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August 2022 Logistics Manager's Index Report®

LMI® at 59.7
Growth is INCREASING AT AN INCREASING RATE for: NOTHING

Growth is INCREASING AT A DECREASING RATE for: Inventory Levels, Inventory Costs, Warehousing Utilization, Warehousing Prices, Transportation Capacity, Transportation Utilization. And Transportation Prices
Warehousing Capacity is CONTRACTING.

(Fort Collins, Colorado) — The Logistics Managers' Index reads in at 59.7 in August, down (-1.0) from July's reading of 60.7. This is the first reading below 60.0 since May of 2020 and the third consecutive reading below the all-time index average of 65.3. While this does still represent expansion in the logistics industry, the rate of growth is now 16.5 points down from March when we saw an all-time high reading of 76.2. This is the largest slide we have seen over a five-month period in the history of the index. The only movements similar to this one were the positive jumps up from the Spring to the Fall of 2020 when we saw a 19.2 point increase between locked-down April and the Q4 build-up to a reawakened economy in September 2020. Essentially, the slide we're seeing now is equivalent in scale to the rapid rise we saw during the early COVID recovery period. That being said, we still do see some growth now, primarily due to robust levels of growth for Inventory Costs and throughout the warehousing metrics.

Researchers at Arizona State University, Colorado State University, Rochester Institute of Technology, Rutgers University, and the University of Nevada, Reno, and in conjunction with the Council of Supply Chain Management Professionals (CSCMP) issued this report today.

Results Overview

The LMI score is a combination of eight unique components that make up the logistics industry, including: inventory levels and costs, warehousing capacity, utilization, and prices, and transportation capacity, utilization, and prices. The LMI is calculated using a diffusion index, in which any reading above 50.0 indicates that logistics is expanding; a reading below 50.0 is indicative of a shrinking logistics industry. The latest results of the LMI summarize the responses of supply chain professionals collected in August 2022. Overall, the LMI is down (-1.0) from July's reading of 60.7. The slowdown in the rate of expansion is the product of the continued slowdown in the transportation market. However, the overall logistics industry continues to expand, driven primarily by high levels of inventory and the associated costs.

The logistics industry is currently facing an interesting mix of decreased consumer demand, but with an abundance of goods throughout supply chain systems. The dynamic at work is somewhat similar to what we saw during the early days of COVID when distribution networks became constipated with inventories due to an unexpected drop in consumer demand. As always, the story behind this month's reading is nuanced, with a mix of both positive and negative economic indicators. This mix has resulted in the tightest warehousing market we have seen in years, along with the loosest transportation market.

Warehousing Capacity is down once again (-4.8) to 42.3. This marks two years straight of contraction. The congestion we see extends throughout the entire U.S. supply chain. During the last week of August the number of TEUs waiting off the East Coast were approximately triple that on the West Coast[1]. While labor talks are still at a standstill, the Inland Longshore and Warehouse Union have thus far kept their promise to not implement a labor strike[2]. Ironically, the labor shutdowns and congestion that shippers hoped (and paid more) to avoid have not materialized in Southern California. Instead, the delays have turned up elsewhere as shippers flocked to alternate ports, none of which have the infrastructure present in California. That isn't to say that everything is flowing smoothly in the city of Angels, as they are still overrun with idle containers that need to either be sent back empty across the Pacific or loaded onto slow-moving trains to be shipped further inland. Interestingly, the total waiting off of all ports together in the

[1] LaRocco, L. A. (2022b, September 1). *Port of New York and New Jersey delay late container fee scheduled to hit ocean carriers*. CNBC. https://www.cnbc.com/2022/09/01/port-of-new-york-and-new-jersey-delay-late-container-fee-.html

[2] Berger, P. (2022b, August 19). West Coast Port Labor Talks Stalled Over Union Conflict. *Wall Street Journal*. https://www.wsj.com/articles/west-coast-port-labor-talks-stalled-over-union-conflict-11660947033

last week of August was 130, down slightly from the 150 we saw in July[3]. The congestion at East Coast ports have led to situations where truckers cannot even access containers, leading to delays and penalties. To avoid the container build up some raw materials importers are utilizing bulk vessels instead of (what would normally be) more efficient container ships to avoid the traffic jams[4].

The story is not much better once shipments get through the ports, as inland bottlenecks continue to choke efficiency. Chassis are sitting under idle containers for double or triple the amount of time they should be under normal circumstances, and UP and BNSF have once again put a cap on inbound containers as they attempt to clear the glut out of their transfer yards[5]. Demonstrating how the demand for trucking capacity has shifted, some retailers are now storing excess inventories in truck trailers in parking lots and fields around the country. We saw something similar to this with intermodal cars in early 2021, but the squeeze on transportation capacity tightened to the point that firms largely moved away from this as a strategy. However, with the squeeze on warehousing capacity mobile storage has become more viable. Karl Siebricht, the CEO of shared warehousing space platform Flexe noted that many customers are now inquiring about leasing out space in the parking lots outside of warehouses to store drop trailers full of inventory. Some retailers are even getting in on the act, becoming entrepreneurial, creating more non-traditional storage in the face of squeezed capacity and a dwindling retail cashflow. Retailers like the Gap and American Eagle are now acting as pseudo 3PLs, allowing other retailers access to their distribution[6].

The supply chain will not truly be “back to normal” until sufficient Warehousing Capacity comes online. This will be difficult to accomplish. Prologis’s vacancy rate in the top 30 U.S. markets is sitting at 3%, well below the normal average somewhere between 5%-10%. Many of the facilities are overflowing with goods to the point that operations have become less efficient due to the lack of space to maneuver or transfer inventory across the facility[5]. Boyd Co’s BizCost unit estimates that the U.S. will need an additional 335 million square feet of warehousing by 2025 just for ecommerce, with another 660 needed for more traditional distribution (up and downstream). If we are not able to bring this volume online, we will continue to see growth in Warehousing Utilization metrics (-3.5) which read in at 65.3 in August and continues its steady rate of growth (reading in between the mid-60’s to the mid-70’s since the start of COVID) as firms struggle to maximize their limited space. The continued growth of utilization not only represents a cost issue but is also a hindrance to operational efficiency as some facilities are

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[3] Miller, G. (2022c, August 30). *Only 8 ships waiting off Southern California—But 41 off Savannah*. FreightWaves. https://www.freightwaves.com/news/only-8-ships-waiting-off-southern-california-but-41-off-savannah

[4] Berger, P. (2022a, August 17). U.S. Shipping Backups Shift to East Coast and Gulf Coast Ports. *Wall Street Journal*. https://www.wsj.com/articles/u-s-shipping-backups-shift-to-east-coast-and-gulf-coast-ports-11660755401

[5] Berger, P. (2022c, August 26). Warehouse Bottlenecks Are Snarling U.S. Supply Chains. *Wall Street Journal*. https://www.wsj.com/articles/warehouse-bottlenecks-are-snarling-u-s-supply-chains-11661529092

[6] Young, L. (2022b, August 23). Retailers Scrambling to Stow Inventories Are Turning to Transport Equipment. *Wall Street Journal*. https://www.wsj.com/articles/retailers-scrambling-to-stow-inventories-are-turning-to-transport-equipment-11661279345

becoming too full to allow for optimal movements inside the warehouse[6]. Labor also remains a limiting factor in distribution networks. More news on this front came last week as a judge upheld the unionization of an Amazon facility in Staten Island[7]. Whether a wave of unionization spreads through other Amazon facilities, and what the ultimate impact of this would be remains to be seen. Unsurprisingly, the ongoing squeeze on inventory space continues to put strong upward pressures on Warehousing Price (-1.2), which is coming in at 75.0 representing a very strong rate of growth. This is reflected around the country where the average rent per square foot was up 17% year over year in the second quarter to $6.96/sqft. This was much more pronounced in high-demand areas like California's Inland Empire, where the price per square foot was a staggering $16.69[8]. The congestion is not bad for everyone of course, as the 3PL industry is expected to generate revenues of 414.1 billion in 2022. This is up 22% from the already high values seen in 2021. Warehousing metrics are expected to stay strong in 2023 as the demand for storage space is likely to remain robust[9].

The other side of this congestion can be seen in our three transportation metrics. The increase in Transportation Price growth we saw in the second half of July was not a harbinger of expansion in August, as prices were down (-1.5) to 48.0, marking two consecutive months of contraction following 25 months of expansion. About half of the markets analyzed by FreightWaves' showed an increase in freight demand, with volume continuing to shift towards East and Gulf Coast ports and away from Southern California[10]. Market research from DAT confirms this, showing that truckload prices are down 11 cents from July to $2.53 per mile[11]. Falling fuel prices are partly behind the reduction in rates, as retail diesel prices averaged $5.115 per gallon during the last week of August, down 70 cents from the highs observed at the end of June[12]. This slide looks to have threatened the OPEC nations, which announced on September 5th that they would be cutting production by 100,000 barrels per day. While this is only a tiny fraction of global demand, it is being read as a sign in many corners that the OPEC nations are willing push back against the demands of their customers in order to maintain prices around $100/barrel[13] (Reed, 2022).

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[7] Herrera, S. (2022, September 1). *Labor Official Recommends Amazon Union Victory in New York Be Upheld*. WSJ. https://www.wsj.com/articles/labor-official-recommends-amazon-union-victory-in-new-york-be-upheld-11662070631

[8] Franz, G. (2022, August 30). *Still booming | DC Velocity*. DC Velocity. https://www.supplychainquarterly.com/articles/7000

[9] Solomon, M. (2022, August 15). *After an unprecedented 2021, what can the 3PL industry do for an encore?* FreightWaves. https://www.freightwaves.com/news/after-an-unprecedented-2021-what-can-the-3pl-industry-do-for-an-encore

[10] Solomon, M. (2022, August 15). *After an unprecedented 2021, what can the 3PL industry do for an encore?* FreightWaves. https://www.freightwaves.com/news/after-an-unprecedented-2021-what-can-the-3pl-industry-do-for-an-encore

[11] Young, L. (2022c, August 30). Best Buy Says Supply-Chain Strains Are Improving Heading Into Fall. *Wall Street Journal*. https://www.wsj.com/articles/best-buy-says-supply-chain-strains-are-improving-heading-into-fall-11661888270

[12] U.S. Energy Information Administration. (2022, August 30). *Gasoline and Diesel Fuel Update. August 30, 2022*. Petroleum & Other Liquids. https://www.eia.gov/petroleum/gasdiesel/index.php

[13] Reed, S. (2022, September 5). OPEC Plus Agrees to Cut Production by 100,000 Barrels a Day. *The New York Times*. https://www.nytimes.com/2022/09/05/business/opec-plus-meeting.html

There was a bit of positivity at the end of the month regarding U.S. employers adding 315,000 jobs in August 2022. Interestingly, only 800 seasonally-adjusted new transportation jobs were reported (4,700 without the adjustment), marking a significant drop off from the five-digit job gains we were seeing in the sector earlier this year, and reflective of the continuing increase in available Transportation Capacity, which despite a slowdown in the rate of change (-4.8) is still growing at a rate of 64.3 – its fifth consecutive month of contraction after 25 straight months of growth. Despite the slowdown, we are still up 71,000 jobs over the last year so this slow down caps a time of significant expansion[14]. They are good paying jobs too. The American Trucking Association reported an average salary of in-house fleet drivers was approximately $70,000 per year in 2022, up 11% from the year before. Walmart made headlines this Spring by offering a starting pay up to $110,000 for drivers[15]. On the plus side, the overall number is down from the over 500,000 jobs added in July and more in line with the slower growth the Federal Reserve would like to see before backing off of its plan to raise interest rates. The overall labor force was also up by three quarters of a million workers, bumping the unemployment rate up to 3.7 percent from its decades-long low of 3.5 percent last month[16]. While it is always better to add more jobs, many firms will surely breathe a sigh of relief if the slowing rate of growth does lead to a more dovish Federal Reserve.

Freight volumes were down 2.6% in early August year-over-year, but is still above what we were seeing pre-pandemic[17]. One metric to keep an eye on in the coming months is Transportation Utilization, which is down (-7.7) to 51.6, essentially showing no movement and getting close to the threshold of contraction. This metric has only contracted five times in the history of the LMI, at the tail end of the 2019 freight recession from November 2019 – January 2020, and from April – May 2020 at the height of COVID lockdowns. If we see this slip into contraction territory again this Fall, it would be an indicator of a freight market in real trouble. Carriers will likely have some Q4 inventory buildup as a tailwind, but whether or not it is enough to prevent contraction remains to be seen. All of that being said, the softening in transportation markets will not last forever. Allied Market Research estimates the freight brokerage market will nearly double in the next decade, growing from $48 billion in 2021 to $90 billion by 2031[18].

While it has not been the case lately, it is not unprecedented to see a disparity like the one we currently see between the rate of change for Transportation Capacity (purple line) and Warehousing Capacity (teal line). Transportation Capacity seeing its fifth consecutive month of

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[14] Kingston, J. (2022, September 2). *BLS data indicates truck transportation employment growth may be slowing*. FreightWaves. https://www.freightwaves.com/news/bls-data-indicates-truck-transportation-employment-growth-may-be-slowing

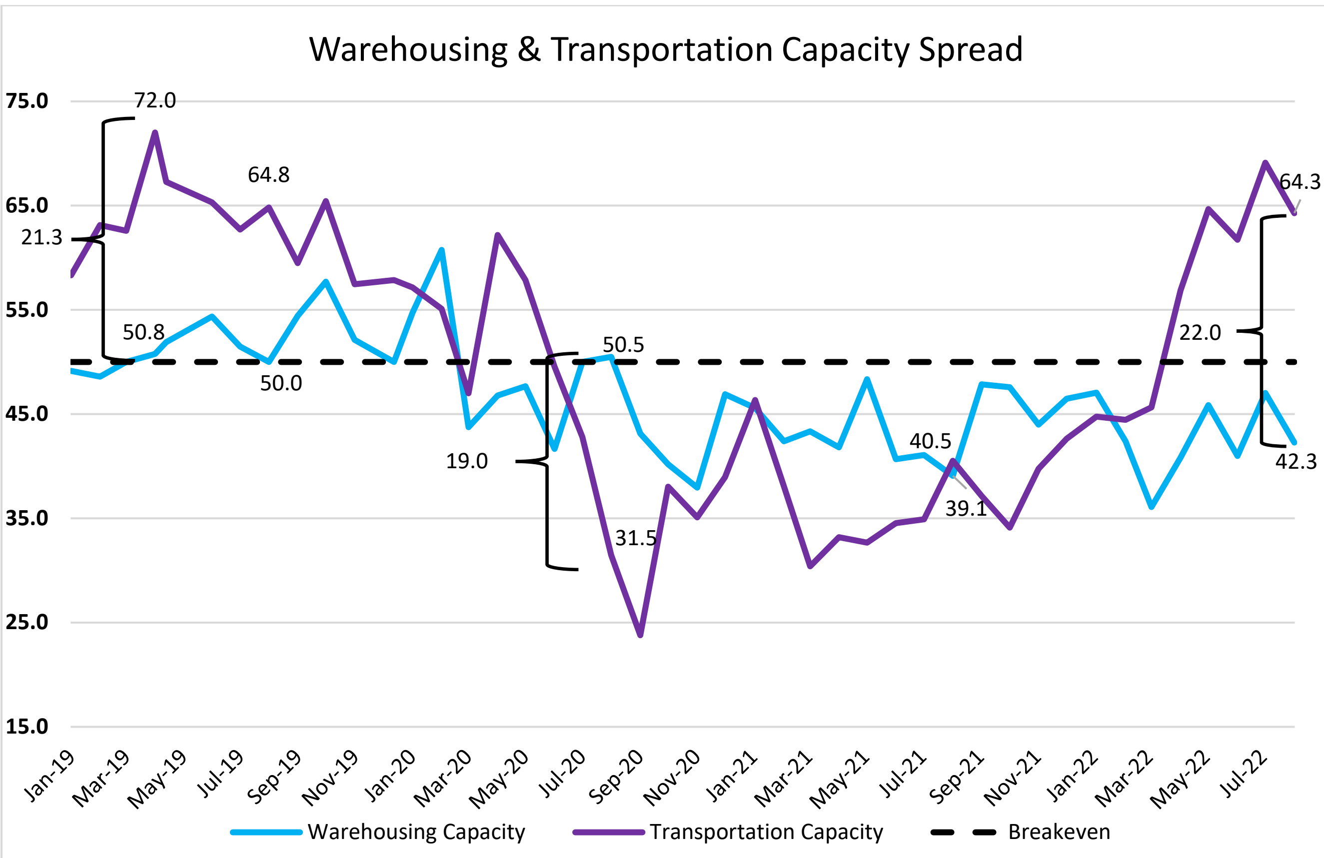
[15] Page, P. (2022, August 10). Truck-Driver Pay Rose 11% Amid Strong Freight Demand Last Year. *Wall Street Journal*. https://www.wsj.com/articles/truck-driver-pay-rose-almost-11-amid-strong-freight-demand-last-year-11660161041

[16] Casselman, B. (2022, September 2). Job Market Cooled but Was Still Strong in August. *The New York Times*. https://www.nytimes.com/2022/09/02/business/economy/august-jobs-report.html

[17] Young, L. (2022a, August 15). Freight Demand Is Moderating Heading Toward the Fourth Quarter. *Wall Street Journal*. https://www.wsj.com/articles/freight-demand-is-moderating-heading-toward-fourth-quarter-11660589658

[18] Casselman, B. (2022, September 2). Job Market Cooled but Was Still Strong in August. *The New York Times*. https://www.nytimes.com/2022/09/02/business/economy/august-jobs-report.html

growth, even as Warehousing Capacity contracts for the 24th straight month. Currently, the spread between the two capacity metrics is 22.0 the second-highest reading from 2019-2022, only behind the 22.1 point spread from July. Since the start of 2019, the spread between capacity metrics has only been over 20.0 four times, with three of those occurrences coming in the last months. The only other time we saw a similar spread was in April 2019, when the two metrics were 21.3 points apart. There was a similar dynamic at play here as well, with a rapid rise in available Transportation Capacity contrasting with a relatively tight warehousing market. Similar to what we see now, available Transportation Capacity had expanded quickly in going into the Spring of 2019 (up 28 points from October 2018). The end result of this expansion was the freight recession that wreaked havoc on carriers until the pandemic provided an unexpected lift. It remains to be seen what will happen with the transportation industry over the next year (our respondents predict a growth rate around 64 over the next 12 months). The real relief would come if Warehousing Capacity moved similarly to the way it had in 2019 and expanded in any way over the next few months. The logistics industry continues to see the tale of two sectors, with warehouses bursting at the seams, and transportation with space to spare.



Inventories continue to be one of the trickier hurdles to navigate in the current economy. Inventory Levels continue to grow, albeit at a slightly reduced rate (-1.3) of 67.6. This is down significantly from the all-time high rate of growth of 80.2 observed in February, but still well above the all-time average of 62.9 for this metric. The last six months have seen a concerted effort by firms to run down the high levels of goods that were on hand this Spring. Many retailers have worked hard, and in some cases taken significant financial losses, to decrease inventory levels. Target reported a 90% drop in net earnings year over year for Q2, largely because of their concentrated efforts to reduce inventories. This included cancelling $1.5 billion in discretionary orders, as well as slashing prices on the goods already clogging their stores and distribution chains. This came even as they pivoted towards getting Q4 goods in early to avoid delays and putting a greater focus on staples such as grocery items[19]. Best Buy recently reported a 6% year-over-year decrease in inventories in Q2. While this is a positive development, it is tempered by the news same-store sales were down 12.1%, and inventory was still 16% higher than it was pre-pandemic[11]. Despite these efforts, there is still a significant level of inventory in the system, which is surely contributing to the continued increase in Inventory Costs (-2.2) which led all metrics in this month's index, reading in at 76.8.

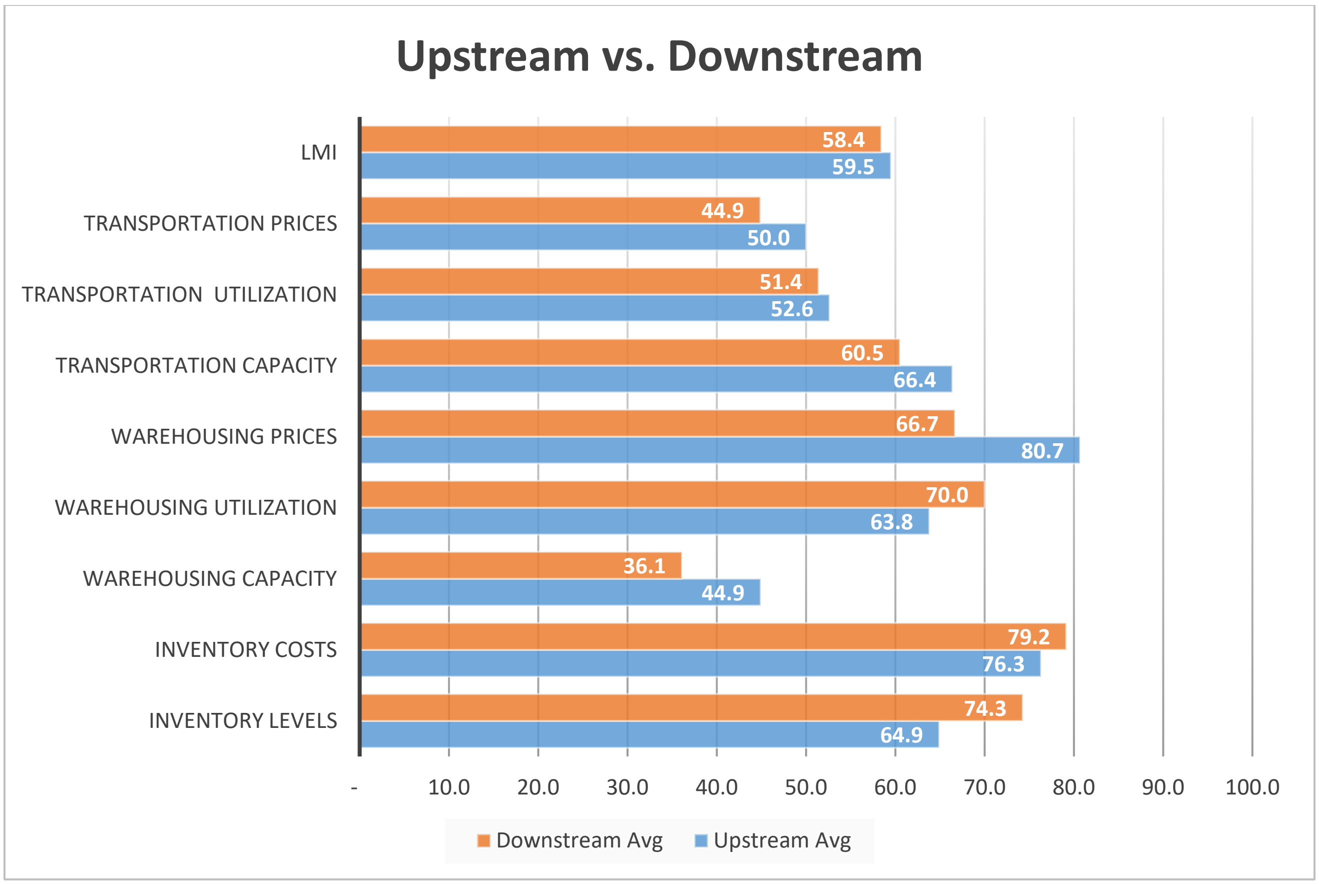
Firms are working hard to get out from underneath this huge volume of goods, but they must do so with caution. As we have seen over the last two and half years, the bullwhip oscillates both up down and winding down inventories while still maintaining a constant assurance of supply is a difficult needle to thread. Firms cannot risk running inventories down to the point where we see a repeat of the holiday shortages of the last two years. This is reflected by new statistics showing that ships waiting off the coast of the Southern California ports is down to eight – the lowest level since November of 2020. In a marked change from that sanguine time two years ago, the ports of LA and Long Beach now only account for 27% of the volume coming into the U.S., with record numbers continuing to flow into places like New York/New Jersey, Charleston, and Savannah[3]. In a repeat of what we saw last year in Southern California, the Ports of New York and New Jersey have delayed the container fees they planned to implement on September 1st, citing the new motivation for firms to move containers through the system more quickly. Currently, empty boxes are dwelling at NY/NJ for around 30 days[1], lending some credence to the worry that firms will once again see a high volume of delayed goods in Q4. Whether or not we will finally see the cycle of overcorrections end remains to be seen.

[19] Nassauer, S. (2022, August 17). *Target's Profit Sinks as Retailer Unloads Unwanted Inventory*. WSJ. https://www.wsj.com/articles/target-tgt-q2-earnings-report-2022-11660708780

The index scores for each of the eight components of the Logistics Managers' Index, as well as the overall index score, are presented in the table below. Seven of the eight metrics show signs of growth. Warehousing Capacity has now continued for two full years, and the rate of contraction has actually picked up by 4.8 points. It will be fascinating to observe how long this streak can go, as no clear end is currently in sight. Inventory Levels and Costs continue to grow at well above their average rates, keeping warehousing busy. Transportation Prices are now contracting for the second straight month. Transportation Capacity has been in plus territory since April, although the rate of increase is down (-4.8) from July.

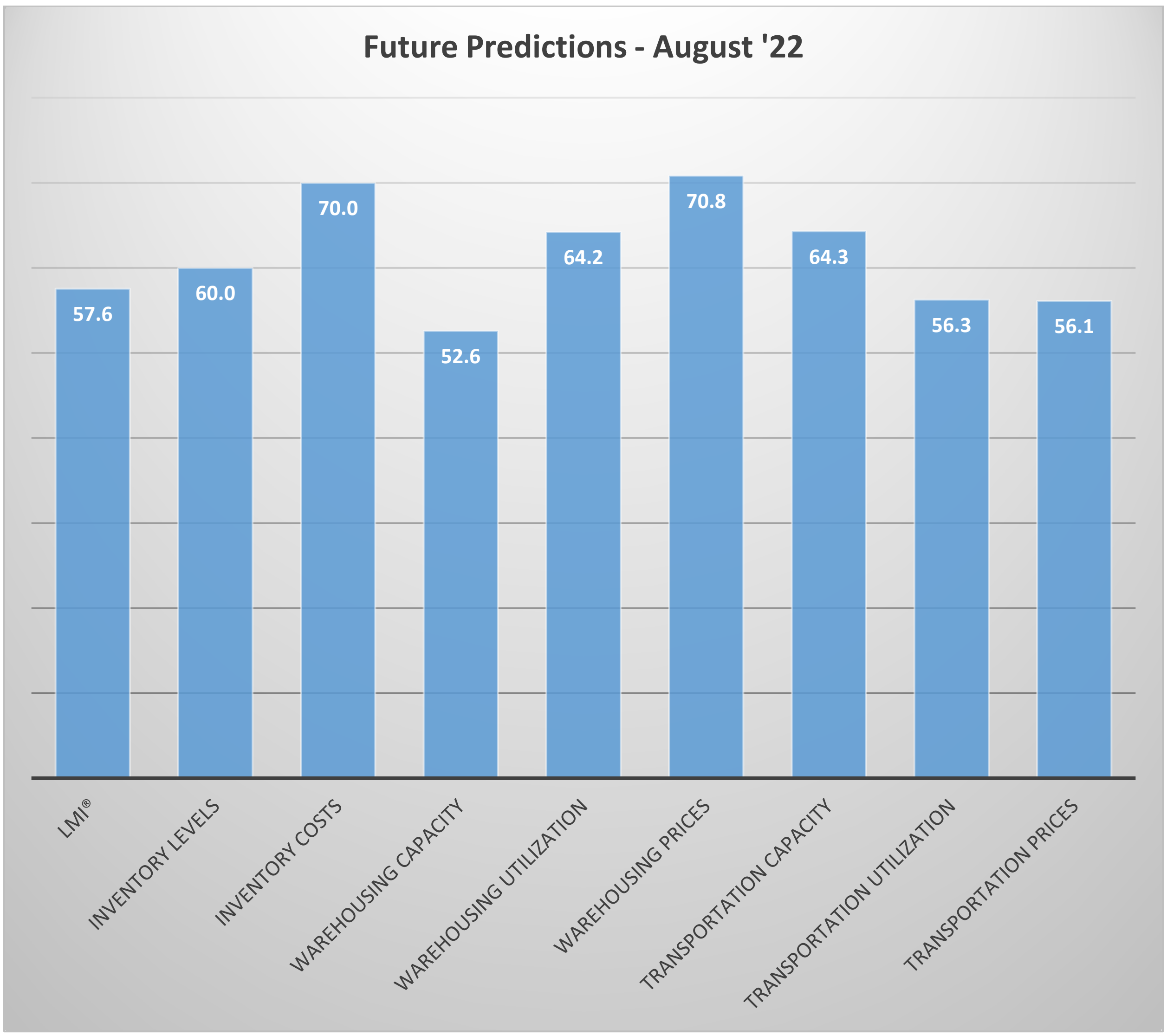
LOGISTICS AT A GLANCE					
Index	**August 2022 Index**	**July 2022 Index**	**Month-Over-Month Change**	**Projected Direction**	**Rate of Change**
LMI®	59.7	60.7	-1.0	Growing	Slower
Inventory Levels	67.6	68.8	-1.3	Growing	Slower
Inventory Costs	76.8	79.0	-2.2	Growing	Slower
Warehousing Capacity	42.3	47.0	-4.8	Contracting	Faster
Warehousing Utilization	65.3	68.8	-3.5	Growing	Slower
Warehousing Prices	75.0	76.2	-1.2	Growing	Slower
Transportation Capacity	64.3	69.1	-4.8	Growing	Slower
Transportation Utilization	51.6	59.3	-7.7	Growing	Slower
Transportation Prices	48.0	49.5	-1.5	Contracting	Faster

This month, both Upstream firms (blue bars) reported significantly higher growth in Warehousing Prices than their Downstream counterparts (orange bars). This may reflect the more rapid Inventory Levels growth we observe Upstream, as wholesalers and distributors struggle to house idle inventories. Inventory may be upstream due to the absolute drought of downstream Warehousing Capacity (reading in at 36.1, 8.8 points lower than Upstream's 44.9). Transportation Capacity declined at a slightly slower rate throughout the supply chain. Interestingly, Transportation Prices declined downstream but held stead upstream. This is a reverse from what we observed in July, when prices continued growing downstream while contracting upstream. This difference may be indicative of a pull back in retail spending, of retail firms slowing orders to wind down inventories, or some combination of the two.

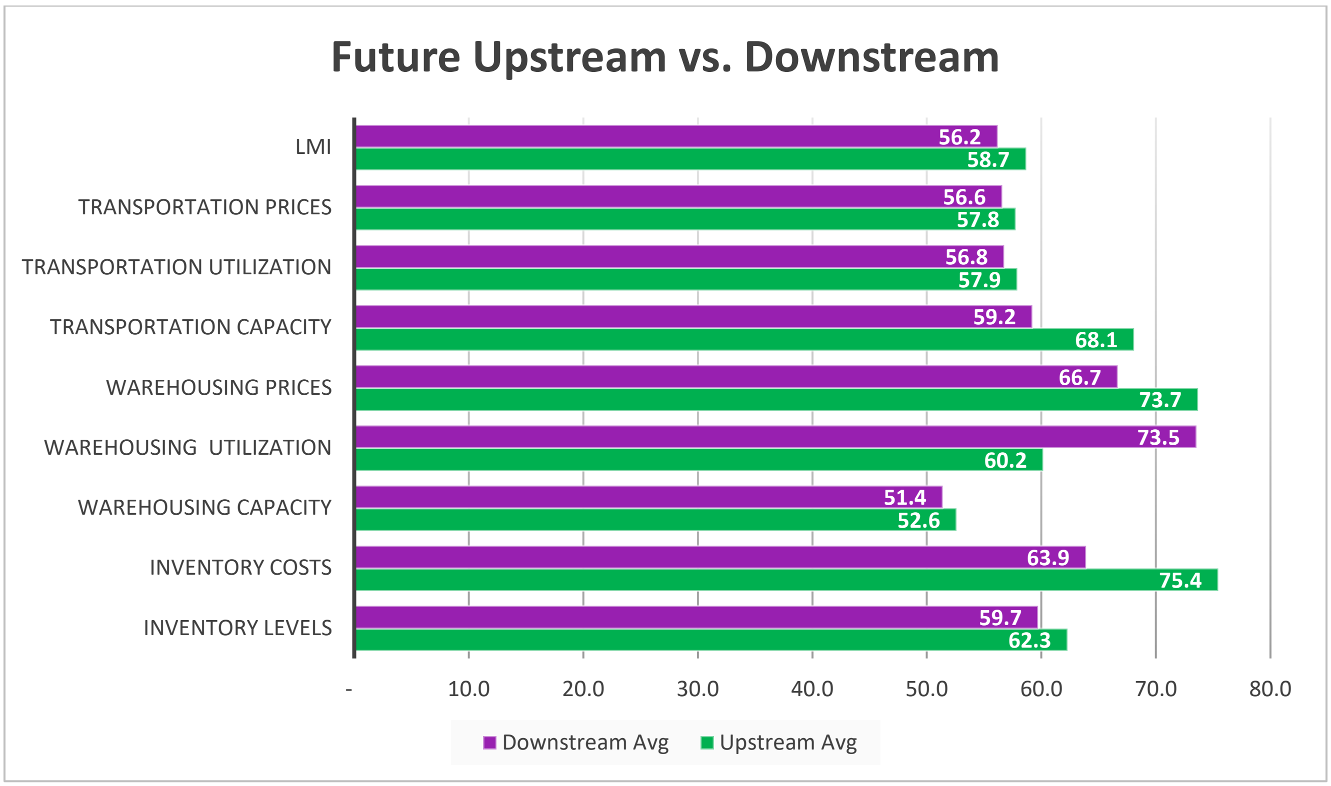


	Inv. Lev.	Inv. Costs	WH Cap.	WH Util.	WH Price	Trans Cap	Trans Util.	Trans Price	LMI
Upstream	64.9	76.3	44.9	63.8	80.7	66.4	52.6	50.0	59.5
Downstream	74.3	79.2	36.1	70.0	66.7	60.5	51.4	44.9	58.4
Delta	9.4	2.9	8.8	6.2	14.0	5.9	1.2	5.1	1.1
Significant?	No	No	No	No	**Yes**	No	No	No	No

Respondents were asked to predict movement in the overall LMI and individual metrics 12 months from now. Their predictions for future ratings are presented below. August's future predictions hint at normalization and a return to business as usual over the next year. After years of predictions in the 80's and 90's, only Inventory Costs and Warehousing Prices are predicted to continue growing at rates in the 70's, and that is just barely as they read in at 70.0 and 70.8 respectively. Slower rates of growth in the 50's and 60's would represent a return to normal rates of growth which would likely be more sustainable than the stratospheric growth we have observed over the last two years. Inventory Costs and Warehousing Prices will likely continue to grow at an elevated rate until sufficient Warehouse Capacity comes online – something that is unlikely to happen if the predicted rate of 52.6 holds true.



The exact nature of the future predictions varies by supply chain position. In August we observe a statistically significant difference in anticipated Warehousing Utilization. In reverse of our observation for the current Upstream/Downstream split, Downstream firms anticipate greater utilization going forward, perhaps reflecting the continued importance of last-mile fulfillment and distribution going forward. Interestingly, Upstream firms are expecting marginally higher Inventory Costs. The change in projected Inventory Costs for downstream firms is down /concerted efforts by retailers to disposition excess goods. In July, Downstream respondents expected Inventory Cost growth at a rate of 82.9. In August that number was 19.0 points lower, reading in at 63.9. Projected Downstream Inventory Levels saw a corresponding drop, dipping from 71.4 in July to 59.7 in August. We also saw double-digit drops for anticipated Transportation Utilization and Costs, as Downstream expectations have fallen more in line with the predictions of their Upstream counterparts. Downstream respondents have now grown slightly more pessimistic that those Upstream. Although they do continue to anticipate Warehousing Utilization, something that can potentially be attributed continued popularity of ecommerce and the need to position inventory in high-demand real estate in order to be as close to the consumer as possible.



Futures	Inv. Lev.	Inv. Costs	WH Cap.	WH Util.	WH Price	Trans Cap.	Trans Util.	Trans Price	LMI
Upstream	62.3	75.4	52.6	60.2	73.7	68.1	57.9	57.8	58.7
Downstream	59.7	63.9	51.4	73.5	66.7	59.2	56.8	56.6	56.2
Delta	2.6	11.5	1.2	13.4	7.0	8.9	1.1	1.2	2.5
Significant?	No	*Marginal*	No	**Yes**	No	No	No	No	No

<u>Historic Logistics Managers' Index Scores</u>

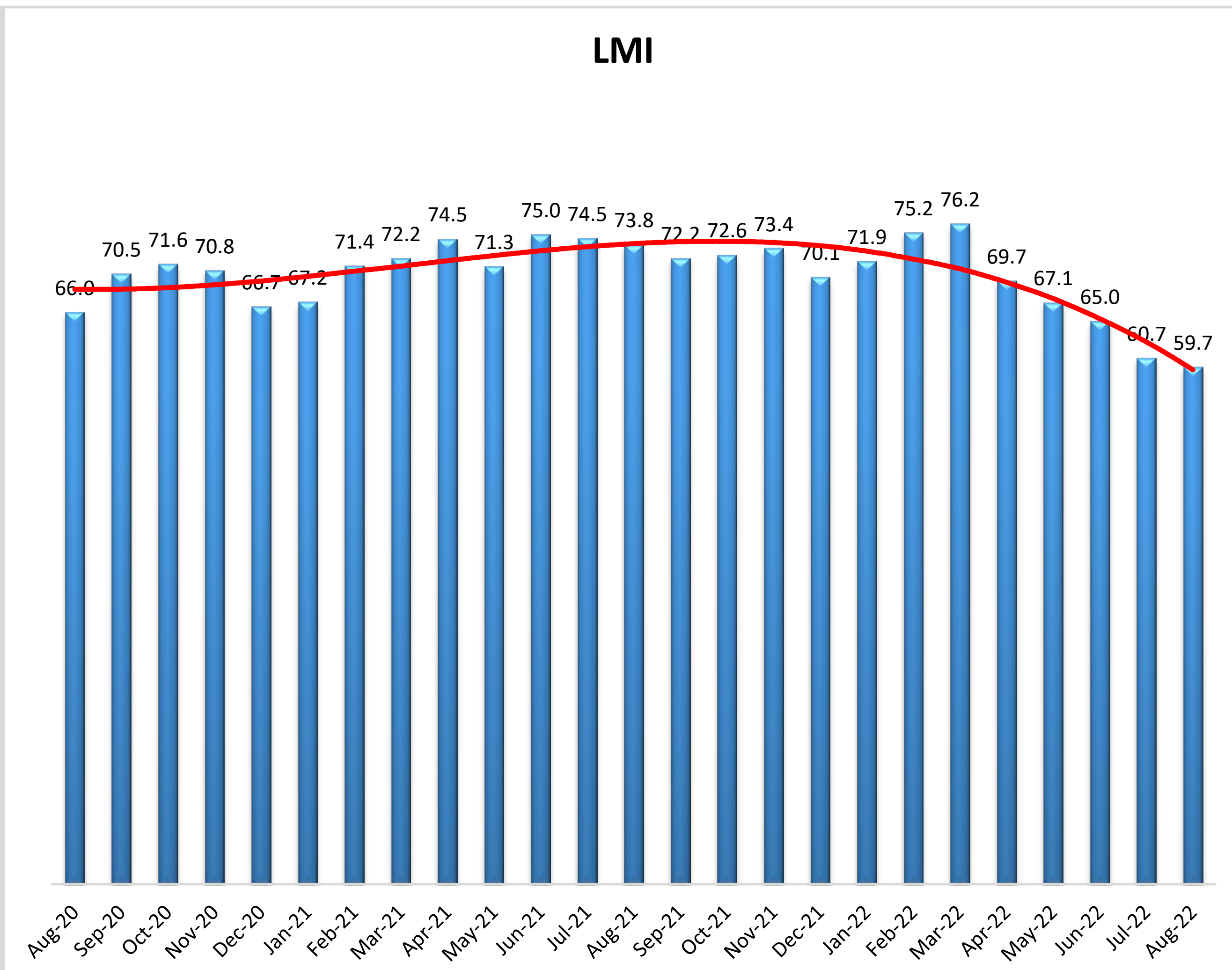
This period's along with prior readings from the last two years of the LMI are presented table below:

Month	***LMI***	Average for last 3 readings – 61.8 All-time Average – 65.1 High – 76.5 Low – 51.3 Std. Dev – 7.05
Aug '22	59.7	
July '22	60.7	
June '22	65.0	
May '22	67.1	
Apr '22	69.7	
Mar '22	76.2	
Feb '22	75.2	
Jan '22	71.9	
Dec '21	70.1	
Nov '21	73.4	
Oct '21	72.6	
Sep '21	72.2	
Aug '21	73.8	
July '21	74.5	
June '21	75.0	
May '21	71.3	
Apr '21	74.5	
Mar '21	72.2	
Feb '21	71.4	
Jan '21	67.2	
Dec '20	66.7	
Nov '20	70.8	
Oct '20	71.6	
Sep '20	70.5	
Aug '20	66.0	

<u>LMI®</u>

The overall LMI reads in at 59.7 in August, down (-1.0) from July's reading of 60.7. This is the first time that the overall index has been in the 50's since May of 2020 at the height of COVID-19 lockdown. This is down 14.1 points from this time last year, and 6.3 down from this time in 2020. The overall index showed steady growth in the 70's for more than a year from February 2021 to March 2022. Since that time the trendline shows a stead downward curve, dropping 16.5 points in the last five months. We do however see that the pace of this decline has slowed somewhat. The pre-pandemic average for this metric was 61.9, it will be interesting to observe if the overall index continues to drop (as it did in 2019) or if it settles in somewhere around that previous average, hovering just above or below 60.0.

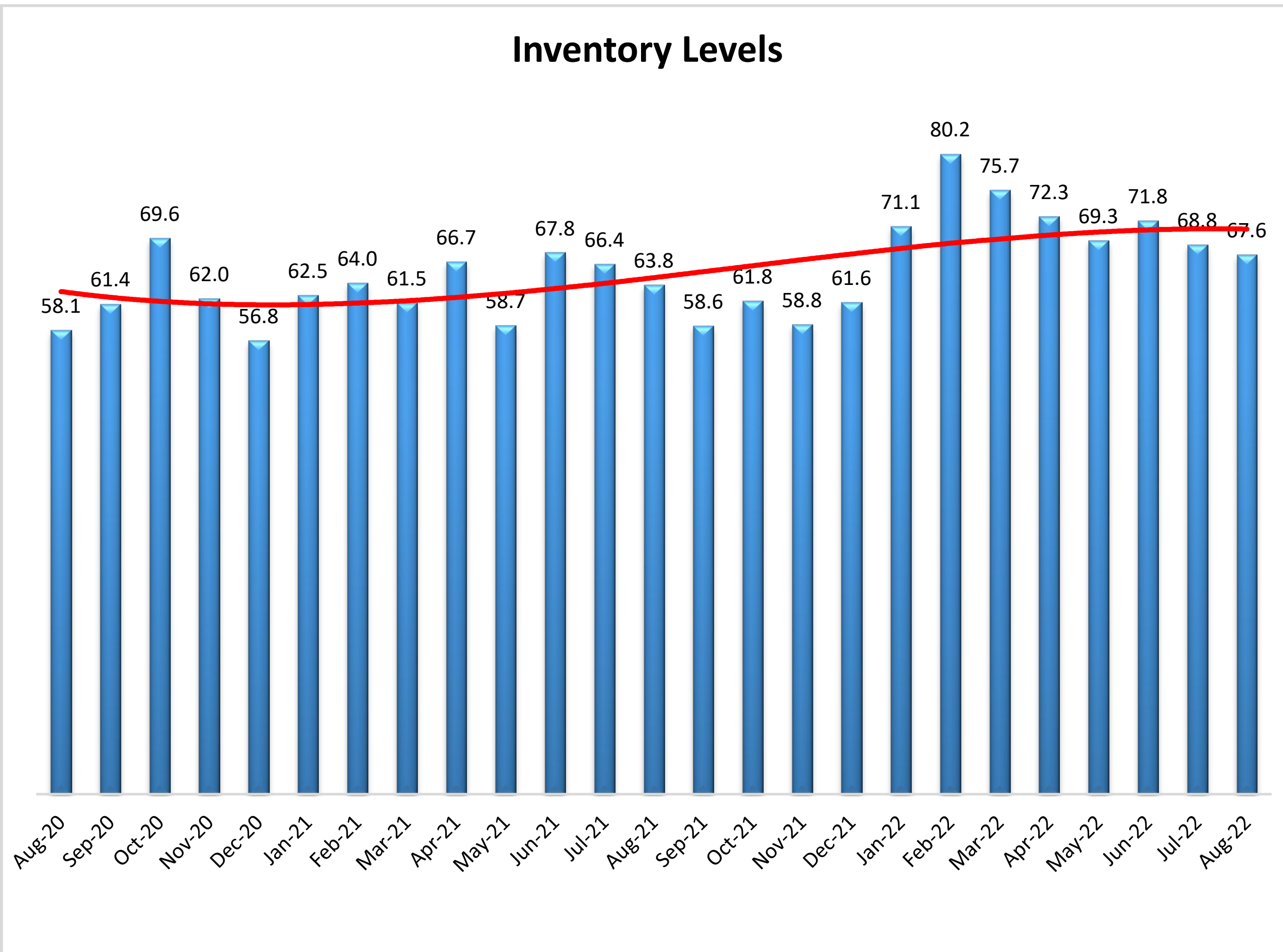
Respondents are expecting a slight slowdown in the rate of expansion, predicting a growth rate of 57.6 for the overall index. This is down (-4.5) from their future prediction in July, as respondents seem to grow slightly more pessimistic, particularly regarding the transportation elements of the index.



Inventory Levels

The Inventory Level value is 67.6, down (-1.2) from July's reading of 68.8, and down steeply (-12.6) from the index's all-time highest value in February. That being said, the current value is 3.8 points higher than the same time last year, and 9.5 points higher than two years ago so seasonally speaking, inventories increasing more quickly than what we might normally expect. This month, downstream respondents reported greater inventory growth by 9.4 pts, (74.3 vs 64.9). Downstream inventories are increasing faster than downstream. This is a change from last month, when upstream respondents reported greater inventory growth by 5.1 pts, (70.8 vs 65.7).

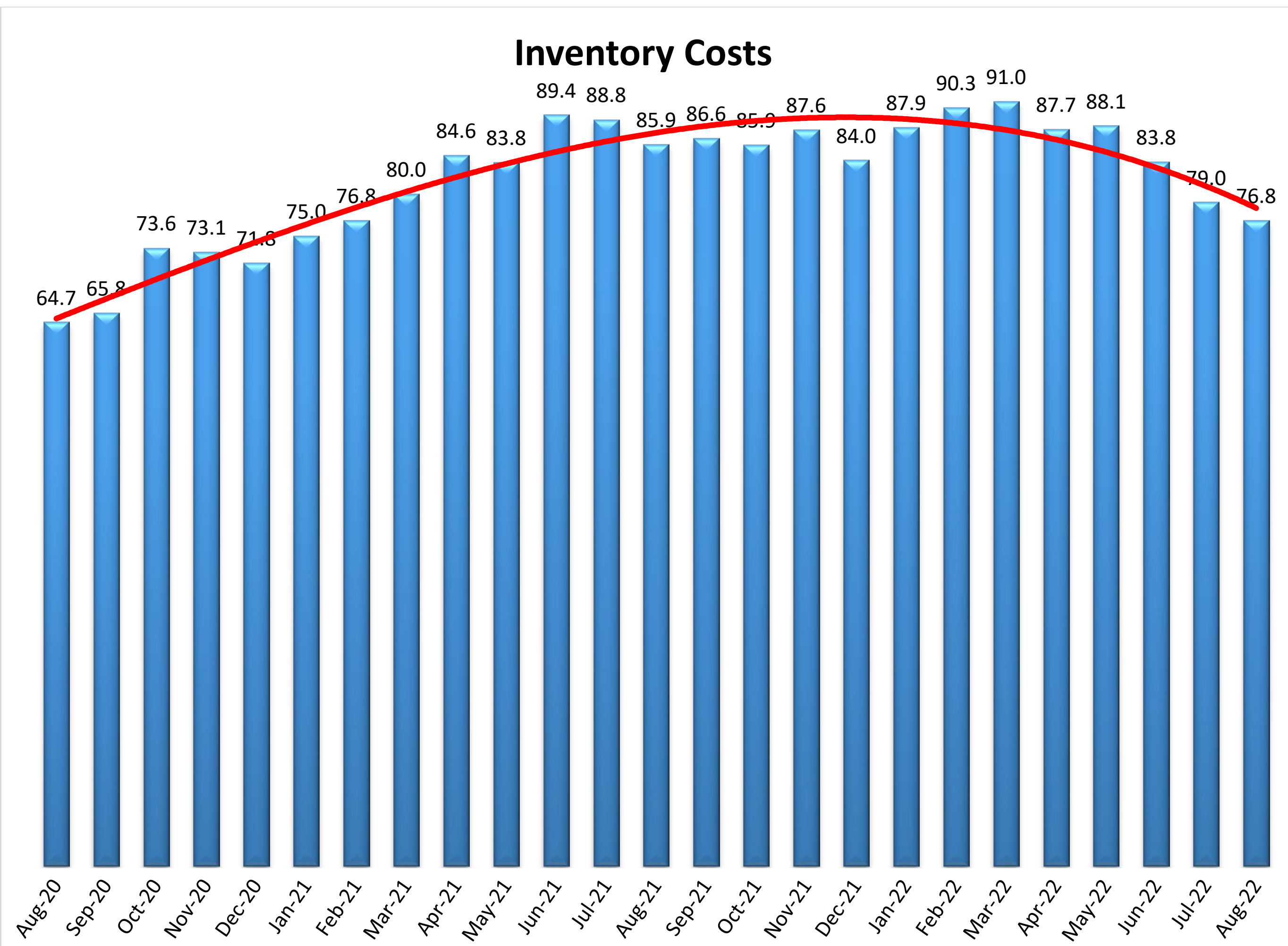
When asked to predict what conditions will be like 12 months from now, the average value is 60.0, down (-4.8) from July's future prediction of 64.8. Downstream respondents predict a slightly lower rate of growth than their upstream counterparts (59.7 vs 62.3) – a significant departure from last month when the downstream forecast was significantly higher (71.4 vs 61.5).



Inventory Costs

The current Inventory Costs index value continues its downward trend. The value of 76.8 is a decrease (-2.2) from July's reading of 79.0, and down 14.2 points from March's all-time high reading of 91.0. Despite this slowdown in the rate of growth values are still high, above the long-term average of 74.9. Given the somewhat high Inventory Levels index value, it is not surprising that Inventory Costs remain high. The value is down 9.1 points from the value last year, but up 12.1 points compared to two years ago.

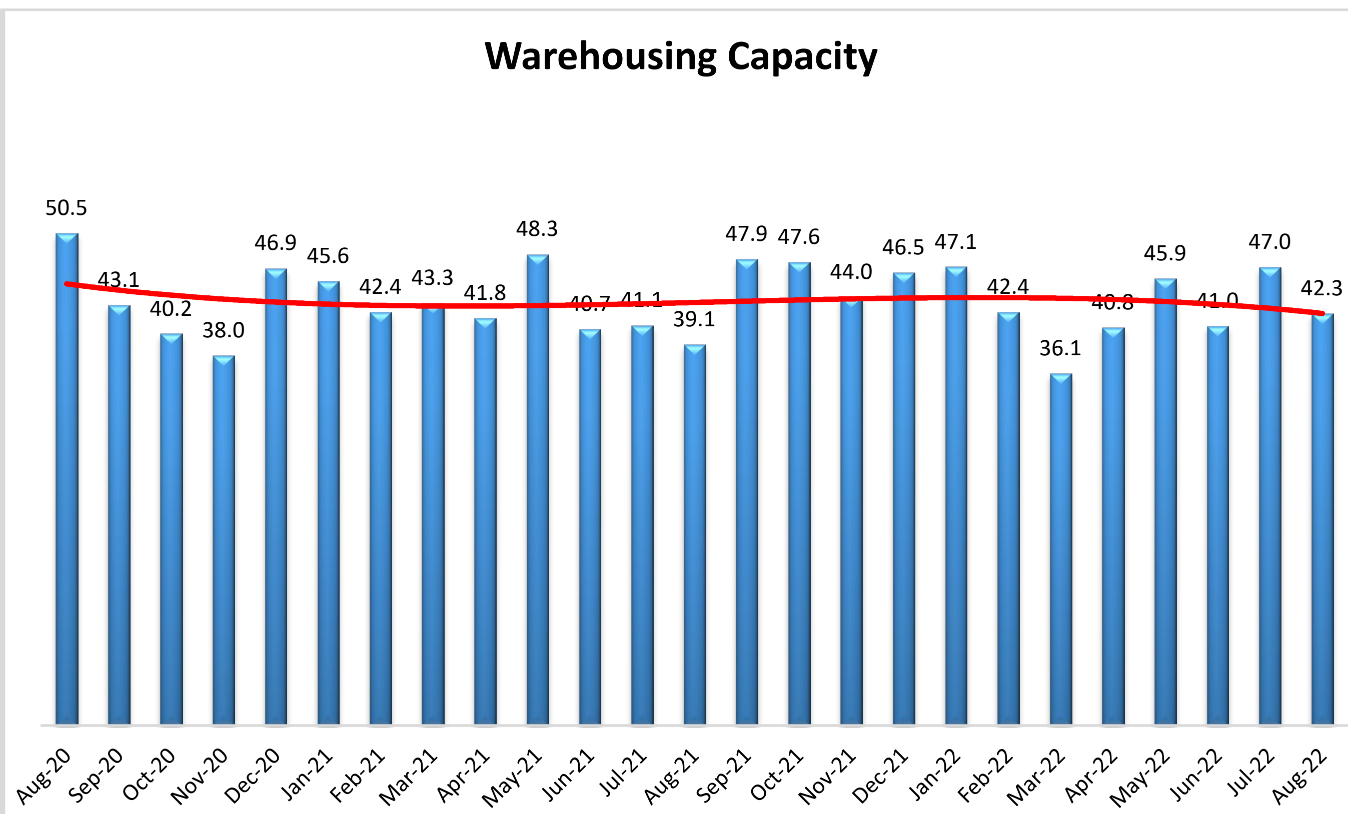
Given the high inventory levels seen above, it seems quite likely that inventory costs will continue to rise, but at a lower rate. Responses from participants are consistent with this prediction, and predict strong increases in inventory costs, with future predictions coming in at 70.0, down (-8.5) from July's future prediction of 78.5. Reflecting the disparity we will also observe in regard to Warehousing Prices, Upstream respondents were 11.5 points higher than Downstream (63.9 vs 75.4). Given the expected increases in interest rates, it would seem likely that the Inventory Cost index will continue to reflect high values, even if the growth of Inventory Levels does moderate. Putting all of these factors together, it seems very likely that the inventory cost index will continue to remain high, but with the lower future predictions across the board, we may finally be seeing some cost relief.



Warehousing Capacity

The August 2022 Warehousing Capacity index registered in at 42.3, down (-4.7) from July's reading of 47.0. The last positive reading for this metric was the 50.5 recorded in August of 2020 (a number that more so indicates standing still than real expansion), meaning this marks two full years of consecutive readings in contraction territory – easily the longest on record for any of our metrics. Other than the respective readings of 50.0 and 50.5 in July and August of 2020, available space has contracted in every month since the start of the pandemic. Even with widespread lockdowns well behind us in the U.S., distribution networks have not yet adjusted to the new ways that people shop, or from the inventory hangover generated during the retail explosion of 2021. It appears that there is a back-and-forth of increased capacity coming online and being consumed more quickly than it has been previously, with various online retailers simultaneously acquiring new warehousing while also closing down several in less populous markets. Thus, this reading could represent a slight blip to the typical two months lag that we normally experience in the relationship between Warehousing Capacity and the impact on other components of the index. Based on the recent months however it appears that the demand for warehousing remains incredibly strong as the reflected capacity continues to tighten.

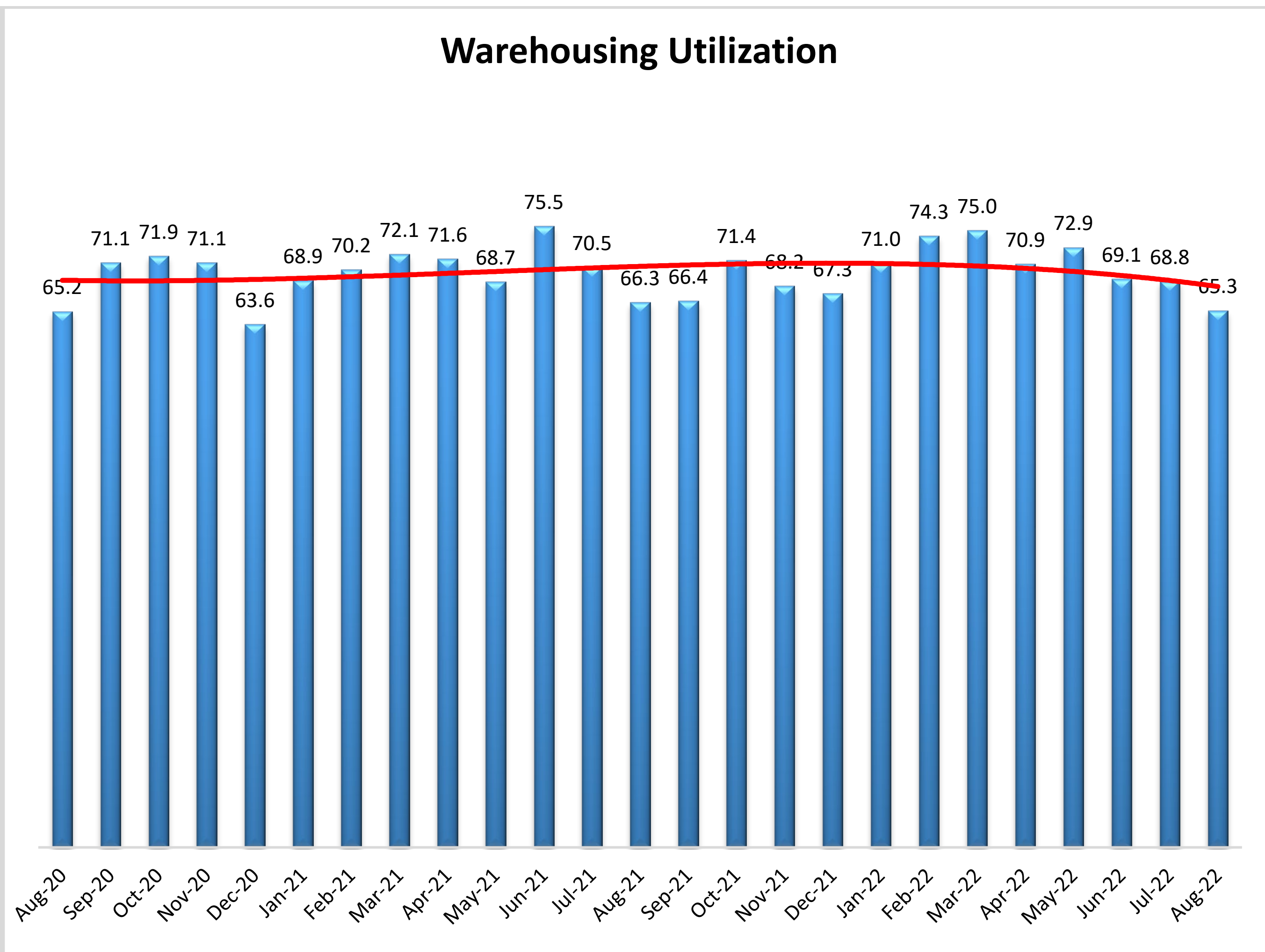
Looking forward at the next 12 months, respondents continue to expect moderate rates of growth, predicting an expansionary rate of 52.6, up slightly (+0.7) from July's future prediction of 51.5. As we will see below, respondents are become cautiously optimistic that increased capacity will also lead to slowing cost growth over the next year, providing a welcome relief throughout supply chains.



Warehousing Utilization

The August 2022 Warehousing Utilization index registered in at 65.3, down (-3.5) from July's reading of 68.8. Comparing this reading to one year prior it is down by 3.0 points and also down 2.0 points from the reading two years ago. Though this value comes in well above the 50-point mark, this does represent the third month in a row of a decrease to the rate at which utilization is growing. The continued rise in the cost of inventory coupled with the ever-increasing costs of warehouse pricing could represent this decreased utilization. Alternatively, retailers could be shifting their strategies in preparation for an e-commerce driven Q4 and holiday season.

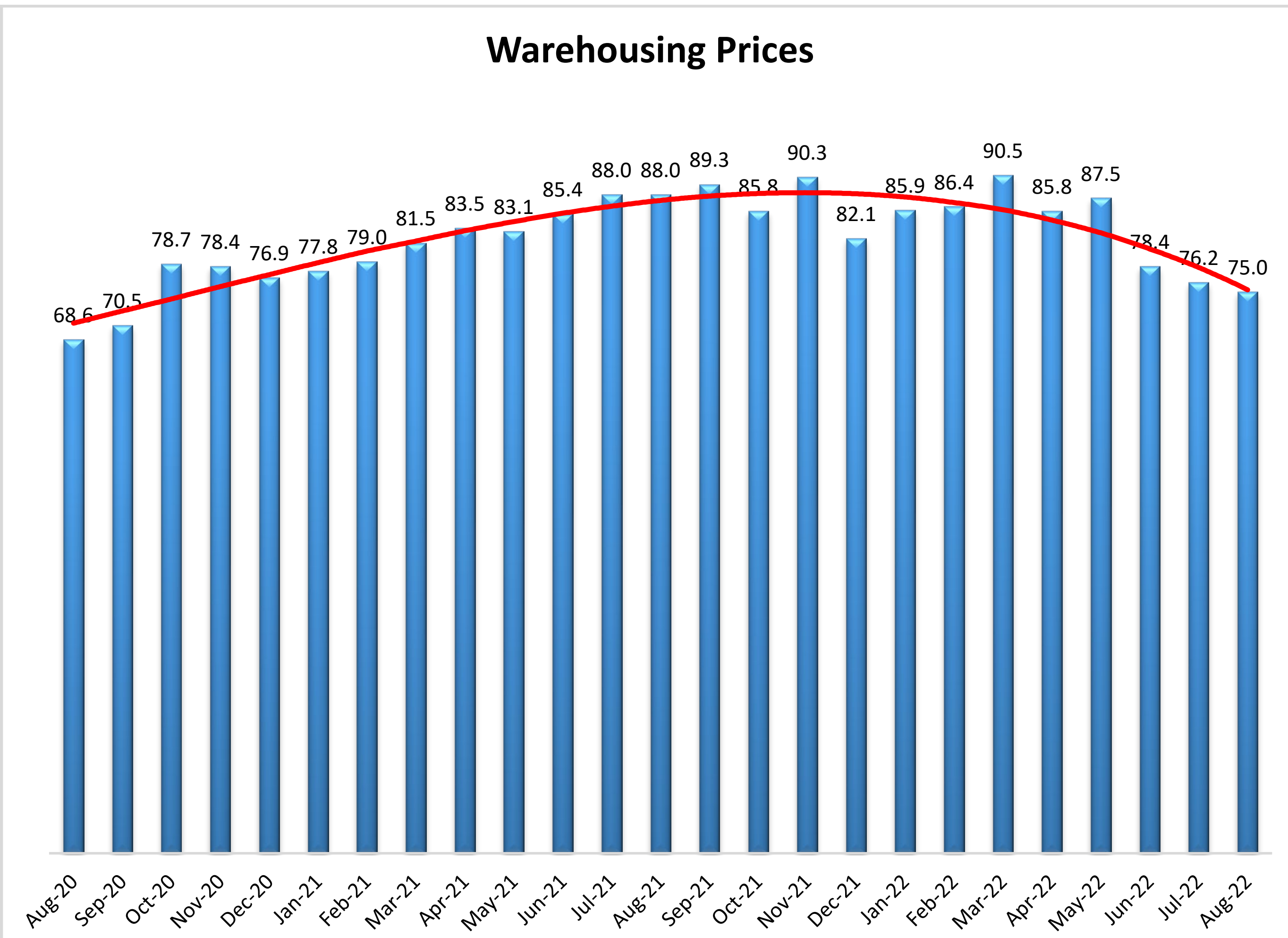
Looking forward at the next 12 months, the predicted Warehousing Utilization index is 64.2, down (-6.9) from July's future prediction of 71.5. While this still portends an increase in utilization, the relaxed rate of growth suggests that respondents are looking forward to more available space, allowing them to clear some of the congestion out of whatever space they're in, potentially improving inventory flexibility as well as operational efficiency.



Warehousing Prices

The August 2022 warehousing price index registered in at 75.0, down (-1.2) from July's reading of 76.2, continuing the three-month trend of slowing rates of expansion. Case in point, when compared to the value one year ago it is down rather sharply by 14.3 points. Typically, shifts in pricing represent either a change to demand or change to supply. Our data indicates that the supply by way of capacity measures is decreasing and has been for two full years. Independently, this could be what is the driving force for increases the pricing despite a mild softening.

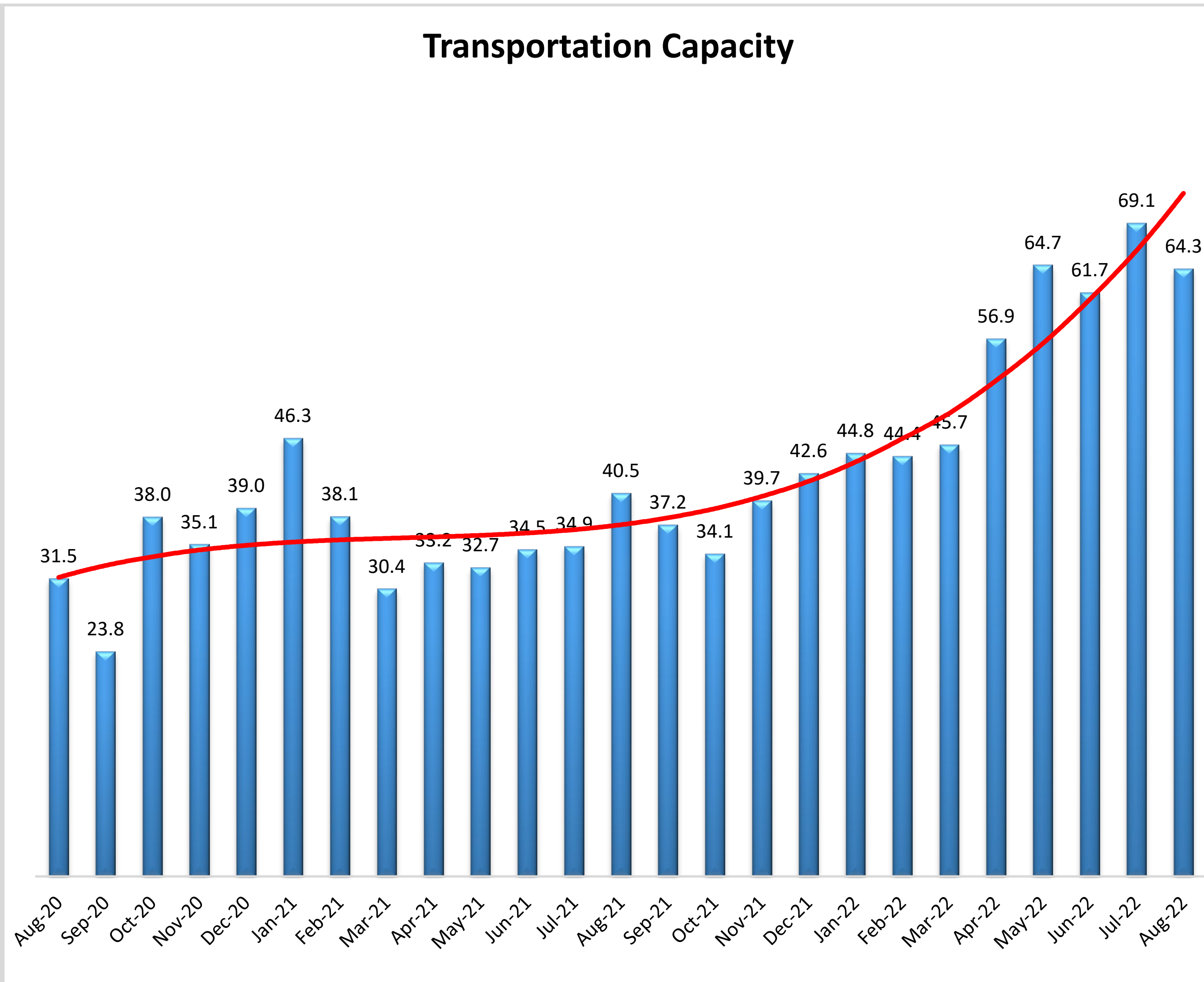
Future predictions suggest that respondents are expecting prices to continue to grow at a rate of 70.8, down (-3.0) from July's future prediction of 73.8. This continues the downward trend we have seen from future predictions of this metric which had regularly read in in the 80's and 90's. Respondents seem more confident than they have in a long time that capacity will come online, and that the price growth we have been seeing will finally slow. However, relief may not come equally for all parties. Upstream respondents are anticipating Warehousing Prices to grow significantly faster (at a rate of 80.7 to Downstream's 66.7). It will be interesting to observe whether this predicted spread holds true, if it does it will likely indicate a significant softening in the consumer retail market over the next year.



Transportation Capacity

The Transportation Capacity Index registered 64.3 percent in August 2022. This constitutes a drop of 4.8 percentage points from the July reading of 69.1. As such, the Transportation Capacity Index retreats from recent highs, with the upstream index indicating 66.4 and downstream index indicating 60.5.

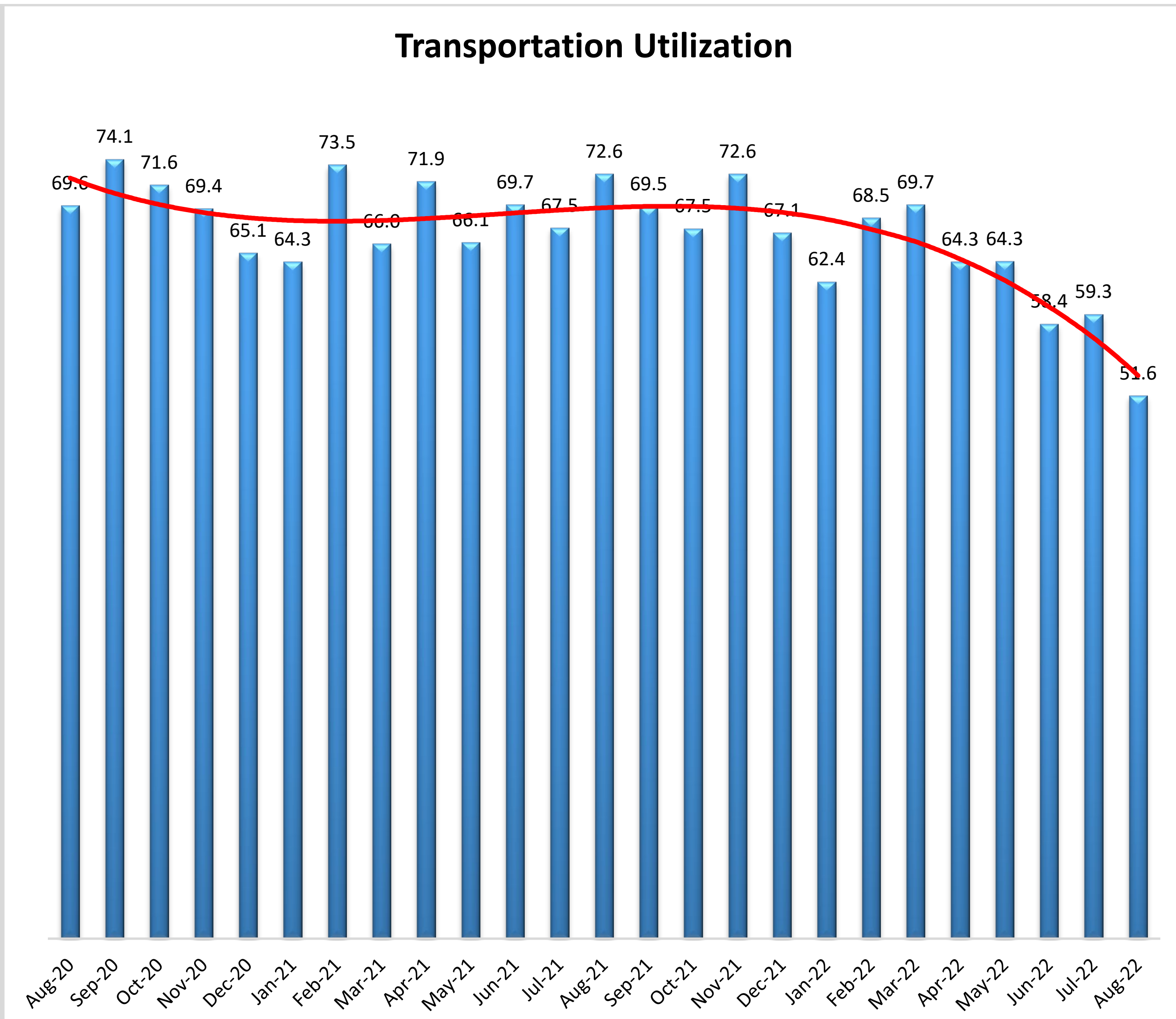
The future Transportation Capacity Index also indicates expansion, registering 64.3, which is 2.7 points greater than the previous reading. Upstream firms indicate a future transportation capacity index of 68.1 while downstream firms indicate a future expectation of only 59.2. As such, capacity increase expectations remain greater for upstream firms than for downstream firms.



Transportation Utilization

The Transportation Utilization Index registered 51.6 percent in August 2022. This denotes a decrease 7.7 percent from the 59.3 level registered in July. With this decrease, transportation utilization reaches a new two year low. Downstream Transportation Utilization Index is at 51.4, while the upstream index is at 52.6. Hence, the downward trend in transportation utilization index is dispersed across the supply chain.

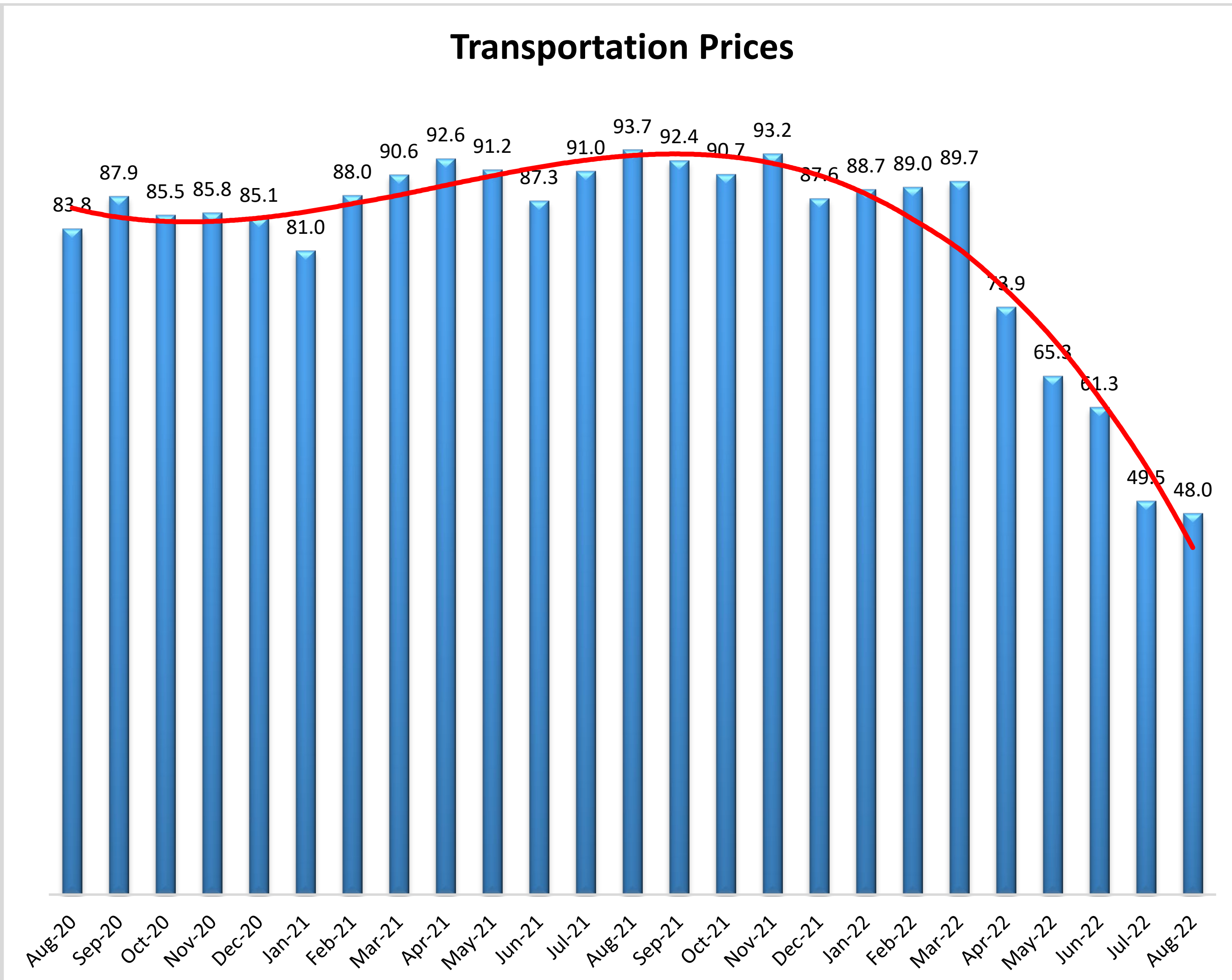
The future Transportation Utilization Index and decreases from previous reading and indicates a 56.3 level for the next 12 months. The lower expectations of future growth are also dispersed across the supply chain, with downstream future index indicating 56.8 and upstream indicating 57.9.



Transportation Prices

The Transportation Prices Index registered 48.0 percent in August 2022. This corresponds to a drop of 1.5 percent from the July transportation prices reading of 49.5. With this drop the Transportation Prices Index remains below 50 and continues to indicate contraction. The price index drop is more pronounced for downstream supply chain firms, where the upstream price index at 44.9. The upstream transportation price index is at 50.

The future index for transportation prices remains is at 56.1, continuing expectations of slight price increases for the next year. The price increase expectations for downstream firms is at 56.6 while the future price index for upstream firms is at 57.8.



About This Report

The data presented herein are obtained from a survey of logistics supply executives based on information they have collected within their respective organizations. LMI® makes no representation, other than that stated within this release, regarding the individual company data collection procedures. The data should be compared to all other economic data sources when used in decision-making.

Data and Method of Presentation

Data for the Logistics Manager's Index is collected in a monthly survey of leading logistics professionals. The respondents are CSCMP members working at the director-level or above. Upper-level managers are preferable as they are more likely to have macro-level information on trends in Inventory, Warehousing *and* Transportation trends within their firm. Data is also collected from subscribers to both DC Velocity and Supply Chain Quarterly as well. Respondents hail from firms working on all six continents, with the majority of them working at firms with annual revenues over a billion dollars. The industries represented in this respondent pool include, but are not limited to: Apparel, Automotive, Consumer Goods, Electronics, Food & Drug, Home Furnishings, Logistics, Shipping & Transportation, and Warehousing.

Respondents are asked to identify the monthly change across each of the eight metrics collected in this survey (Inventory Levels, Inventory Costs, Warehousing Capacity, Warehousing Utilization, Warehousing Prices, Transportation Capacity, Transportation Utilization, and Transportation Prices). In addition, they also forecast future trends for each metric ranging over the next 12 months. The raw data is then analyzed using a diffusion index. Diffusion Indexes measure how widely something is diffused, or spread across a group. The Bureau of Labor Statistics has been using a diffusion index for the Current Employment Statics program since 1974, and the Institute for Supply Management (ISM) has been using a diffusion index to compute the Purchasing Managers Index since 1948. The ISM Index of New Orders is considered a Leading Economic Indicator.

We compute the Diffusion Index as follows:

PD = Percentage of respondents saying the category is Declining,
PU = Percentage of respondents saying the category is Unchanged,
PI = Percentage of respondents saying the category is Increasing,
Diffusion Index = 0.0 * PD + 0.5 * PU + 1.0 * PI

For example, if 25 say the category is declining, 38 say it is unchanged, and 37 say it is increasing, we would calculate an index value of 0*0.25 + 0.5*0.38 + 1.0*0.37 = 0 + 0.19 + 0.37 = 0.56, and the index is increasing overall. For an index value above 0.5 indicates the category is increasing, a value below 0.5 indicates it is decreasing, and a value of 0.5 means the category is unchanged. When a full year's worth of data has been collected, adjustments will be made for seasonal factors as well.

Logistics Managers Index

About The Logistics Manager's Index®

The Logistics Manager's Index (LMI) is a joint project between researchers from Arizona State University, Colorado State University, University of Nevada, Reno, Rochester Institute of Technology and Rutgers University, supported by CSCMP. It is authored by Zac Rogers Ph.D., Steven Carnovale Ph.D., Shen Yeniyurt Ph.D., Ron Lembke Ph.D., and Dale Rogers Ph.D.