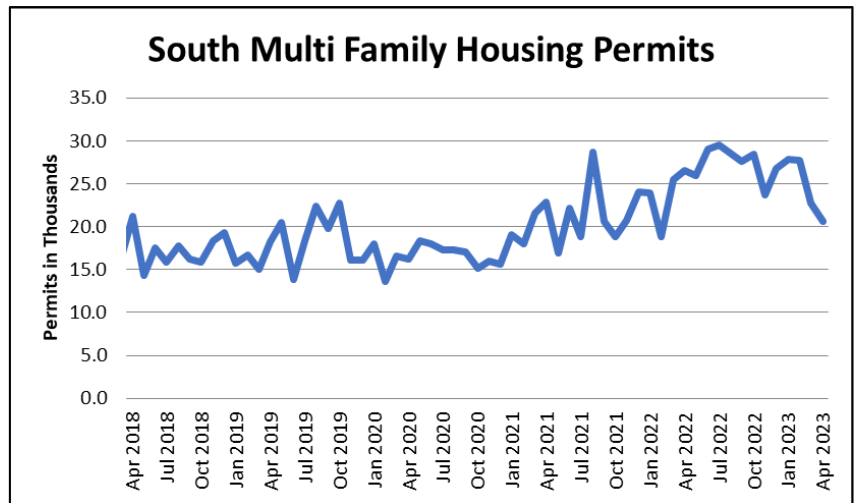
- Southern region housing permits were down 8.2% month-over-month (+9.6% in the last update).
- On a 3-month rolling average basis, permits were up 2.2% (+8.6% in the last update).
- On a year-over-year basis, total permits were down 22.0% (-19.8% in the last update).



- Southern region single family home permits were down 7.6% M/M (+29.6% last month).
- On a 3-month rolling average, they were up 10.7% (+17.2% in the last update).
- On a year-over-year basis, single family permits were down 21.9% (-23.4% in the last update).

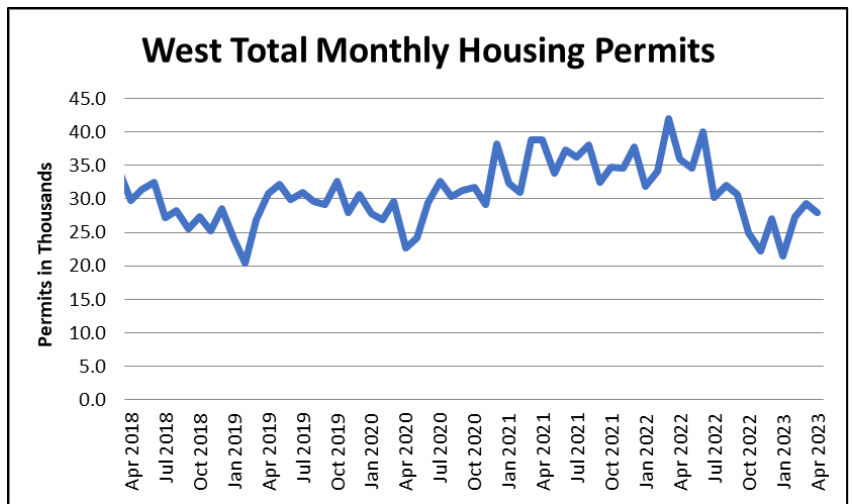


- Southern multi-family permits were down 9.6% M/M (-17.7% last month).
- On a 3-month rolling average basis, permits were down 9.2% (-2.9% last month).
- On a year-over-year basis, permits for multi-family housing were down 22.3% (-10.6% in the last update).

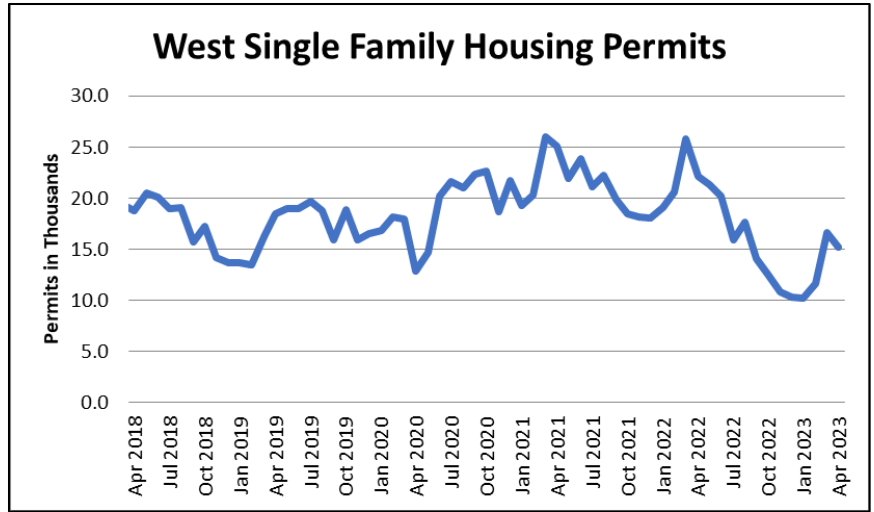


Regional market outlook: West

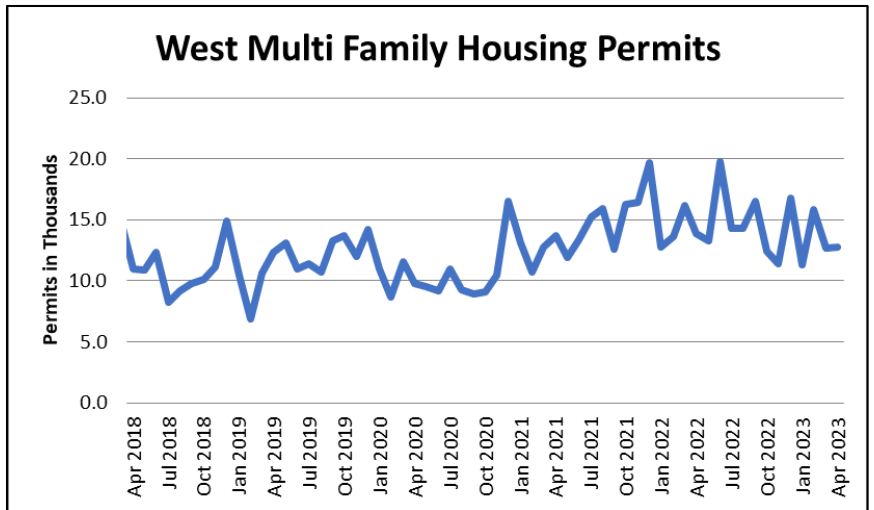
- Western region total monthly housing permits were down 4.4% M/M (6.9% last month).
- On a 3-month rolling average basis, they were up 10.0% (5.4% last month).
- On a year-over-year basis, permits were down 22.2% Y/Y (-30.2% in the last update).



- Single-family permits were down 8.4% M/M (43.1% last month).
- On a 3-month moving average basis, permits were up 16.1% (19.3% in the last update).
- Year-over-year, single family permits were down 31.2% (-35.7% in the last update).



- Multi-family permits were up 0.8% M/M (-19.6% in the last update).
- On a 3-month rolling average, it was up 7.0% (-3.3% in the last update).
- Year-over-year, multi-family unit permits were down 7.9% (-21.6% last month).



Industry Outlook

ASA Sales were stronger by 0.5% Y/Y (+3.7% last month) in April (latest available). Year-to-date through April, sales were up 7.3% (+11.0% in the last update). For the trailing twelve months prior, sales were up 13.5% (15.8% in the last update). ASA Pulse Report findings are reported monthly. The following chart shows the breakdown by primary business type and region.

	April Y/Y % Change in Total Dollar Sales	YTD % Change vs. YTD 2022	Trailing Twelve Months % Change
All Businesses	0.5%	7.3%	13.5%
By Primary Business			
PHCP	0.4%	5.5%	9.6%
PVF	3.0%	7.9%	20.9%
PHCP & PVF	-1.6%	9.6%	14.6%
By Region			
1 (SWPD)	-1.6%	1.2%	11.9%
2 (MWD)	-0.7%	7.8%	14.5%
3 (SWCD)	5.2%	9.1%	17.6%
4 (NCWA)	3.1%	9.4%	10.6%
5 (ASA Northeast)	0.7%	4.9%	12.0%
6 (SWA)	-2.6%	11.4%	15.5%

The US Transportation Services Freight Index (TSIFRGHT), which typically leads ASA Sales by about five months, was up in February (latest available yet to be updated). The report showed that the TSI was at 138.7 for freight, up 1.4% M/M and was down by 0.8% Y/Y (down 0.7% Y/Y last month).

More recent data (comparing similar industry data to the TSI) from other sources show much weaker data. DAT Trendlines was reporting at the end of May that spot truck freight demand was **61.2% lower than it was a year ago**. Spot trucking rates have fallen 23.8% Y/Y, and now fuel surcharges are down -29.7% Y/Y.

New data shows that oil production in the US was just 11.6 million barrels per day but is expected to approach 12.5 million barrels per day sometime in 2023 (lower than the 13 million bpd estimates). Total oil inventories were slowly improving but remain at the lower end of the 5-year range, and the Strategic Petroleum Reserves are still at the lowest levels since the mid 1980's and rebuilding activity must begin at some point. This will continue to keep production steady through most of 2023 barring a significant global drop in demand (an event worse than a mild global recession). With global demand for oil dropping of late, OPEC has decided to cut another 1 million barrels of oil per day. Most analysts don't believe that this cut will last, and OPEC has consistently outproduced estimates. When money in an economy is tight and oil production is a country's dominant industry, it is difficult to hold back when they can find buyers.

Retail sales were flat in April across many categories month-over-month, and some sectors remained stronger on a year-over-year basis (inflation still boosting some of them).

When adjusted for inflation, sales were 0.1% higher month-over-month in April, but were lower by 3.2% year-over-year.

As we mentioned last month, approximately 60% of US households are under pressure and have little credit or savings to fall back on (down slightly from 62% a month ago). Consumer use of credit cards is still rising at one of the fastest rates on record, and among these households that are living check-to-check, credit card balances are still running at 97% of their credit limits. Credit card interest rates have also hit an all-time high above the national average of 20%. Those pressures may finally be impacting retail spending as consumers work on paying down higher credit card balances.

Home improvement retail sales volumes were slightly better in April on seasonal spending, rising by 0.5% M/M but they remained lower by 3.7% against last year. Again, when adjusted for inflation, sales were likely lower year-over-year.

Economic growth is still expected to be flat in 2023 (roughly 0.7% for the full year) with some recession risk still lingering for Q3 and perhaps Q4. Construction is still doing well for non-residential, and that momentum will continue to keep the supply industry chasing opportunities.

Kind of Business	Percent Change	
	Apr. 2023 Advance from --	
	Mar. 2023	Apr. 2022
Retail & food services, total	0.4	1.6
Retail	0.4	0.5
Motor vehicle & parts dealers	0.4	-0.5
Furniture & home furn. stores	-0.7	-6.4
Electronics & appliance stores	-0.5	-7.3
Building material & garden eq. & supplies dealers.....	0.5	-3.7
Food & beverage stores.....	-0.2	3.7
Grocery stores	-0.4	3.7
Health & personal care stores	0.9	7.9
Gasoline stations	-0.8	-14.6
Clothing & clothing accessories stores	-0.3	-2.3
Sporting goods, hobby, musical instrument, & book stores	-3.3	-5.4
General merchandise stores.....	0.9	4.3
Department stores	-1.1	-1.4
Miscellaneous store retailers	2.4	2.6
Food services & drinking places	0.6	9.4