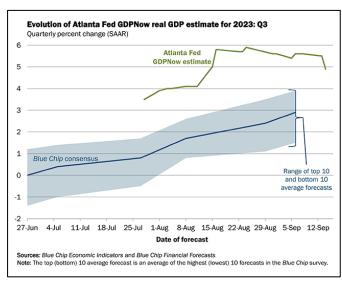


Factors Shaping Supply Chain & Logistics

Q3 GDP Still Trending at 4.9%. The Atlanta Fed GDPNOW estimate early in September is currently showing it growing at 4.9% based on data released thus far. This is up sharply from last quarter's 2.4% GDP growth rate. Keep in mind that GDP growth is largely hanging on nonresidential construction, consumer spending, and government spending through the first half of the year. Most of that has continued in Q3 thus far.

Inflation is still running too hot and consumer households are generally still under pressure. The latest data shows average inflation running at 4.1%, above the Federal Reserve's target rate of 2%. There is some slight disinflation, but the rate may be too slow for the Fed (another rate hike is possible).

Inflation-Adjusted Retail (the good and bad). Inflation-adjusted retail figures showed that they continued to soften versus levels last year, that's the bad news. But the good news is that (even when stripping out the impact of inflation) they remain stable at levels that are 12% higher than they were prior to the pandemic. From a total dollars moving through cash registers, they remain near the peaks hit last year and in 2021 when product spending was high. Overall, that's good news if it continues at these rates to remain above the long-term trend.



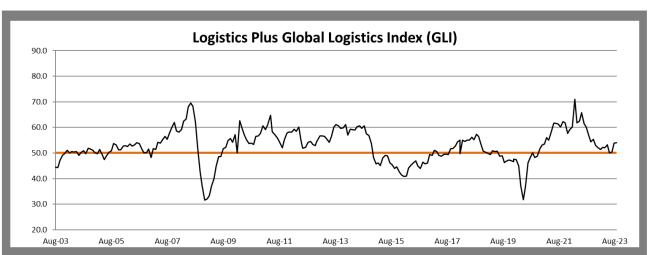


The Logistics PULSE Global Logistics Index

The GLI Improves Marginally Again in August

The LogisticsPULSE Global Logistics Index (GLI) came in at **54.0** in August, up marginally from 53.9 in July. It was still in expansion territory and showed slight improvement into the peak. The index was 4.9% lower Y/Y (it was 9.5% lower Y/Y last month) but was 0.2% higher M/M.

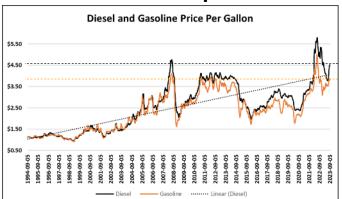
The GLI measures transportation demand across 22 global economic metrics and has been measured over twenty years of collected data.





Logistics PULSE | NORTH AMERICAN LOGISTICS

What's New & Important with North American Supply Chains?



Inventory to Sales Ratio (ISR) Analysis					
	Sector	July Sales (Millions)	9/12/09 - 09/12/19 10-YR Average	Jul-23	ISR Percent Above/Below Pre-pandemic
	Total Business		1.34	1.39	3.7%
1	Automotive		2.49	0.78	-68.6%
2	Retail		1.43	1.30	-9.1%
3	Merchant Wholesalers		1.29	1.39	7.8%
4	Manufacturing		1.35	1.48	9.6%
1	Drugs Wholesalers	86,557	1.09	1.01	-7.3%
2	Paper Wholesalers (ie. National Paper)	7,996	1.09	1.04	-4.6%
3	Department Stores (ie. Nordstrom's)	11,025	2.11	2.03	-3.8%
4	Furniture, Appliance Stores (i.e NFM)	18,720	1.63	1.59	-2.5%
5	Chemical Wholesalers	13,707	1.17	1.15	-1.7%
6	General Merchandise (ie. Walmart)	73,007	1.43	1.41	-1.4%
7	Computer Wholesale Distributors	24,737	0.79	0.78	-1.3%
8	Apparel Stores	25,971	2.39	2.37	-0.8%
9	Food and Beverage Stores	82,033	0.78	0.78	0.0%
10	Furniture Wholesalers	10,541	1.71	1.71	0.0%
11	Building Material Stores (ie. Home Depot)	35,620	1.85	1.92	3.8%
12	Grocery Wholesalers	72,822	0.68	0.73	7.4%
13	Machinery Wholesalers (ie. John Deere, Vermeer)	51,735	2.60	2.81	8.1%
14	Lumber and Construction Material Wholesalers	18,180	1.49	1.63	9.4%
15	Commerical Equipment Wholesalers	50,052	1.09	1.21	11.0%
16	Durable Goods Wholesalers	305,027	1.59	1.84	15.7%
17	Hardware, Plumbing, Heating Wholesalers	19,552	2.05		17.6%
18	Household Appliances/Electronics Wholesalers	63,736	1.10	1.35	22.7%
19	Alcohol Wholesale Distributors	14,131	1.31	1.68	28.2%

Diesel Surges to Third Highest Rate in History

Diesel prices have quietly surged to the third highest level in history. The previous two periods were during the Great Recession when crude oil hit \$145 a barrel and during the early panic period of the invasion of Ukraine. Inventory forecasts show diesel remaining near the bottom of the 5-year average throughout much of 2024. Refinery utilization is still running at more than 90% and many planned maintenance schedules are running behind plan. This is important because overall demand for diesel is lower than it was last year when the supply chain was running hot. If demand were higher, prices could be inching nearer to highs seen in 2022.

Inventories Still Elevated Above Normal

Although improving slightly, inventories are largely ahead of normal levels compared to the period prior to the pandemic. As of the end of July (latest available), 64% of businesses were sitting more than 3% higher than their inventory levels in the decade prior to the pandemic. When inventories are this overstocked, much of the upper end of the supply chain is "choked off". This is largely why the demand side of the economy is currently good, but the freight side remains more sluggish than expected.

Full Truckload (FTL) Price Index:

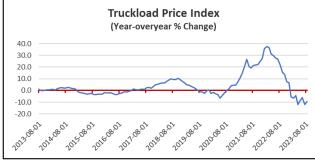
Truckload prices were up 1.2% M/M (-5.9% lower last month) in August (latest available) according to the Producer Price Index (includes both contract and spot rates). They were down 9.4% Y/Y (-12.2% lower last month). (PCU484121484121)

Less-Than-Truckload (LTL) Price Index:

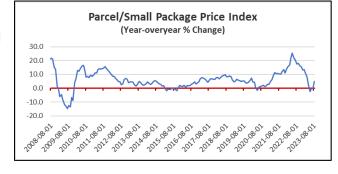
LTL prices were sharply higher by 4.4% month-over-month in August (latest available) but were lower by 0.5 Y/Y (-7.2% last month). This is the first clear corresponding data available to show the impact of the Yellow closure. Historical analysis showed prior closures pushing prices up 4-6%, and it appears that this will have a similar impact in the near term. (PCU4841224841221)

Parcel/Small Pack Price Index:

Prices for parcel and small package express courier services surged by 5.0% Y/Y (0.1% lower last month); and were up month-overmonth in July by 2.7%. E-commerce sales were 7.2% higher Y/Y (9.4% last month) but were flat month-over-month in August (latest available). (PCU492110492110201)



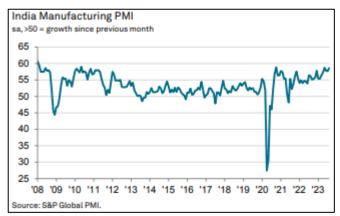






LogisticsPULSE | INTERNATIONAL LOGISTICS

What's New & Important with International Supply Chains?



India Continues to Be Global Manufacturing Hotspot

The fastest growing manufacturing sector in the world continues to be India, its PMI rose to 58.6 in August from 57.7 last month, and by far the hottest manufacturing sector in the world. Demand was still higher than expected. Export orders were growing for their 17^{th} consecutive month and was hitting their sharpest growth rate in nine months. What is interesting, is that it is being driven heavily by growth from Bangladesh, China, Malaysia, Singapore, Taiwan, and to a lesser degree, the US. Indian manufacturers were ordering input materials at their second-fastest pace in more than 18 years. What is negative against the inflation fight, input prices were rising at their fastest rate in 12 months. (Chart Source: S&P Global)

Supply Chain Disruptions Not a Thing of the Past

Disruptions due to environmental issues are still roiling the global supply chain, albeit at a much slower rate than was experienced from 2020 to 2022. Floods in Portugal have disrupted suppliers of auto parts, leading to many manufacturers being forced to temporarily idle operations. One particular supplier provides more than 80% of toothed rings for key engine manufacturers, and it is expected to have delayed output through all of October. Other issues span delays at the Panama Canal to hurricane impacts, all of which continue to create challenges and delays for distribution patterns.

Airfreight Price Index:

The airfreight price index was not updated at the time of writing this month's briefing. It was flat M/M in July (latest available) and was lower on a Y/Y basis, falling by 30.4% (down 36.2% last month). (IC131)



Ocean Freight Price Index:

The <u>blended</u> PPI for maritime service in Aug was 12.6% lower Y/Y (11.4% lower last month), but it was up 1.8% M/M (flat last month). Sailing capacity is still available and port congestion is at a minimum on a macro basis. Some Panama Canal routes are still being hampered by low water levels. (PCU483111483111)



Warehousing Price Index:

Warehousing prices were lower in August (latest data available) with rates down 1.4% M/M (+1.8% last month) but was higher Y/Y by 8.7% (+5.0% last month). (PCU49314931)







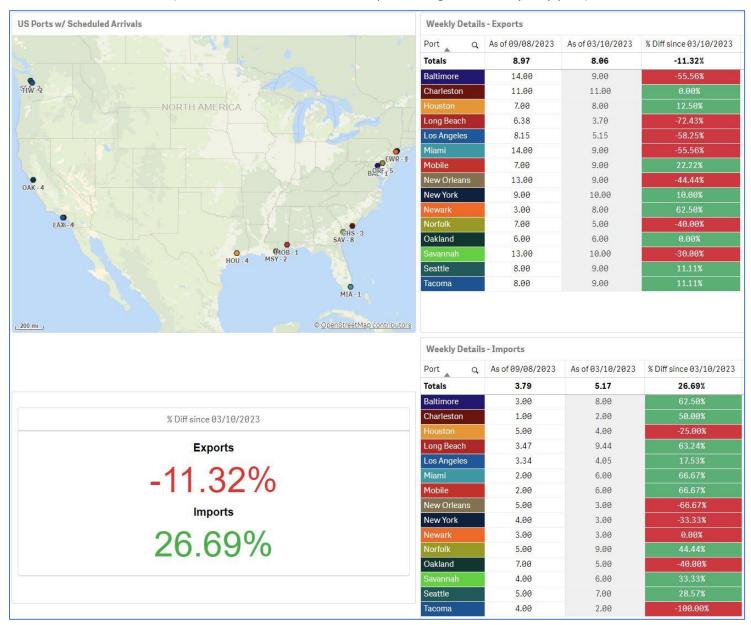
The LogisticsPULSE Port Congestion Index

U.S. Container Imports Processing Much Improved Early 2023

Port congestion is one of the biggest shipping problems faced by U.S. corporations today. The **LogisticsPULSE Port Congestion Index** (PCI) is a data-driven tool that can help calculate how much congestion there is at specific ports in the USA and around the world.

- On the Imports side, the Container Processing Time (in days) has improved an impressive 26.69%, or almost 1.5 days, above what it was in mid-March 2023. The processing time for Exports from these same ports is slower by about 11.32 %, or almost a full day longer than it was in mid-March 2023.
- The US Ports with the greatest amount of Imported TEU's currently are in New York, Los Angeles and Long Beach and are being processed in about 3.6 days. The highest volume of Exported TEU's are also New York, Los Angeles and Long Beach and they are completing the export process in about 7.84 days.
- The ports with the greatest number of scheduled vessel arrivals are in Norfolk, Savannah & New York, where Miami, Baltimore, Mobile and Newark have the fewest.

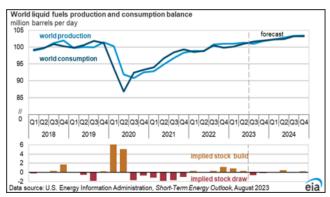
(data shown below is container processing time, in days, by port)





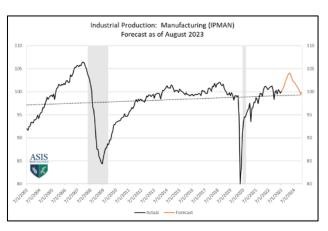


Special Topics in Supply Chain & Logistics:



Oil Forecast Update: Prices Rising on Supply Concerns

In the past 30 days, the outlook for global oil supplies have tightened and oil prices have increased. At the time of writing this month's briefing, oil prices have risen sharply. West Texas Intermediate had moved above \$90 a barrel and Brent North Sea Crude was above \$94 a barrel. OPEC+ has agreed to temporarily cut production by up to 2.1 million barrels per day. Instability in the Middle East and the ongoing war in Ukraine are still backdrops creating unexpected impacts to oil distribution. The forecast for global oil still shows WTI averaging \$83.22 in 2024 (up from \$79.65 in 2023) and Brent to eclipse \$88.22 on average next year (\$84.46 in '23).



Manufacturing Outlook Mixed

Global manufacturing activity was generally softening in August with Europe being among the weakest markets, Asia showing pockets of growth but generally remaining sluggish, and the USMCA markets generally mixed. The US and Canada were still showing contraction in manufacturing while Mexico was growing. Any issues that may stem from a slowing of the automotive industry (during labor negotiations) would obviously have global implications. Some markets in Europe that have been teetering on the edge of recession but rely on exports of manufactured goods could face further headwinds if a labor-related slowdown were to follow (or a longer duration slowdown). Nineteen countries had manufacturing sectors remaining in contraction. A few were showing mild peak retail season upticks in activity, but those increases were mild.

What's New at Logistics Plus?

Logistics Plus Opens New LP Aero Entity

Logistics Plus announces the opening of a new entity, LP Aero™, to enhance the company's global air charter solutions. LP Aero will be based in London, UK, and managed by Andriy Blagovisniy, Global Director of Air Chartering. Andriy holds a degree in Aerospace Engineering and Aircraft Design and is universally recognized as one of the top experts in Aviation. Read More

LP Makes Inc. 5000 Annual List of Fastest-Growing Private Companies

Logistics Plus is proud to announce it has been included in *Inc.* magazine's 2023 Inc. 5000 list, an exclusive ranking of the fastest-growing private companies in America. LP made the list with an impressive three-year sales growth rate of over 80% from 2019 to 2022 for its U.S.-based operations. It is the fifth time in the past six years and the eighth time overall since 2007. Read More

Jim Berlin Featured on WPSE Business Spotlight Radio/Podcast

Logistics Plus Founder and CEO Jim Berlin was featured on the weekly Business Spotlight program. In this month's Logistics Plus segment, Jim discusses the company's 27th Anniversary, recent growth, company culture, what he envisions for the future, and more. <u>Listen to Podcast</u>







