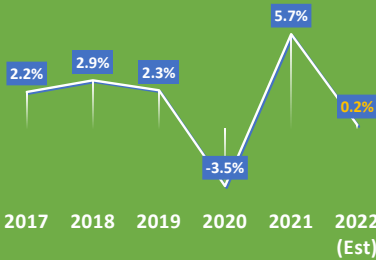


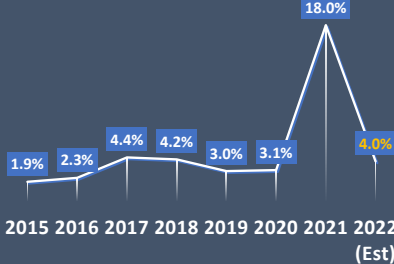
## Executive Summary – Q3 '22

### Selected Indices

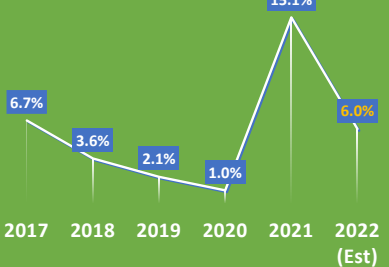
#### REAL GDP



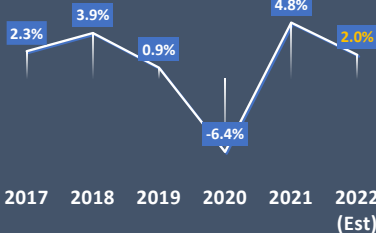
#### RETAIL SALES



#### BUSINESS INVESTMENT



#### INDUSTRIAL PRODUCTION



### Big Items

**Real GDP:** GDP forecasts are getting weaker with the outlook for full year 2022 now down to just 0.2%. Inflation is obviously still a problem, and the Federal Reserve continues to anticipate an aggressive interest rate hiking program to tame it. The current outlook shows the Fed's Effective Funds Rate now needing to approach 5% and the unemployment rate likely needing to get to 4.8% before real progress is made on the inflation front.

**Paper Inventories-to-Sales:** The inventory-to-sales-ratio is an important barometer of future orders for new paper (consumer paper). Currently, the sales ratio is still down 5.4% from pre-pandemic levels (-7.7% in the last update) and was 9.6% lower Y/Y (-9.6% last quarter). A low ratio should keep restocking activity flowing. Most consumer staples categories continue to show strong growth and at the time of the printing this quarter's briefing, job creation was still averaging nearly 200,000 jobs per month. Layoff trends had not set in and spending at a consumer level continues to be stable.

**Construction:** Housing construction is best described as "mixed". Total housing starts bounced higher by 12.2% M/M in August and are now just 0.1% lower Y/Y. This was likely a single month anomaly; general housing trends are decelerating under Federal Reserve interest rate hiking pressure. Single family has also decelerated sharply but also experienced a pop in August, it was up 3.4% M/M but was sharply lower by 14.6% Y/Y. Multi-family housing starts were still the bright spot, rising 28.6% M/M and were still 31.0% higher Y/Y. Non-residential construction was still stable year-over-year with manufacturing construction leading the industry with nearly \$97 billion in annualized spending which was 23% higher year-over-year.

**Retail:** When adjusted for inflation, retail sales contracted by 0.4% in September. They were flat year-over-year compared to September of 2021. But total retail spending was still near the upper end of the historic range and was still outpacing the twenty-year average. In other words, total dollars of spending are still strong, those dollars are just buying fewer products. Spending on non-essentials is also slowing for the 59% of US households that are now living check-to-check.

**Manufacturing:** Global manufacturing has taken the biggest turn since the last quarterly update. There are now 15 countries with manufacturing sectors in contraction, the US is growing just slightly with durable goods sectors leading most of the growth. Droughts in primary producer markets like China, Europe, and now even in the United States have impacted hydroelectricity production and have forced some slowing of industrial production. Smelter activity in China and Europe has been curtailed as energy shortages sweep those regions. Higher energy costs have also been a factor with some companies voluntarily shutting down manufacturing shifts and temporarily shutting down smelter production.

### Risks

**Recession Risk:** The theme in Q3 continued with the Federal Reserve continuing to attempt to tame inflationary pressures by raising interest rates and reducing the amount of liquidity in the financial system. This mixture of factors is slowing growth in the economy. Forecasts now have Q3 coming in at a lackluster 0.3% growth rate, Q4 and Q1 '23 are both expected to contract at 0.5%. Full year 2022 will likely show 0.2% growth, 2023 will come in at 1.2% (back-half loaded), and 2024 is projected to settle back into a sub-2% growth pattern according to Federal Reserve forecasts.

# Macroeconomic Viewpoints

- Dr. Chris Kuehl

**Recession Pressure Builds** – The old jokes seem more appropriate than ever. It is said to be a downturn when your neighbor loses their job, a recession when you lose your job and a depression when the economist loses their job. It would seem simple enough to define a recession but the truth is that it isn't. The arbiter of defining a recession is the National Bureau for Economic Research (NBER) and it defines a recession as follows - "a significant decline in economic activity that is spread across the economy and that lasts more than a few months." Vague enough for you? This is more than reporting that GDP declined for a quarter or two – this determination involves employment, personal income, consumer spending, industrial production, and a host of other factors. The challenge now is that some of these are indeed pointing at recession, but several are not (as noted earlier in the Advisor).

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Supply Chain Situation	- 8
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There is an important intangible when looking at recession. Expectations on the part of the consumer and the business community play an immense role. To be frank, people can talk themselves into a recession. The behavior of consumers and business can either pull an economy out of the slump or accelerate the decline. If consumers assume that things are going to get worse, they generally react with caution. They decide to spend less, they become more concerned about their job security, they shy away from big investments (cars, homes etc.). They postpone travel and reduce discretionary purchasing in general. Business reacts similarly with reduced desire for hiring, reduced investment in equipment, reduced levels of output. Even as demand continues there is reluctance to try to meet it for fear that this demand will be short lived. It is self-fulfilling prophecy.

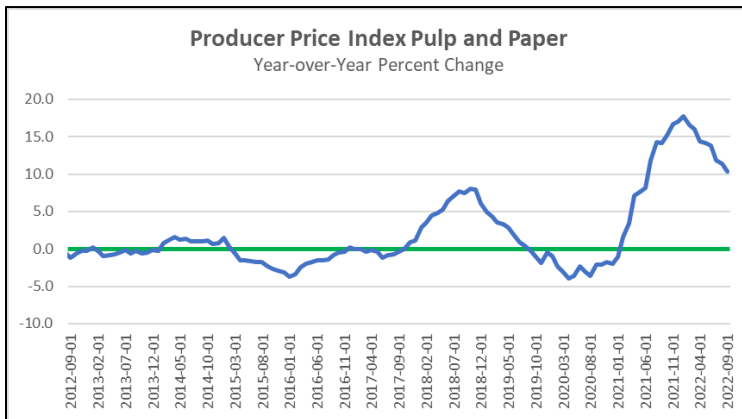
A look at the data shows an economy that is closer to the edge of downturn than anybody wants to see but it has not yet tipped in some significant ways. Employment remains strong with rates well under what would be considered recessionary. Not only are overall rates still just 3.5% but the quit rate remains high and new claims for unemployment are still low. The issue for most companies remains labor shortages and that has inhibited the normal pace of layoffs that might have been expected. There are also solid numbers when it comes to capacity utilization. After three months in a row of readings above 80% there was a very slight drop to 79.9% in August. Given that numbers between 80% and 85% are considered normal these are solid. The automotive sector continues to surge on steady demand. Durable goods orders are stable. The fact is these numbers are not exactly spectacular, but they are not in the doldrums either.

The factors that have people worried include the impact of inflation fighting measures by the Fed. As long as these rates keep climbing there will be pressure on the economy to slow down and thus far the Fed has not suggested they are satisfied with the impact they have had on inflation. If you are looking at some of the more unusual indicators of an impending recession you can take your pick of these. The "men's underwear" index holds that when men stop buying new underwear there is a recession. When women start buying more lipstick that is a sign as well (assuming that women are focusing on little luxuries). Finally, there is the measure that was developed in south Florida some decades ago. It is the "Vixen Index" which holds that when there are more attractive wait staff and servers there is a shortage of jobs. Not very politically correct and not very easy to quantify either.

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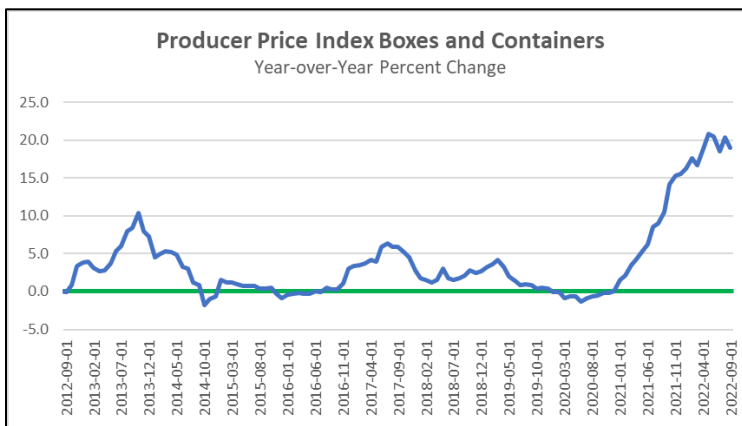
# Upstream Conditions

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. The most recent months of activity are used to provide the most accurate viewpoints.



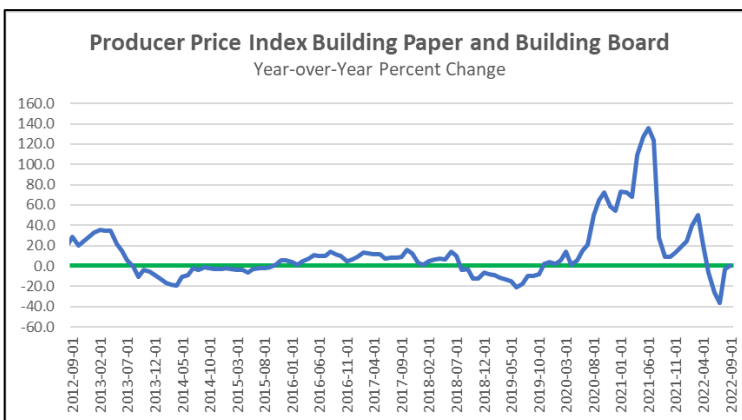
## Pulp and Paper Prices (WPU0913)

- The Producer Price Index (PPI) for paper and pulp in September (latest PPI available) was up month-over-month by 0.1% (up 1.1% last month). It was higher year-over-year, rising by 10.3% Y/Y (up 11.4% last month) against more difficult comparisons.
- **Looking Ahead:** Rising energy and production costs continue to keep prices higher for pulp and paper in general. Despite some softening of transportation cost trends, prices generally are still high on a historical perspective and now energy prices will continue to add to operating costs. Demand continues to remain stable for now, with inventories also remaining lower than they should be.



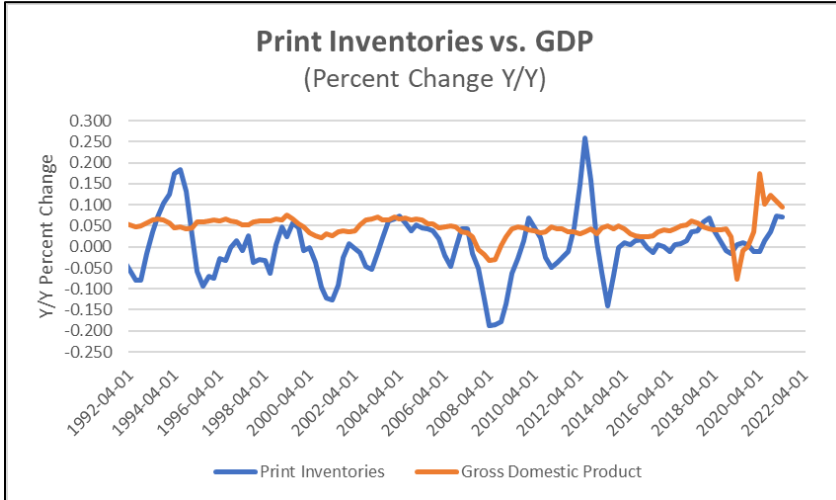
## Paper Boxes and Container Prices (WPU091503)

- The Producer Price Index (PPI) for boxes and containers in Sept (latest PPI available) was up month-over-month by 0.2% (up 2.4% last month). It was higher year-over-year, rising by 19.0% Y/Y (up 20.4% last month). This marked another all-time high for the index at 352 points.
- **Looking Ahead:** Spending in total dollars continues to trend near all-time highs. E-commerce sales continue to grow at a 10% annualized rate (and remember that current e-commerce volumes are 65% higher than they were pre-pandemic). For now, there seems to be little change in total consumer spending despite inflationary pressures reducing the total number of units being purchased (consumer dollars not going as far).



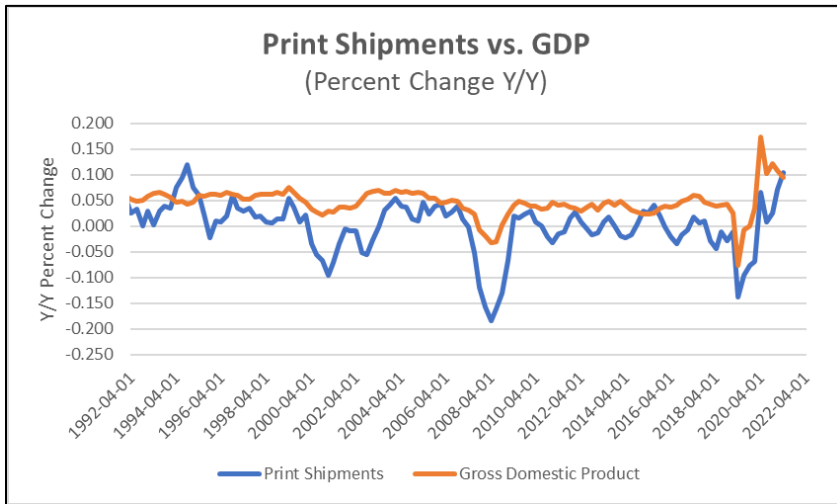
## Building Paper / Building Board Prices (WPU092)

- The Producer Price Index (PPI) for building paper and building board in Sept (latest PPI available) was down month-over-month by 2.3% (up 6.6% last month). It was up slightly year-over-year, rising by 0.7% Y/Y (down 2.9% last month).
- **Looking Ahead:** Construction paper demand will go through “fits and spurts” over the next 6 months as the Fed hikes interest rates. Many construction projects have been waiting for better labor availability and lower raw material costs, and those costs are coming down. Q1 could show some “green shoots” in commercial construction demand, and it remains stable now.



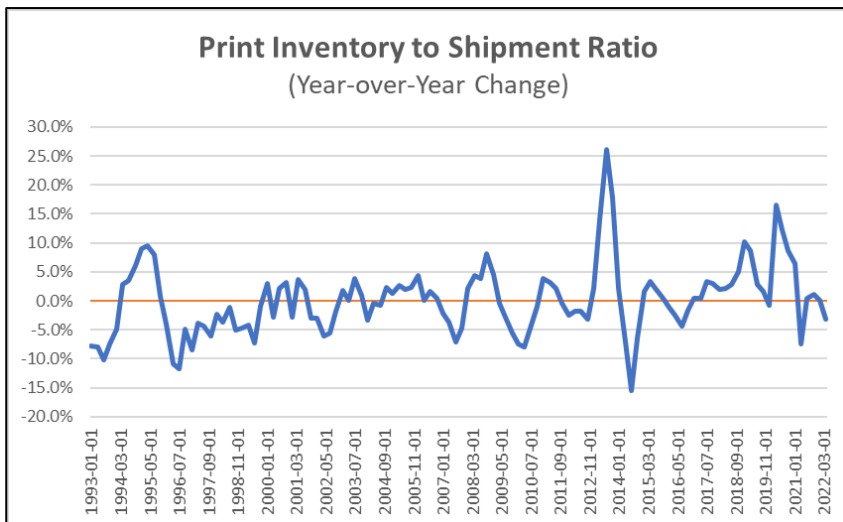
### Print Inventories vs. GDP (U23STI)

- Print inventories were sitting 7% higher year-over-year and were hitting their highest level since July of 2013. These inventory figures cover the broadest spectrum of print material, some sub-sectors could be experiencing tighter conditions.
- **Looking Ahead:** Print inventories generally follow GDP trends, of course the year-over-year percent changes in inventory levels are more dramatic than the changes in GDP. Going into a possible mild recession in 2023, it will be interesting to see if print firms start to trim inventories as we have seen in prior downturns. For now, with a strong US dollar, inventories continue to rise. They were 1% higher month-over-month at the end of the last quarter.



### Print Shipments vs. GDP (U23SVS)

- Shipments of print material were up 1% year-over-year through the end of the last quarter (down slightly from the 1.3% rate hit in the prior quarter). However, shipment activity surged in the last quarter by 7% over the prior quarter. Activity was far more robust and deliveries were the strongest since October of 2019.
- **Looking Ahead:** Like inventories, print shipment activity has more volatility than is seen in GDP. On a percent change year-over-year basis, shipments saw their fastest rate of recovery coming out of the pandemic since the mid-1990's. This rapid rate of recovery can have ripple effects across the industry, and the risk of overbuilding inventories is possible as we see in other US sectors.



### Inventory to Shipments Ratio (U23SIS)

- The inventory to shipment ratio (ISR) for the print industry declined by 3.1% year-over-year after remaining flat in the prior quarter.
- **Looking Ahead:** The importance of the inventory to shipment ratio is that it shows how quickly inventories are building relative to outgoing shipment volumes. An ISR that is falling (like the current condition) shows that outbound shipment activity is outpacing inventory building activity. The shipment ratio is also a gauge of how backlogged the manufacturing process is. Looking at the inventory-to-sales ratio for the industry, it is still showing the sector 5.4% understocked relative to levels from the pre-pandemic period in 2019.

# Manufacturing Producer Prices

The Producer Price Index (PPI) for key paper 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 Manufacturing Sectors						
Category	PPI Code	Sep-22	Aug-22	M/M % Chg	Sep-21	Y/Y % Chg
<b>Paper Manufacturing</b>	<b>PCU322322</b>	<b>185.8</b>	<b>185.0</b>	<b>0.5%</b>	<b>159.9</b>	<b>16.2%</b>
Pulp, Paper and Paperboard Mills	PCU32213221	181.4	180.1	0.8%	157.5	15.2%
Pulp Mills	PCU3221132211	286.3	270.1	6.0%	214.5	33.5%
Paper Mills	PCU3221232212	233.0	227.1	2.6%	201.2	15.8%
Paper Mills (Except Newsprint)	PCU322121322121	161.0	159.6	0.8%	142.4	13.0%
Newsprint	WPU091302	176.1	171.1	2.9%	136.6	28.9%
Paperboard (Primary Products)	PCU322130322130P	375.8	375.5	0.1%	324.7	15.7%
Recycled Paperboard	PCU3221303221307	433.4	424.5	2.1%	358.9	20.8%
Paper Container Manufacturing	PCU3222132221	332.4	332.5	0.0%	281.7	18.0%
Converted Paper Product Manufacturing	PCU32223222	191.1	190.6	0.3%	163.5	16.9%
Corrugated and Solid Fiber Box Manufacturing	PCU322211322211	452.9	454.7	-0.4%	394.3	14.9%
Shipping Containers for food, beverages, carryout	PCU32221132221101	380.0	379.2	0.2%	324.4	17.1%
Shipping Containers for paper products	PCU32221132221102	470.4	470.4	0.0%	411.9	14.2%
Shipping Containers for Metal Machinery	PCU32221132221103	270.8	270.8	0.0%	232.2	16.7%
Corrugated Paperboard in Sheets and Rolls	WPU091405	369.2	369.2	0.0%	316.5	16.7%
Folding Paperboard Box Manufacturing	PCU322212322212P	222.2	221.5	0.3%	176.7	25.7%
Paper Bag and Coated and Treated Paper Manuf.	PCU322220322220	132.0	131.3	0.5%	118.2	11.7%
Stationery Product Manufacturing	PCU322230322230	158.7	160.9	-1.4%	124.0	28.0%
Sanitary Paper Product Manufacturing	PCU322291322291	131.9	128.5	2.7%	117.8	12.0%
Disposable Sanitary Product Manufacturing	PCU3222913222912	101.2	101.0	0.3%	98.9	2.4%
Sanitary Tissue Product Manufacturing	PCU3222913222915	167.1	161.0	3.8%	136.3	22.6%

**Q3 Comments:** Like other producer prices, the paper products category continues to also face inflationary pressures. Higher input costs are driving most categories higher, but the rate of price escalation has slowed in many categories. Prices are still high year-over-year but have started to show signs of moderation on a sequential month-over-month basis with many categories coming in flat. Shipping materials are taking a temporary breather as inventory overstocks start to hamper reorders of new products and subsequently slow down manufacturing output. Spending on consumer staples remains strong and e-commerce spending is obviously continuing to do well. Pulp input prices are still elevated, and overall paper manufacturing came in 16.2% higher year-over-year and was still inflating at a 0.5% monthly rate through September.

# Downstream Market Demand

Kind of Business	Percent Change	
	Sep. 2022	
	from --	
	Aug. 2022	Sep. 2021
<b>Retail &amp; food services, total .....</b>	<b>0.0</b>	<b>8.2</b>
Total (excl. motor vehicle & parts gasoline stations) .....	0.3	7.5
Retail .....	-0.1	7.8
<b>Motor vehicle &amp; parts dealers .....</b>	<b>-0.4</b>	<b>5.6</b>
<b>Furniture &amp; home furn. stores .....</b>	<b>-0.7</b>	<b>0.9</b>
<b>Electronics &amp; appliance stores .....</b>	<b>-0.8</b>	<b>-8.6</b>
<b>Building material &amp; garden eq. &amp; supplies dealers.....</b>	<b>-0.4</b>	<b>9.7</b>
<b>Food &amp; beverage stores.....</b>	<b>0.4</b>	<b>6.4</b>
Grocery stores .....	0.4	6.8
<b>Health &amp; personal care stores .....</b>	<b>0.5</b>	<b>4.3</b>
<b>Gasoline stations .....</b>	<b>-1.4</b>	<b>20.6</b>
<b>Clothing &amp; clothing accessories stores .....</b>	<b>0.5</b>	<b>3.1</b>
<b>Sporting goods, hobby, musical instrument, &amp; book stores .....</b>	<b>-0.7</b>	<b>3.7</b>
<b>General merchandise stores.....</b>	<b>0.7</b>	<b>3.7</b>
Department stores .....	1.3	1.8
<b>Nonstore retailers .....</b>	<b>0.5</b>	<b>11.6</b>
<b>Food services &amp; drinking places ...</b>	<b>0.5</b>	<b>11.4</b>

## Retail Sales (RRSFS)

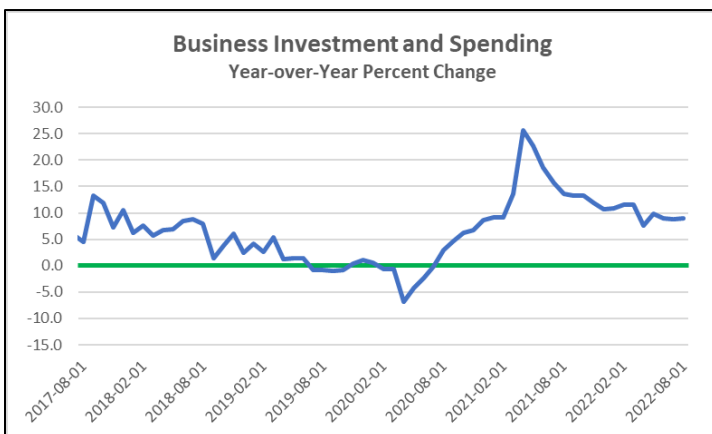
- Total retail sales were 8.2% higher year-over-year in September (the latest available). When stripping out fuel, autos, and food, sales were still up 7.8%. However, when adjusting for inflation, total retail sales were flat Y/Y and were 0.4% lower sequentially M/M.
- General merchandise retailers reported sales 3.7% higher year-over-year and the critical e-commerce sector experienced an increase of 11.6%. Inventory overstocks are a concern, most department stores are 16% heavier than they were prior to the pandemic (based on inventory to sales ratios). This affects the speed of their reorder activity. Consumer staples are still much higher in demand than discretionary items (and many of those products are still facing stockout issues) at this time and inflationary food price pressures are still rising. These sectors obviously create significant demand for paper packaging and shipping materials, and direct purchases of consumer paper goods.
- **Outlook:** The total dollars being spent in retail is still near all-time highs, consumers are still spending. In 2021, 51% of US households were living check-to-check, that figure is now closer to 60%. This changes the types of products being purchased and the total number of products being consumed.

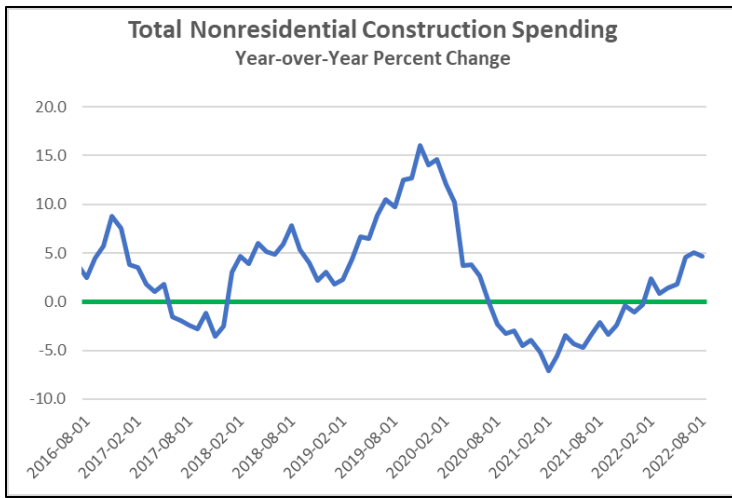
E-commerce sales are mixed. Some reports show sales slowing over previous years, but the national data is reporting an increase of 11.6% Y/Y and online sales are still 60% higher than they were pre-pandemic.

Food and grocery spending is being boosted by inflation. Spending continues to be steady, but price pressures on consumers are likely to continue to build into 2023.

## Capital Goods New Orders (NEWORDER)

- Value of manufacturers new orders for capital goods remained strong again in August (latest available) and were up sequentially 1.4% M/M (0.7% higher last month). They were up by 8.9% Y/Y (up 8.8% last month) and continued to be strong overall.
- **Outlook:** There are still warnings being seen in survey results showing that capex utilization will dip late in 2022 and continue through the first half of 2023. But we don't see that in the data – yet. Corporate spending continues to be robust based on most measures and even in the durable goods sector, new orders remain stable for equipment and other items that can create small pockets of paper demand. But the overall spending trend is more important, and it shows that executives have enough positive sentiment to keep spending – for now.



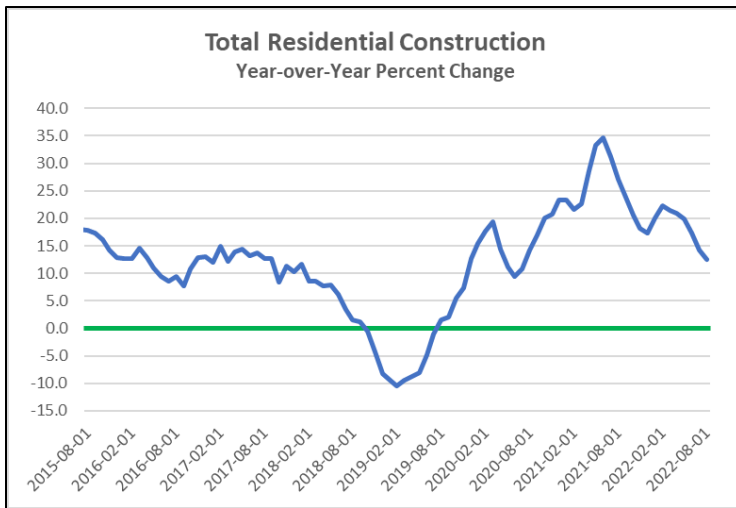


**Total Non-Residential Constr. (TLNRESCONS)**

- Total Non-Residential Construction was 4.7% higher than it was a year ago (5.0% higher last month) and was down 0.4% M/M (+0.7% last month). Overall spending was at an annual rate of \$859B (down from the January 2020 annualized run rate peak of \$884B).
- **Outlook:** As mentioned prior, many projects that were put on hold earlier in 2022 because of limited supply of steel, girders, cement, labor, etc. are now starting to get rescheduled as raw material costs and labor availability improves. Some sectors, such as manufacturing construction, is still growing more than 20% year-over-year. Paper used in roofing and insulation, packaging of components and equipment, and wall board should continue to experience stable demand through this broader macroeconomic slowdown underway.

**Total Residential Construction (PRESCONS)**

- Total residential construction in August (latest available), was up by 12.5% Y/Y (up 14.3% last month). It was down 0.9% M/M (-1.7% last month).
- **Outlook:** As reported last quarter, the US housing market is changing fast. Permits were down in August M/M by 8.5% and were 13.0% lower Y/Y. Multi-family housing demand was down 15.1% M/M and were 15.2% lower Y/Y. Single family permits were down 11.4% Y/Y and fell 3.4% M/M. Home prices have not yet eased enough to offset the impact of interest rate hikes. The monthly payment on a \$400K house from one year ago is \$700 higher, and that pushes many families out of the single-family housing market. The US still is in need of nearly 5 million dwellings for people to live in, which is one of the reasons that multi-family demand remains strong (despite the August downturn which could have been a single month anomaly).

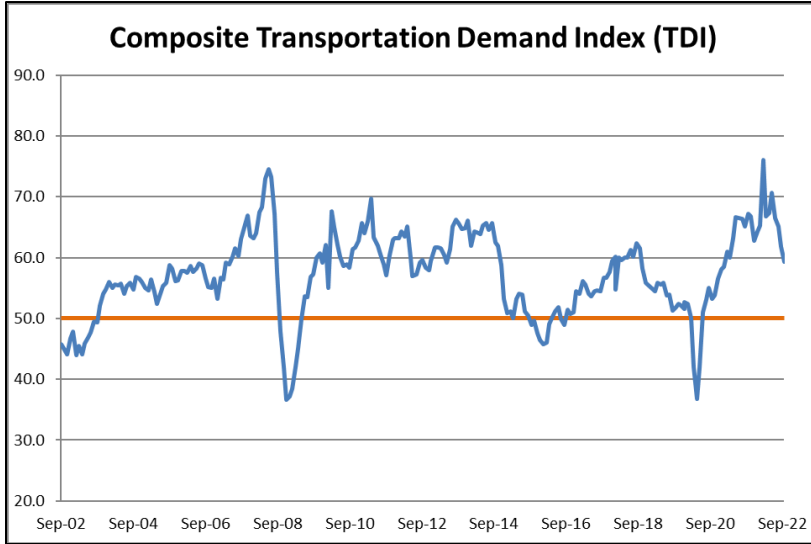


**Wholesale Trade (R4241IM163SCEN)**

- Merchant wholesalers' inventory to sales ratios of paper supplies were at 1.06 months of inventory-on-hand. This is still lower than the decade average, but inventories are recovering. The ratio was lower by 3.6% Y/Y through August (latest available; down 2.7% Y/Y last month).
- **Outlook:** Wholesale inventory to sales ratios for paper products remain below decade low levels. When the ratios are low (inventory is tight) prices are higher. Input prices and transportation costs are still driving up the cost of operations. But some pressure has started to build on the retail front as retail buyers start to show some hints of easing their purchases and stockpiling of inventories. A strong dollar is the one contrarian in the mix, a stronger dollar has encouraged some stockpiling for importers but risks slowing export volumes out of the US.



# Supply Chain and Transportation Situation



## Transportation Demand Still High

- The Transportation Demand Index shows the current demand environment for freight services (which dictates price). The current demand index at a broad level (across all modes of transportation) was 4.0% **lower** month-over-month in September and was 8.9% lower year-over-year.
- **Outlook:** Although the sequential trend shows demand slipping across the sector, the demand index remains in the upper end of the historic range and there are still problems in the industry keeping prices higher. Prices are still elevated year-over-year (truckload prices are still 12.0% higher Y/Y; Less-than-Truckload is up 16.0%, and Rail is up 10.7%). Those prices are for both contract and spot rates and include fuel surcharges. Prices are certainly starting to decelerate, but they remain in the upper range of what would be considered a normal range over the past 8 years.

	22-Sep	22-Aug	21-Sep	Y/Y Change %	M/M Change %
<b>Composite</b>	59.3	61.8	65.1	<b>-8.9%</b>	<b>-4.0%</b>
<b>Rail</b>	57.5	59.3	63.0	<b>-8.7%</b>	<b>-3.0%</b>
<b>Trucking</b>	59.5	62.2	65.0	<b>-8.5%</b>	<b>-4.3%</b>
<b>Air</b>	63.1	64.6	74.3	<b>-15.1%</b>	<b>-2.3%</b>
<b>Maritime</b>	61.6	62.7	73.7	<b>-16.4%</b>	<b>-1.8%</b>

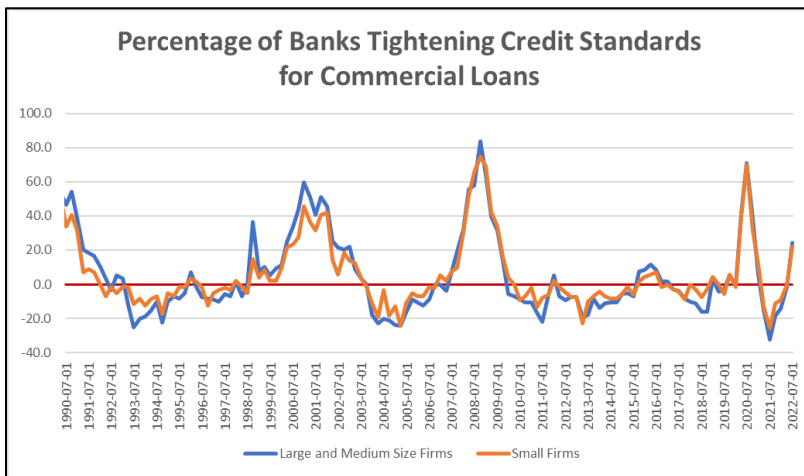
## Mode Demand Slowing

- Each mode of transportation continued showing signs of decelerating demand, which would suggest that some softening of price would also follow. A reading over 50 here is considered to be an expanding market, a reading below 50 is contracting. Every mode still had indexes above normal, demand was stable. But there was continued deceleration taking place and as mentioned last quarter, some shippers should be in a position to negotiate more stringently on price, especially going into a new contract year.
- **Outlook:** Demand destruction (a broader, slowing freight market) was the primary factor pushing rates lower. Capacity is more available and anyone playing the spot market should be able to find “deals” on freight rates. Inventories are also getting overstocked across many sectors, and that slows reorder demand which impacts freight demand, freight volumes, and pushes prices lower.



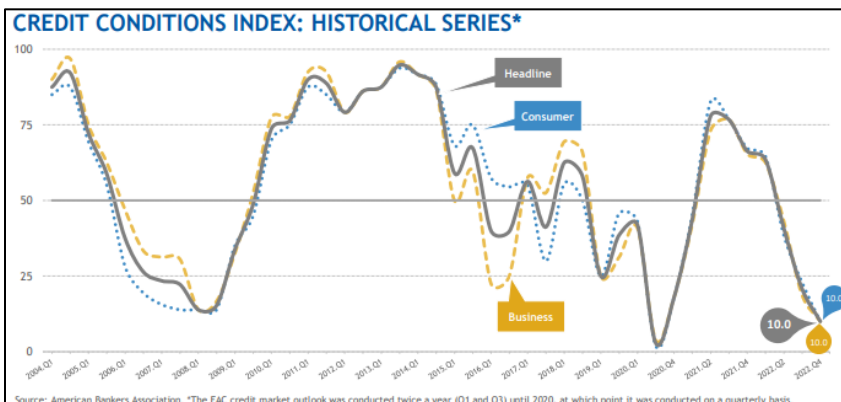
# Banking Credit and Finance

**Overall Observations:** In the past quarter, the percentage of banks that expect credit conditions to get tighter has accelerated dramatically from last month's report. As the two indicators below show, credit conditions are expected to tighten and the quality of businesses seeking credit is expected to worsen as well. The Federal Reserve is still on track to tighten the Effective Funds Rate to nearly 4.8% at its peak, which they expect to hit by the summer of next year. Currently, the Fed's outlook shows at least one more 75-basis point hike and perhaps a 50-basis point hike before the end of the year. That would increase rates to their highest levels since September of 2007.



## Banks Tightening Conditions (DRTSCILM; DRTSCIS)

- In Q2 of this year, -1.5% of large and mid-size commercial industrial loan banks were tightening standards on credit; that percentage has now surged to 24.2% in one quarter. For small industrial and commercial firms, zero percentage of banks were tightening standards in Q2, but that figure has also surged to 22.2% in Q3.
- **Outlook:** Credit risk is certainly rising and banks' willingness to take on that additional risk is starting to change. Although higher interest rates give them an opportunity to be profitable after nearly a decade of cheap money, they are being far more selective on how much risk they are willing to take on. Anecdotes suggest that some industrial firms are heading to smaller, regional banks to try and get projects financed.



## Credit Conditions (ABA)

- The American Bankers Association's Credit Conditions Index for business credit fell 10.8 points to 10.0 in Q4 2022 (the latest report). This was the weakest reading since the beginning of the pandemic lockdown period. All of the members of the ABA except for two felt that business credit availability and business credit quality to worsen over the next two quarters.
- **Outlook:** Looking forward, the banking sector expects the next six months to be rocky. With a reading well below 50, the ABA Credit Conditions index has only been weaker one other time, and that was during the pandemic. The current downtrend is even a bit steeper and worse than the outlook during the Great Recession in 2009.

# Industry Outlook

Economic slowing continued to be a global phenomenon through Q3 and the outlook for the next 6 months appears to be continuing this trend. Some of the largest regions of the world are experiencing difficult economic environments as everything from geopolitics to environmental impacts, a surging dollar, higher interest rates, and negative sentiment drags on growth. China has also not abandoned their zero-Covid policy which also hampers growth potential and it disrupts the global supply chain, making it volatile and difficult to predict.

	2022				2023				2019	2020	2021	2022	2023	2024	2025
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4							
<b>Real GDP</b>	-1.6	-0.6	0.3	-0.5	-0.5	0.5	2.0	3.0	2.3	-3.4	5.7	0.2	1.2	1.7	1.8
<b>Unemployment rate (%)</b>	3.8	3.6	3.6	3.6	3.7	3.9	3.9	4.4	3.7	8.1	5.4	3.8	4.4	4.4	4.3
<b>PCE Inflation (%Y/Y)</b>	6.3	6.5	6.3	4.2	3.4	3.0	2.9	2.8	1.5	1.2	3.9	5.4	2.8	3.3	2.0
<b>Core PCE Inflation (%Y/Y)</b>	5.2	4.8	4.6	4.4	3.4	3.2	3.1	3.1	1.7	1.4	3.3	4.5	3.1	2.3	2.1
<b>Fed Funds Rate</b>	0.4	1.6	3.1	4.4	4.4	4.5	4.6	4.6	1.6	0.1	0.1	4.4	4.6	3.9	2.9

Looking forward, US growth is expected to be just 0.2% for 2022 with Q4 contracting at 0.5% after the US contracted in Q1 by 1.6% and Q2 at 0.6%. For the full year 2023, growth is expected to accelerate slightly by 1.2% built largely on stronger second half growth.

Paper production costs could be further impacted late in Q4 and early next year as natural gas prices in the US increase. Most analysts are anticipating an increase in natural gas to LNG conversions starting in December, which will increase demand for US natural gas regardless of what the weather does. If the US has a sharply colder winter, it could push natural gas prices much higher. This, in turn, would impact various forms of electricity production. Several regions of the US are also undergoing drought conditions and that has lowered hydroelectricity production, pushing electricity higher. Current consumer price index measures for electricity show the national average price 15.5% higher year-over-year, which is the fastest rate of growth on an annual basis since 1981.

Construction activity will continue to slow down temporarily except in manufacturing, some commercial sectors (single-story retail and mixed use), and energy, water, and conservation projects. However, as commodity prices come down and certain products are more available some projects that have been temporarily put on pause will restart, which could create some odd, off-cycle improvements in demand (called green shoots) that could come in the middle of a broader slowdown. This could increase demand for construction paper to a degree.

Consumer spending in retail and e-commerce sales will continue to create a stable environment for packaging, this is expected to continue unless the jobs environment dramatically changes. Even with layoffs accelerating, the market still must absorb nearly 10 million jobs that remain open. Households are starting to use credit cards more to make daily purchases, which is concerning. But their consumption of consumer staples is not slowing and top-line spending continues to remain near all-time highs on a dollar basis (those dollars just don't buy as much as they did a year ago).