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January-February 2018 Logistics Manager's Index Report®

LMI® at 64.2%

**Rate of Growth for Inventory Price and Warehousing Price is INCREASING.
Inventory Levels, Inventory Costs, Warehousing Utilization, and Transportation
Utilization is INCREASING but at a DECREASING RATE. Rate of growth for
Warehousing Capacity and Transportation Capacity is DECREASING.**

(Fort Collins, Colorado) — According to a sample of North American logistics executives, economic activity across the logistics sector expanded, primarily driven by increases in price and utilization from September to December.

The report was issued today by researchers at Arizona State University, Colorado State University, Portland State University, Rutgers University, and the University of Nevada, Reno, and in conjunction with the Council of Supply Chain Management Professionals (CSCMP).

Results Overview

The LMI score is a combination of all of the other components that make up the index 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 percent indicates that logistics is expanding; a reading below 50 percent is indicative of a shrinking logistics industry.

The January/February LMI® registered 64.1 percent this indicates that the overall logistics industry is currently in a state of growth. This is a decrease of 2.1 percentage points from the September-December reading of 66.2. The two point drop indicates that while the logistics industry is still growing, it is doing so at a slower rate than in Q4 of last year. This lower score is largely driven by contractions in the reported availability of both Warehouse and Transportation Capacity. This is a continuation of trends over the last few months of the LMI. Growth in available Warehouse Capacity has been trending downwards since June of 2017, and for only the second time in the history of the LMI is actively contracting – meaning that less warehouse space is available not than in the previous period. Transportation Capacity has been contracting in each of the previous three periods. While it is contracting slightly more slowly than it was in the previous period, it's current index rating of 31.2 is indicative of a sharp contraction in available Transportation Capacity.

Reflecting the tightening of available capacity, Warehouse and Transportation Prices continue to climb in our index. In particular, Transportation Prices continues to grow at a rate far above the other components of the LMI. This period's index score of 93.1 is the highest ever measured for any component of the LMI, and is swiftly approaching the maximum score of 100.0 – the highest possible score achievable in a diffusion index. Warehouse Prices read in at 75.0, their highest index score since the first reading of the LMI in September 2016. A decrease in the supply of available Warehouse and Transportation Capacity appears to be driving up price, potentially placing some financial strain on logistics networks.

We also note decreasing rates of growth in Inventory Levels, Warehousing Utilization and Transportation Utilization. The drop in these specific categories was expected as retail sales tend to slow down immediately after the holiday season. Lower expected sales generally lead to less inventory on-hand, particularly in light of the September-December reading being the highest index score for Inventory Levels in the history of the LMI®. With less inventory on-hand, the rate of growth for both Warehouse and Transportation Utilization decreased as well. However, while the rates of growth for these metrics are down, they are still in a state of expansion, just at a slower pace than in the fourth quarter of 2017.

Finally, we track the anticipated movement of all eight components of the LMI over the next 12 months. Seven of the eight are predicted to experience varying levels of growth over the next year. With Transportation Price growing the most (89.1) and Warehousing Capacity the least (61.6). The only metric that is predicted to decline over the next 12 months is Transportation Capacity, with a very low score of 35.9. This suggests that Transportation Prices will only continue increasing as supply struggles to match demand.

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. Warehousing Capacity and

Transportation Capacity are contracting. Inventory Levels, Inventory Costs, Warehousing Utilization, Transportation Utilization, and the overall Logistics Managers' Index are growing, but at decreasing rates. Warehousing Price and Transportation Price are both growing at increasing rates.

| LOGISTICS AT A GLANCE | | | | | |
|----------------------------|--------------------|--------------------|-------------------------|---------------------|----------------|
| Index | Jan/Feb 2018 Index | Sep-Dec 2017 Index | Month-Over-Month Change | Projected Direction | Rate of Change |
| LMI® | 64.1 | 66.2 | -2.1 | Growing | Slowing |
| Inventory Levels | 60.3 | 71.2 | -10.9 | Growing | Slowing |
| Inventory Costs | 69.4 | 70.8 | -1.4 | Growing | Slowing |
| Warehousing Capacity | 49.4 | 53.6 | -4.2 | Contracting | From Growing |
| Warehousing Utilization | 63.7 | 69.7 | -6.0 | Growing | Increasing |
| Warehousing Prices | 75.0 | 69.5 | 5.5 | Growing | Increasing |
| Transportation Capacity | 31.3 | 30.7 | 0.6 | Contracting | Slowing |
| Transportation Utilization | 70.3 | 77.9 | -7.5 | Growing | Slowing |
| Transportation Prices | 93.1 | 86.0 | 7.1 | Growing | Increasing |

Transportation typically functions as a leading indicator of overall economic health. The dramatic contraction in Transportation Capacity, combined with the steep, continuing growth in Transportation Prices indicates that demand is high and the industry is healthy. The drop in Warehousing Capacity and increase in Warehousing Price are further evidence that the demand for available logistics capacity remains high, while available supply seemingly struggles to keep up.

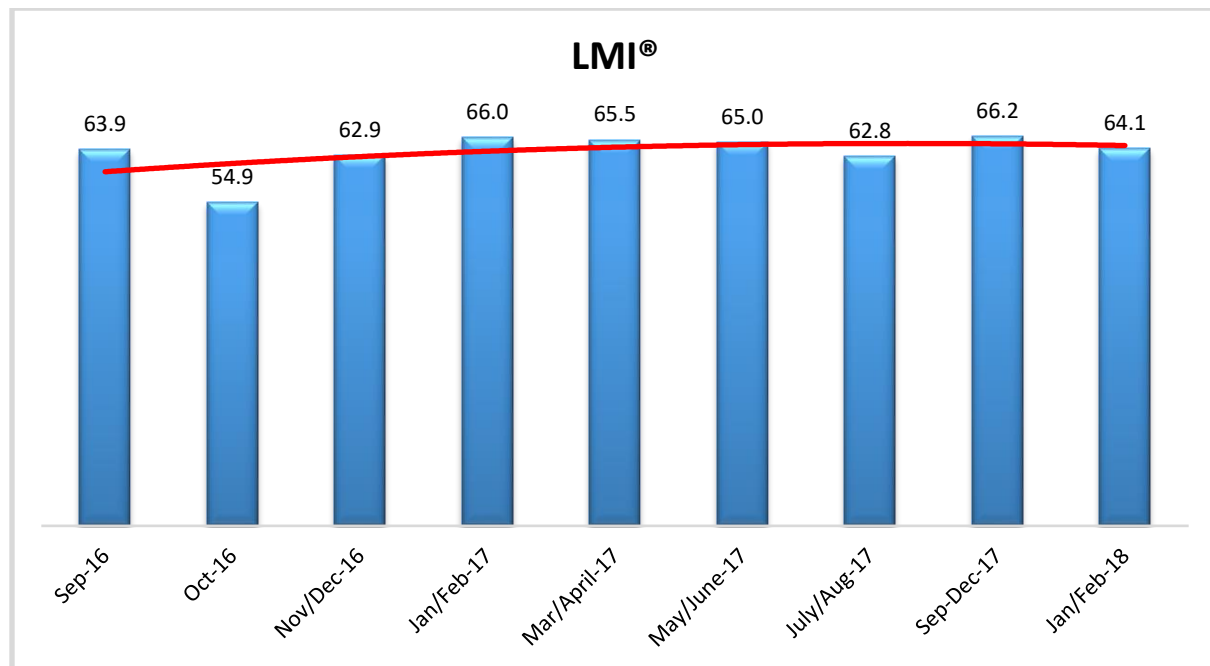
This period's along with the prior eight readings of the LMI are presented table below:

PREVIOUS READINGS

| Month | LMI | Average for previous readings – 63.5 High – 66.18 Low – 54.9 Std. Dev – 3.25 |
|------------------------|-------|---|
| January/February '18 | 64.1 | |
| September-December '17 | 66.18 | |
| July/August '17 | 62.78 | |
| May/June '17 | 65.0 | |
| Mar/April '17 | 65.5 | |
| Jan/Feb '17 | 66.0 | |
| Nov/Dec '16 | 62.9 | |
| Oct '16 | 54.9 | |
| Sep '16 | 63.9 | |

LMI®

The LMI decreased to 64.1 in the January/February reading. This is down slightly from the all-time high it reached in the fourth quarter of 2017, but still above the index average of 63.5. breaks a streak of three consecutive periods of a decreasing overall index score. As mentioned above, this increase is primarily driven by significant rates of growth in utilization and price – particularly Transportation Prices. As mentioned above, the LMI is calculated using a diffusion index, in which any reading above 50 percent indicates that logistics is expanding; a reading below 50 percent is indicative of a shrinking logistics industry.

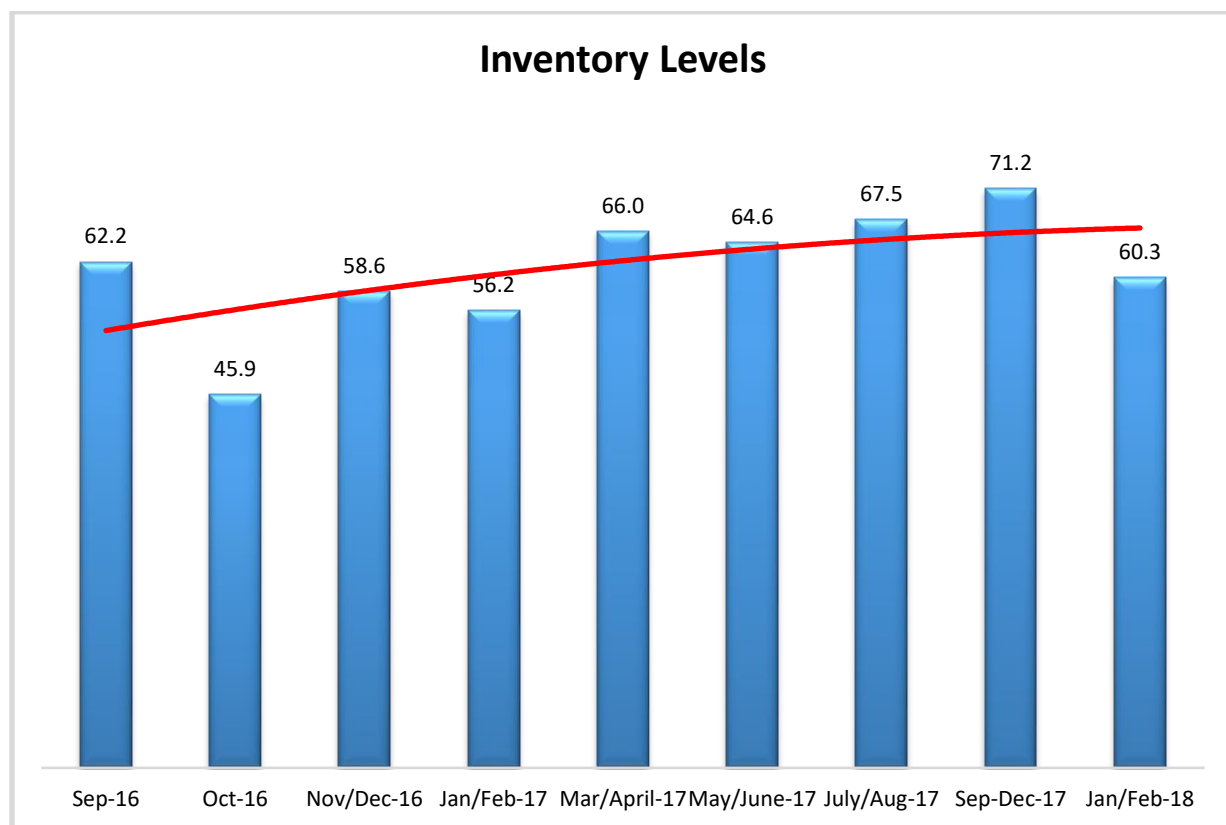


Every reading since the beginning of this project in September of 2016 has indicated growth in the logistics industry. The January/February 2017 reading continues that trend, with the overall index score reading at 64.1, well above the growth/contraction threshold of 50.0. The decrease is partially driven by companies carrying less inventory, as well as a squeeze on available capacity. The growth is seemingly buoyed by high prices for whatever logistics and distribution space is still available. While the researchers feel strongly that warehousing, transportation, and inventory trends are key economic indicators, the exact relationship between the LMI and the overall economy as indicated by GDP has yet to be established empirically.

Inventory Levels

The Inventory Level index is 60.3, which indicates growth, but significantly below the 71.2 reading from Q4 of last year. Given the general seasonality of retail sales, we would expect inventory values to be lower, but the index is not a measurement of total inventory levels. The 60.3 value indicates that the panelists have seen inventory levels continue to grow, but at a slower rate. This value is consistent with what was observed last year, the Jan/Feb value showed a decline compared to the end of the previous year.

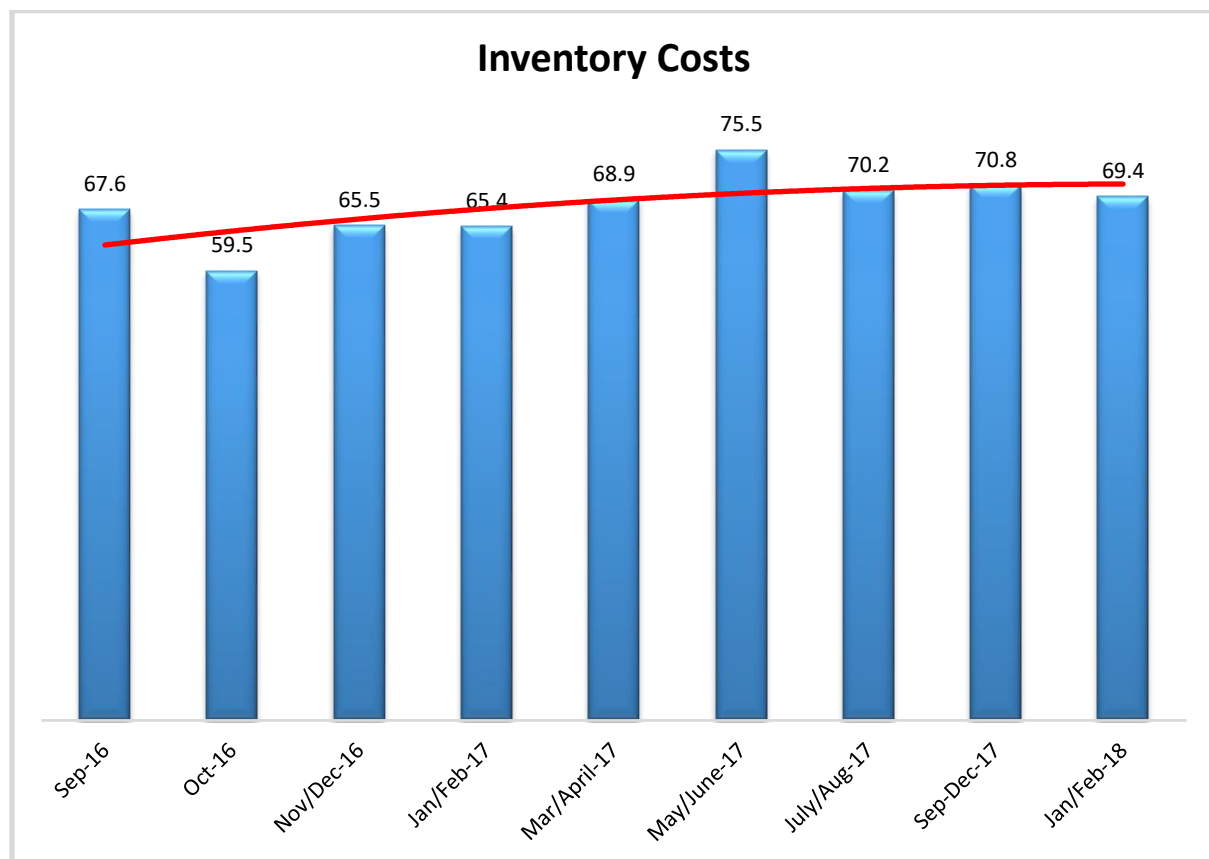
Looking forward at the next 12 months, the predicted Inventory Level index is 68.0, indicating inventory levels are expected to continue to increase over the next year.



Inventory Costs

The Inventory Costs index is 69.4, meaning costs have increased significantly over Q4 of 2016. Because inventory levels have grown, it is not surprising that inventory costs would also increase. But given that Warehousing Capacity is flat and Warehousing Utilization has increased, it would be expected that Inventory Costs would continue to increase.

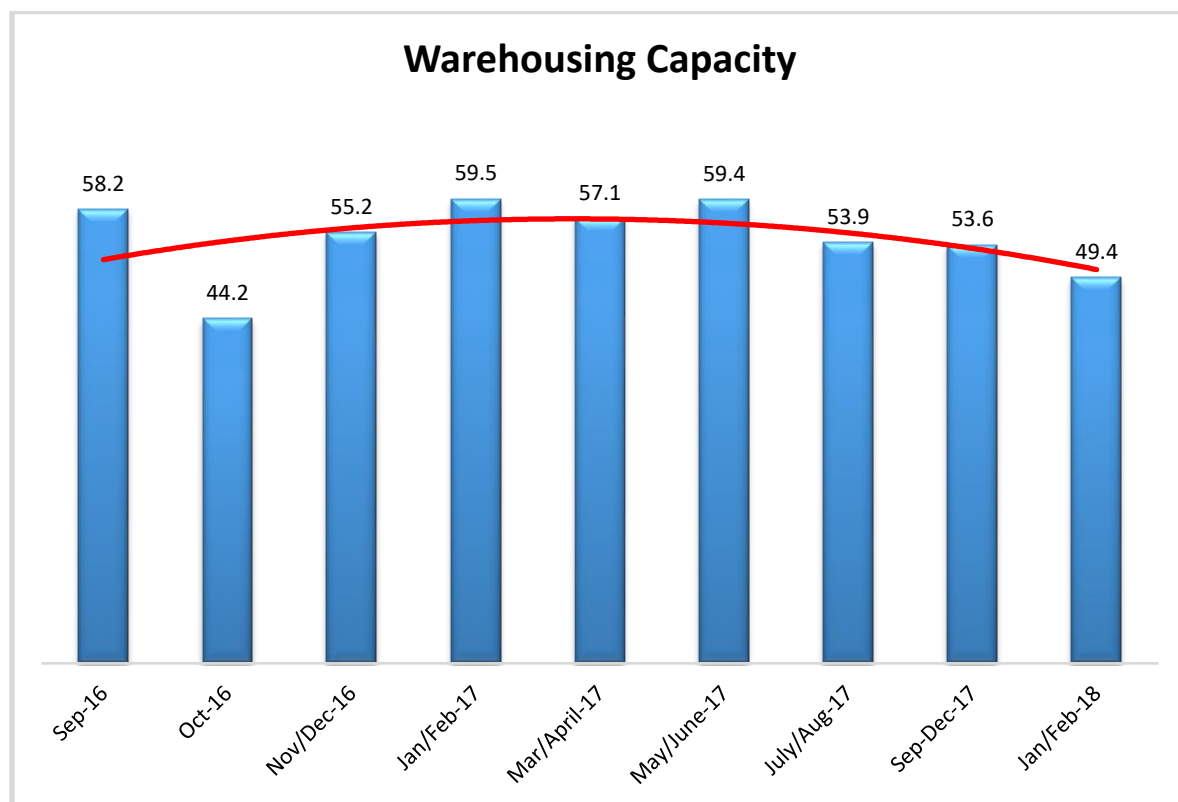
Looking forward at the next 12 months, the predicted Inventory Cost index is 72.4, indicating panelists expect inventory costs to continue to increase over the next year.



Warehousing Capacity

The Warehousing Capacity Index registered 49.4 percent in January-February 2018. This is a somewhat sharp decline of 4.2 percentage points from the September-December reading of 53.6 and as well as from the Jan/Feb 2017 high of 59.5. This is the second lowest reading ever recorded in the LMI®. It would appear that the warehousing space is contracting, overall.

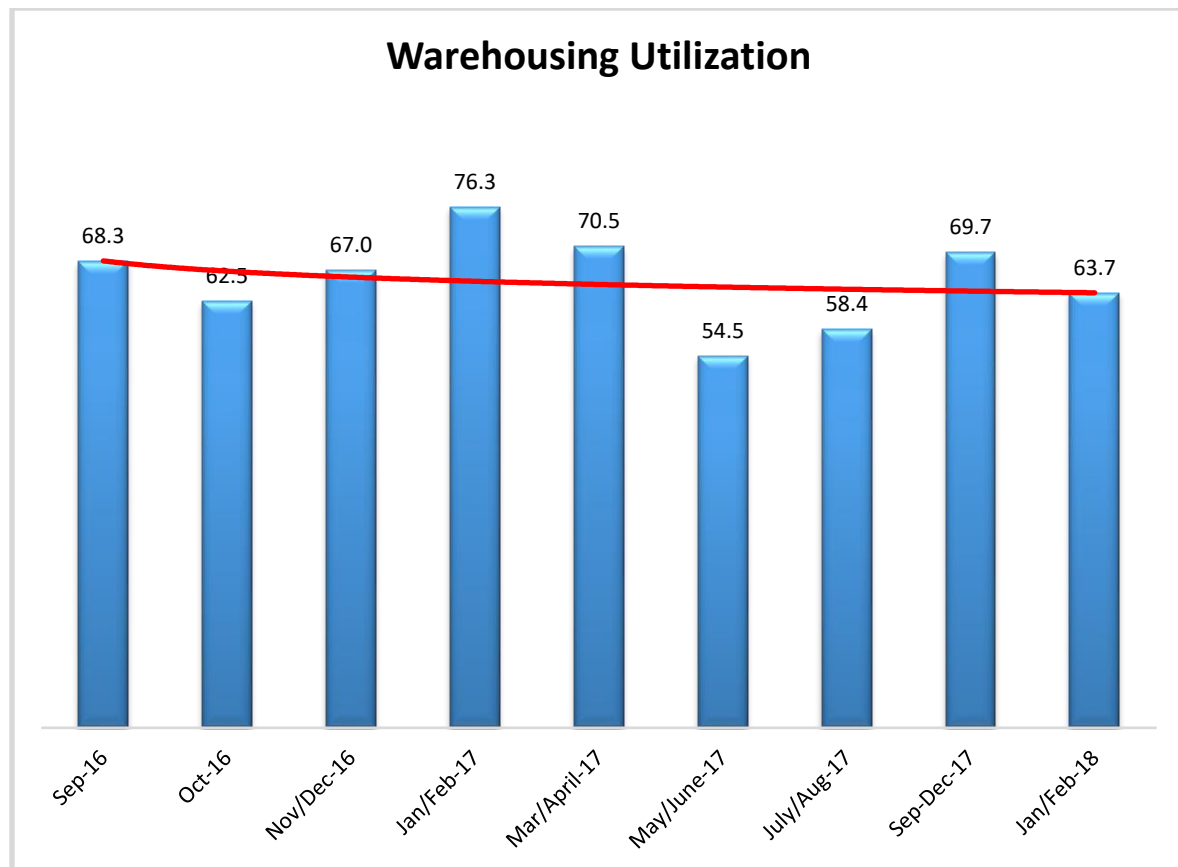
Looking forward at the next 12 months, the predicted Warehousing Capacity index is 61.6. This indicates that firms are optimistic that more warehouse space will become available over the next year, potentially easing the current mismatch between the supply and demand of affordable warehousing.



Warehousing Utilization

The Warehousing Utilization Index registered 63.7 percent in January-February 2018. This is a decrease of 6 percentage points from the September-December reading of 69.7, which was the third highest rate of growth recorded for this metric in the LMI. A warehousing utilization score of 63.7 continues a relatively stable and minor, but overall downward trend.

Looking forward at the next 12 months, the predicted Warehousing Utilization index is 78.3, indicating that firms anticipate utilizing more of the existing warehouse capacity over the next year.



Warehousing Prices

Finally, the Warehousing Prices Index registered 75.0 percent in January-February. This is a significant increase of 5.5 percentage points from the September-December reading of 69.5. The reading of 75.0 is the second highest value for the Warehousing Prices Index (highest recorded value was in September 2016 at a value of 76.9). The increased warehousing prices follows from the decreasing capacity numbers recorded above.

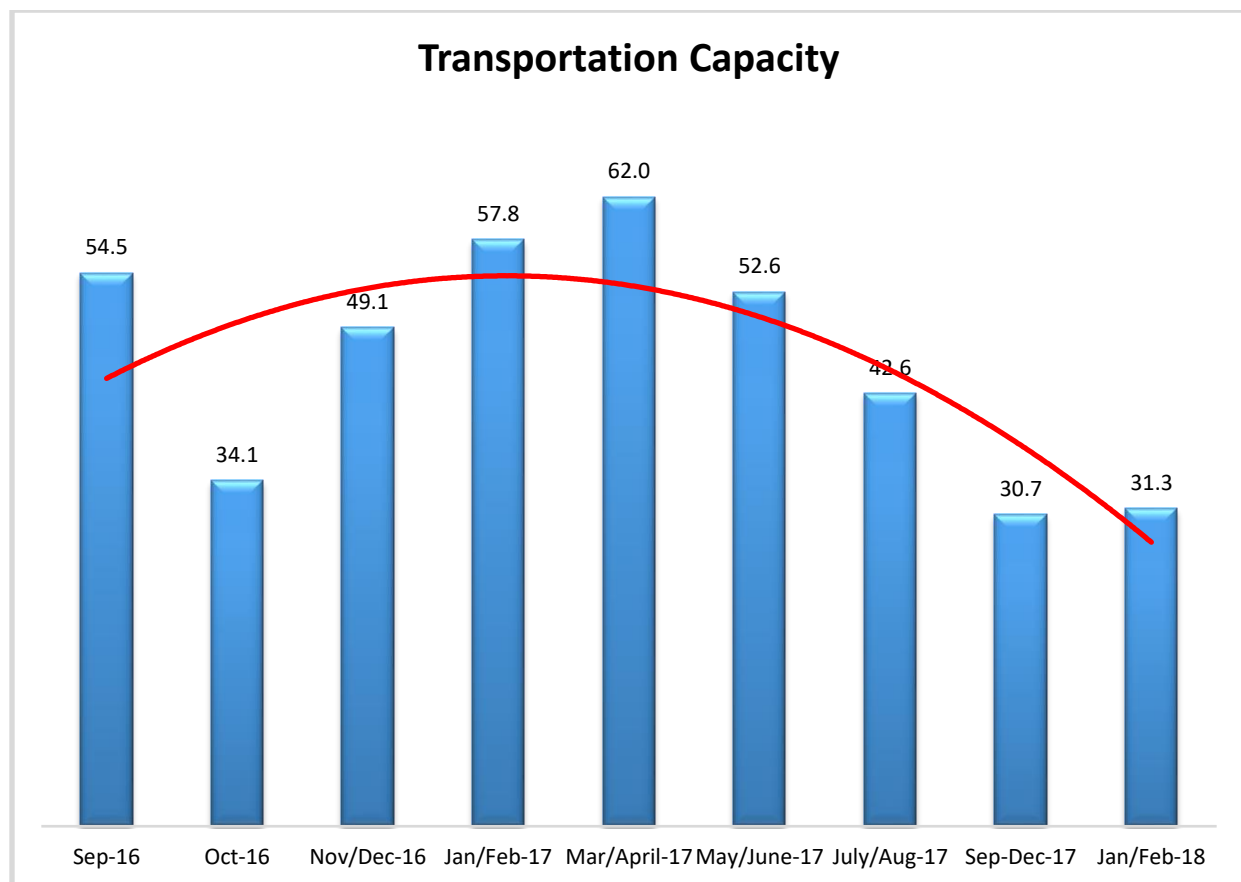
Looking forward at the next 12 months, the predicted Warehousing Prices index is 74.7, indicating inventory levels are expected to continue to increase at a strong rate over the next year. Whether this is due to a limited supply of warehousing, or distribution moving ever-closer to consumers, and therefor into more expensive areas, is unclear.



Transportation Capacity

The Transportation Capacity Index registered 31.3 percent in January-February 2018. This is a small increase of 0.6 percentage points from the September-December reading of 30.7 and still significantly down from the March/April high of 62.0. This is the second lowest reading ever recorded in the LMI®. It would appear that transportation industry is still struggling to keep up with demand and excess capacity is still historically low.

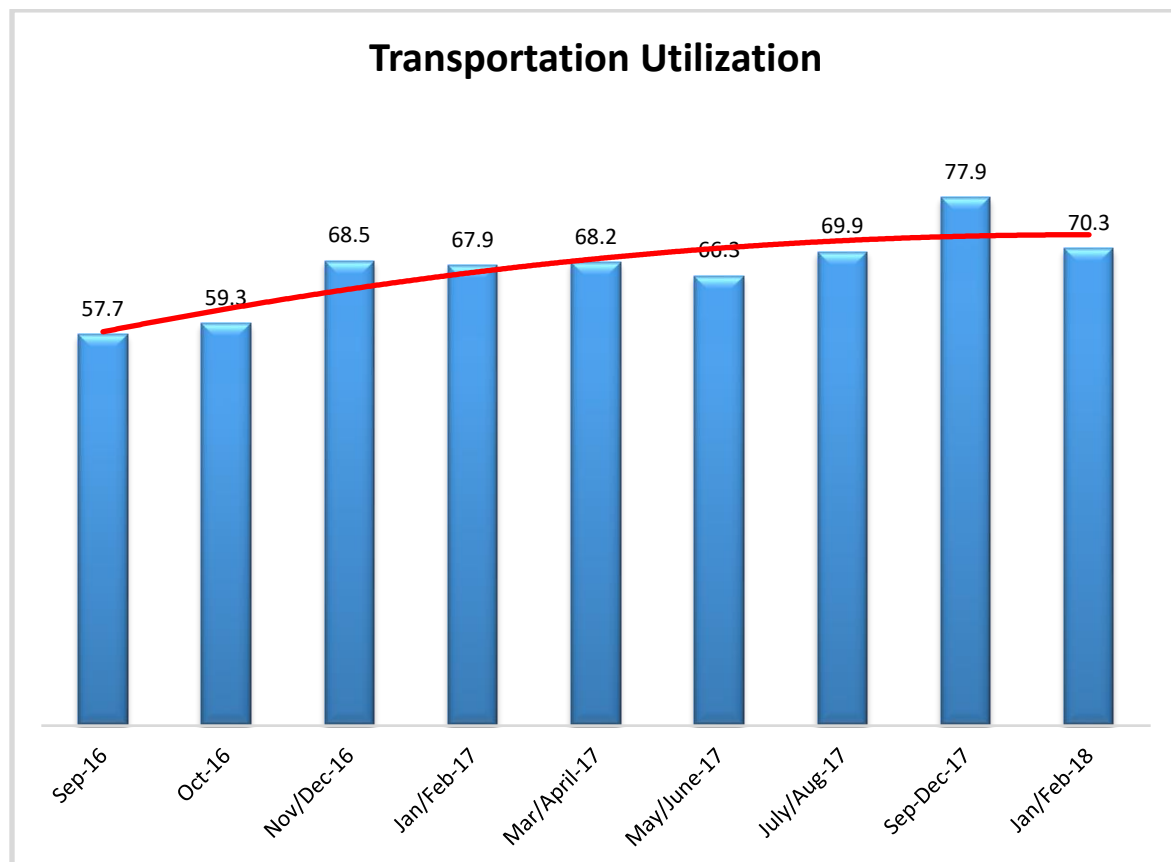
Looking forward at the next 12 months, the predicted Inventory Level index is 35.9. This is the only component of the LMI that is predicted to continue decreasing over the upcoming year. With increasing demands on transportation, and the current deficit of available capacity, respondents are pessimistic that the level of available transportation supply will be sufficient to meet demand over the next 12 months.



Transportation Utilization

The Transportation Utilization Index registered 70.3 percent in January-February 2018. This is a decrease of 7.6 percentage points from the September-December reading of 77.9, which was the highest rate of growth recorded for this metric in the LMI. 70.3 is the second highest reading ever recorded for the Transportation Utilization Index indicating that although we are down from the historical high, the utilization rate is still elevated and 2.4 percentage points higher than a year ago.

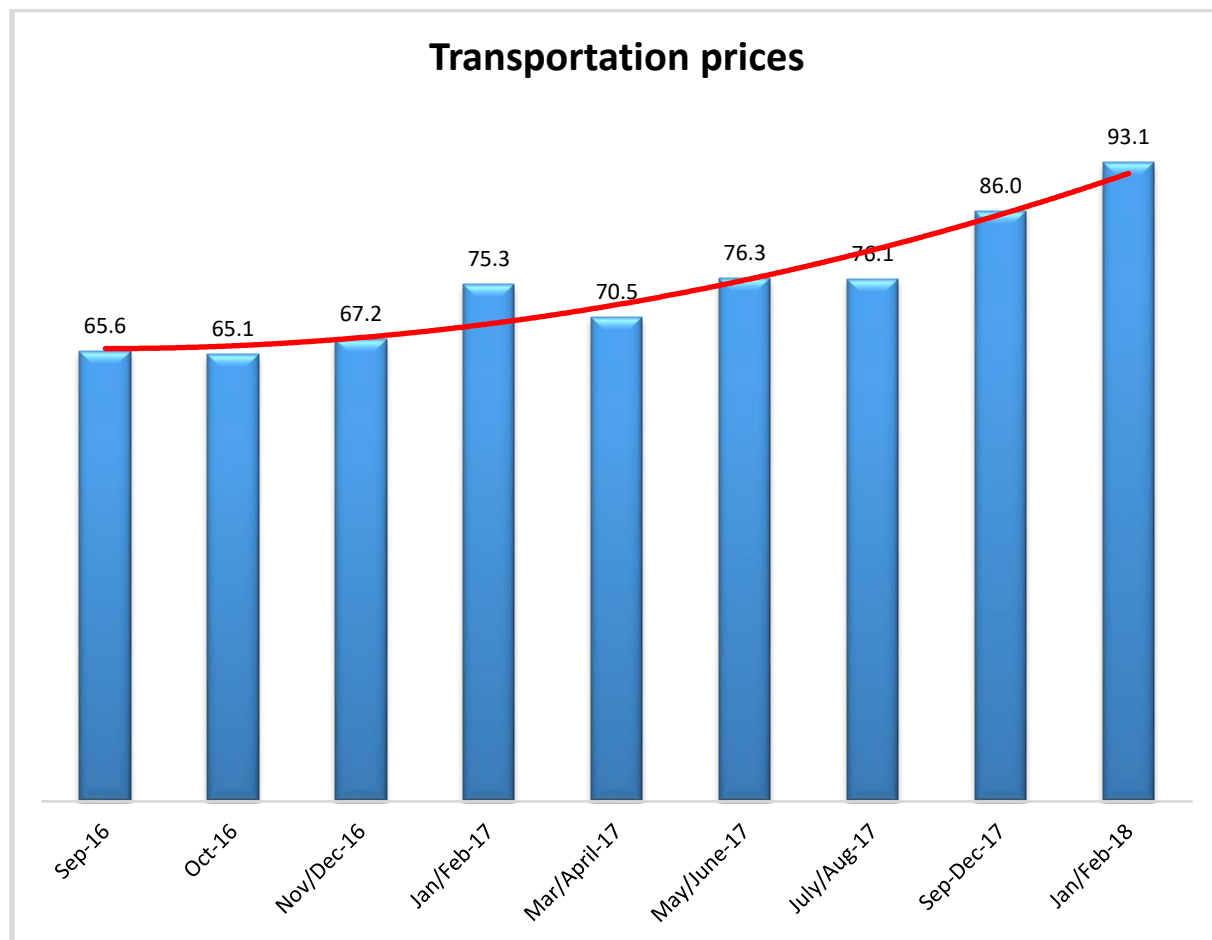
Looking forward at the next 12 months, the predicted Transportation Utilization is 71.2. This indicates that utilization will continue to increase over the next year as companies attempt to make the most out of limited, expensive space.



Transportation Prices

Finally, the Transportation Prices Index registered 93.1 percent in January-February. This is a significant increase of 7.1 percentage points from the September-December reading of 86.0. The reading of 93.1 constitutes a new record for the Transportation Prices Index and its growth continues to outpace all other sectors measured by the LMI® for the fifth consecutive period.

Looking forward at the next 12 months, the predicted Transportation Prices index is 89.1, indicating that respondents are not predicting much relief from high prices over the next month, this corresponds with the future predictions of continuing limitations in Transportation Capacity noted above.



About This Report

The data presented herein is 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,
 $\text{Diffusion Index} = 0.5 * PD + 0.5 * PU + 1.0 * PI$

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

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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, Portland State University and Rutgers University, supported by CSCMP.