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February 2019 Logistics Manager's Index Report®

LMI® at 61.95%
Growth is INCREASING AT AN INCREASING RATE for: Inventory Levels, Warehousing Utilization, and Transportation Capacity.
Growth is INCREASING AT A DECREASING RATE for: Inventory Costs, Warehousing Prices, Transportation Utilization and Transportation Price.
Warehouse Capacity is DECREASING.

(Fort Collins, Colorado) — According to a sample of North American logistics executives, growth continued (although at a decreasing rate) across the logistics sector in February 2019. Capacity is increasing while price and cost metrics are increasing. This is the fourth

consecutive drop in the overall LMI, continuing the drop from the consistently high growth measured throughout much of 2018.

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 eight unique other 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 percent indicates that logistics is expanding; a reading below 50 percent is indicative of a shrinking logistics industry. The latest results of the LMI summarize the responses of over 120 supply chain professionals collected in February 2019. Starting this month, a change was made in the way the *overall* LMI is calculated, with Transportation and Warehousing Capacity being "flipped" for the overall calculation. This means that an index score of 60.0 in Transportation Capacity would now be registered as a 40.0 in the calculation of the *overall* LMI. However it would still appear as a 60.0 in the discussion of the individual Transportation Capacity index. This has the effect of higher rates of available capacity, which likely indicate slowing demand, now lowering the overall LMI instead of increasing it, which we believe is a more accurate representation of logistics activity. All historical LMI® charts have been updated to reflect this change.

This month, all cost and price related variables, including Warehouse Prices (-1.4), Transportation Prices (-2.2) and Inventory Cost (-1.1) are slightly down. They are all still well above 50, Transportation Prices display the lowest levels of growth at 67.23, but at an ever-decreasing rate. Transportation Price was the highest scoring index for much of 2017, but is now registering only above the capacity metrics and Transportation Utilization. Transportation Price has historically been the metric most associated with future retail activity. We are still registering growth, but at much slower rate (26.5 points lower than this time a year ago). Conversely, Warehouse Prices are up approximately 5.1 points over the past year. This is partially explained by available levels of Warehouse Capacity (48.58) and Transportation Capacity (63.14). Warehouse Capacity (-0.6) has been contracting since October 2018, while Transportation Capacity (+4.8) – which had been increasing since November after over a year of contraction – continues to expand.

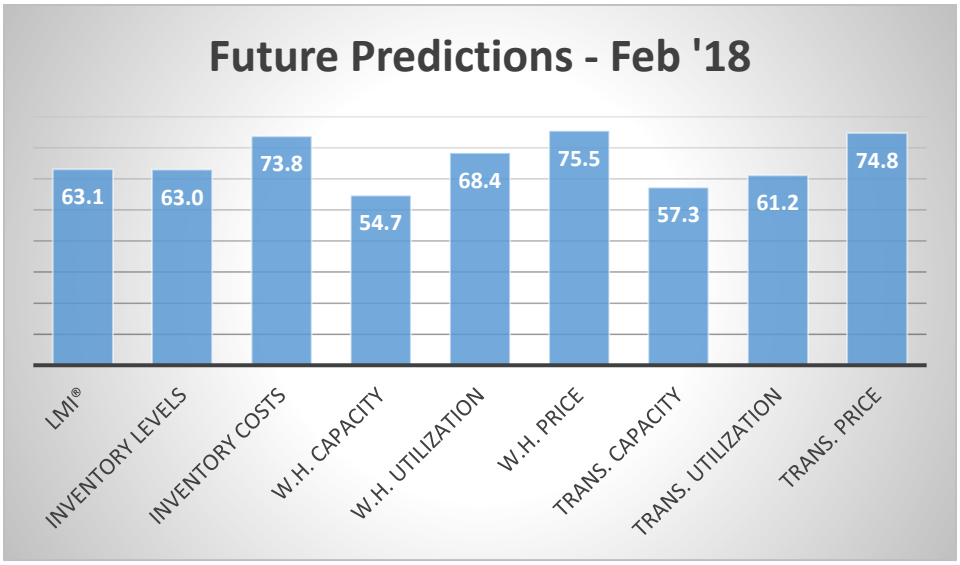
Inventories continue to grow (+1.37 to 67.62), and Inventory Cost (-1.14 to 74.51) continue to increase at a slightly decreasing, but still quite high, rate. Both inventory levels and inventory costs seem to be continuing to grow. This could be related to the fact that warehousing capacity is decreasing slightly. Because inventory levels are continuing to increase, and warehousing capacity is decreasing, it seems quite likely costs will continue to rise.

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. Inventory Levels, Inventory Costs, Warehousing Utilization, Warehouse Prices and Transportation Capacity are increasing at increasing rates. Transportation Utilization and Transportation Price are increasing at decreasing rates - although they are all still growing. Finally, Warehousing Capacity is decreasing but at a decreasing rate. The overall LMI® index score is down

slightly, but still indicates growth in the logistics industry. It seems that LMI levels are returning to where they were before the recent tax cut. Whether or not the tax cut "super-charged" the logistics industry for 12 months, or this is merely the result of natural business cycles, is unclear. What is clear is that the logistics industry continues to grow, but at a markedly slower, and perhaps more sustainable, pace.

LOGISTICS AT A GLANCE					
Index	**February 2019 Index**	**January 2019 Index**	**Month-Over-Month Change**	**Projected Direction**	**Rate of Change**
LMI®	61.95	63.33	-1.38	Growing	Decreasing
Inventory Levels	67.62	66.25	+1.37	Growing	Increasing
Inventory Costs	74.51	75.65	-1.14	Growing	Decreasing
Warehousing Capacity	48.58	49.16	-0.57	Contracting	Increasing
Warehousing Utilization	67.93	65.96	+1.96	Growing	Increasing
Warehousing Prices	72.33	76.96	-4.63	Growing	Decreasing
Transportation Capacity	63.14	58.33	+4.80	Growing	Increasing
Transportation Utilization	57.69	59.92	-2.23	Growing	Decreasing
Transportation Prices	67.23	69.38	-2.15	Growing	Decreasing

Future predictions indicate that respondents predict an increase in all eight LMI® metrics over the next 12 months. Both Transportation and Warehouse Prices are predicted to grow at slightly higher rates than they are currently. Capacity is anticipated to be up, but still struggling to keep pace with demand. It is worth noting that over the past year LMI® respondents have been very accurate in their future predictions. Whether or not this period's dip in growth rates will have an impact on this accuracy remains to be seen. Future predictions for LMI components 12 months from now are displayed below:



Historic Logistics Managers' Index Scores

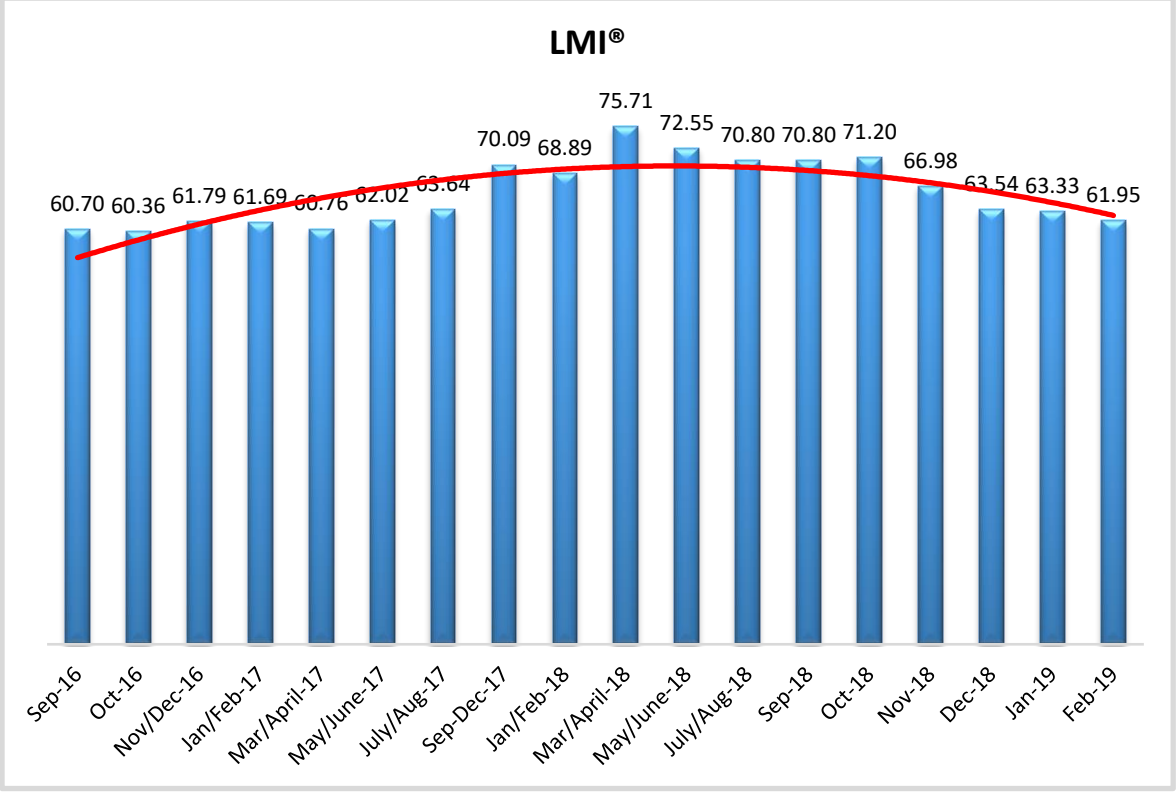
This period's along with the prior 16 readings of the LMI are presented table below. The values have been updated to reflect the method for calculating the overall LMI:

Month	***LMI***	Average for previous readings – 66.2 High – 75.71 Low – 60.36 Std. Dev – 4.82
February '19	61.95	
January '19	63.33	
December '18	63.54	
November '18	66.98	
October '18	71.20	
September '18	70.80	
July/August '18	70.80	
May/June '18	72.55	
March/April '18	75.71	
January/February'18	68.89	
September-December '17	70.09	
July/August '17	63.64	
May/June '17	62.02	
Mar/April '17	60.76	
Jan/Feb '17	61.69	
Nov/Dec '16	61.79	
Oct '16	60.36	
Sep '16	60.70	

LMI®

The overall LMI index is 61.9 in the February 2019 reading. This is down from January's index score of 63.3. As mentioned above, the method used to calculate the LMI has been revised, with Transportation and Warehousing Capacity being "flipped" for the overall calculation. So an index score of 60.0 in Transportation Capacity would now be registered as a 40.0 in the calculation of the overall LMI. However it would still appear as a 60.0 in the discussion of the individual Transportation Capacity index. This has the effect of higher rates of available capacity, which likely indicate slowing demand, now lowering the overall LMI instead of increasing it. The historical LMI scores given below have been updated to reflect this change. Under this new method of calculation, the LMI has been decreasing since November. The overall index, like the index scores for price, now displays a steady decline since reaching high scores in the 70's for most of 2018. This months' reading is brought down primarily by decreases in virtually every metric. The trend-line is clearly bending back downwards, indicating that the logistics industry is returning to a more sustainable pace of growth.

Looking forward, respondents predict the overall LMI will continue to grow over the next year, predicting an overall index score of 63.1. This indicates an expectation of steady if unspectacular growth in the logistics industry through 2019.

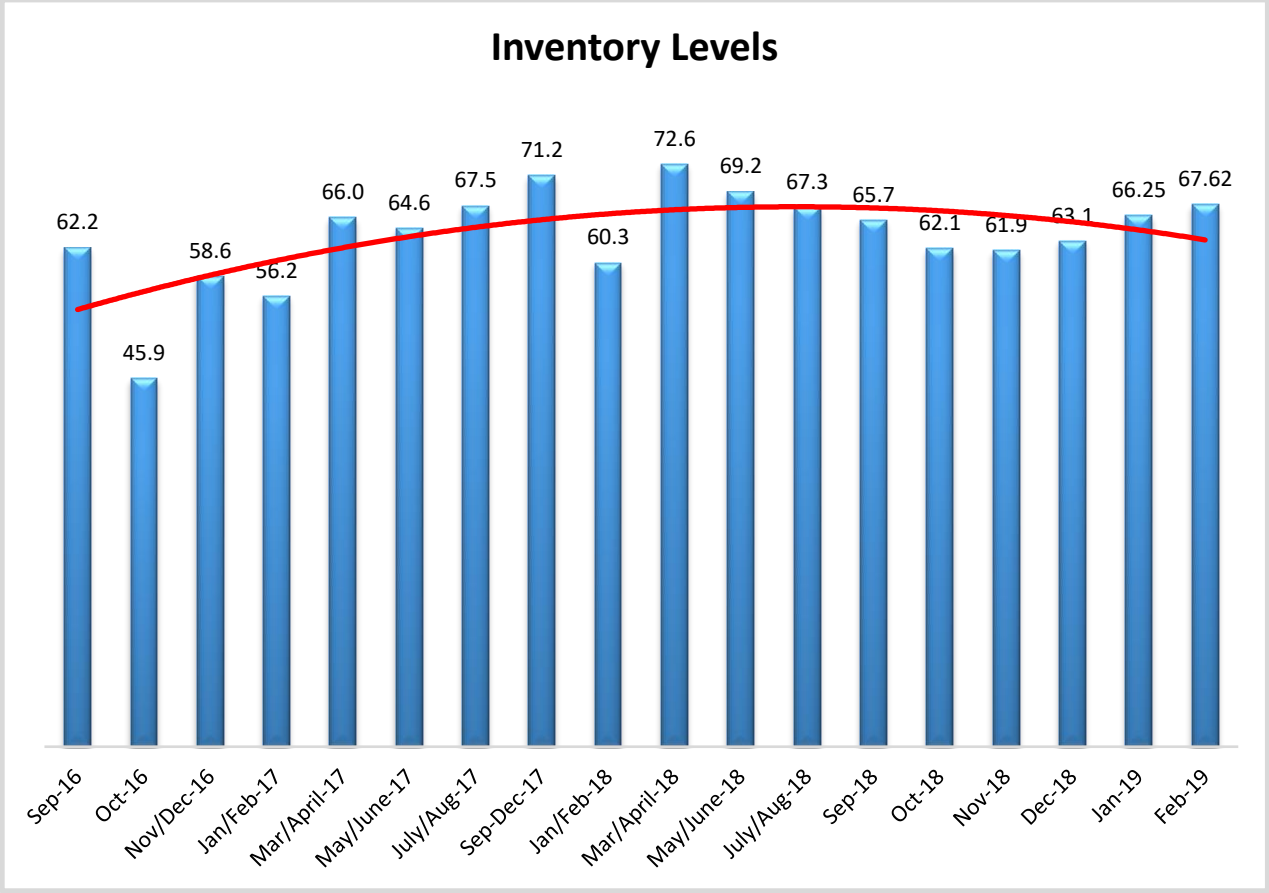


Every reading since the beginning of this project in September of 2016 has indicated growth in the logistics industry. The January 2019 reading does not buck this trend, as 61.9 is well above the growth/contraction threshold of 50.0.

Inventory Levels

The Inventory Level index is 67.6, which indicates that inventory levels are continuing to rise. Because this is well above 50, inventory levels are still growing, and this is the second month of increasing values. This value is 6.3 points above the level a year ago at this time, of 60.3. January last year saw a significant, but temporary drop from December before increasing back up to over 72, followed by a downward trending period. The string of uninterrupted growth that started in November/December of 2016 continues.

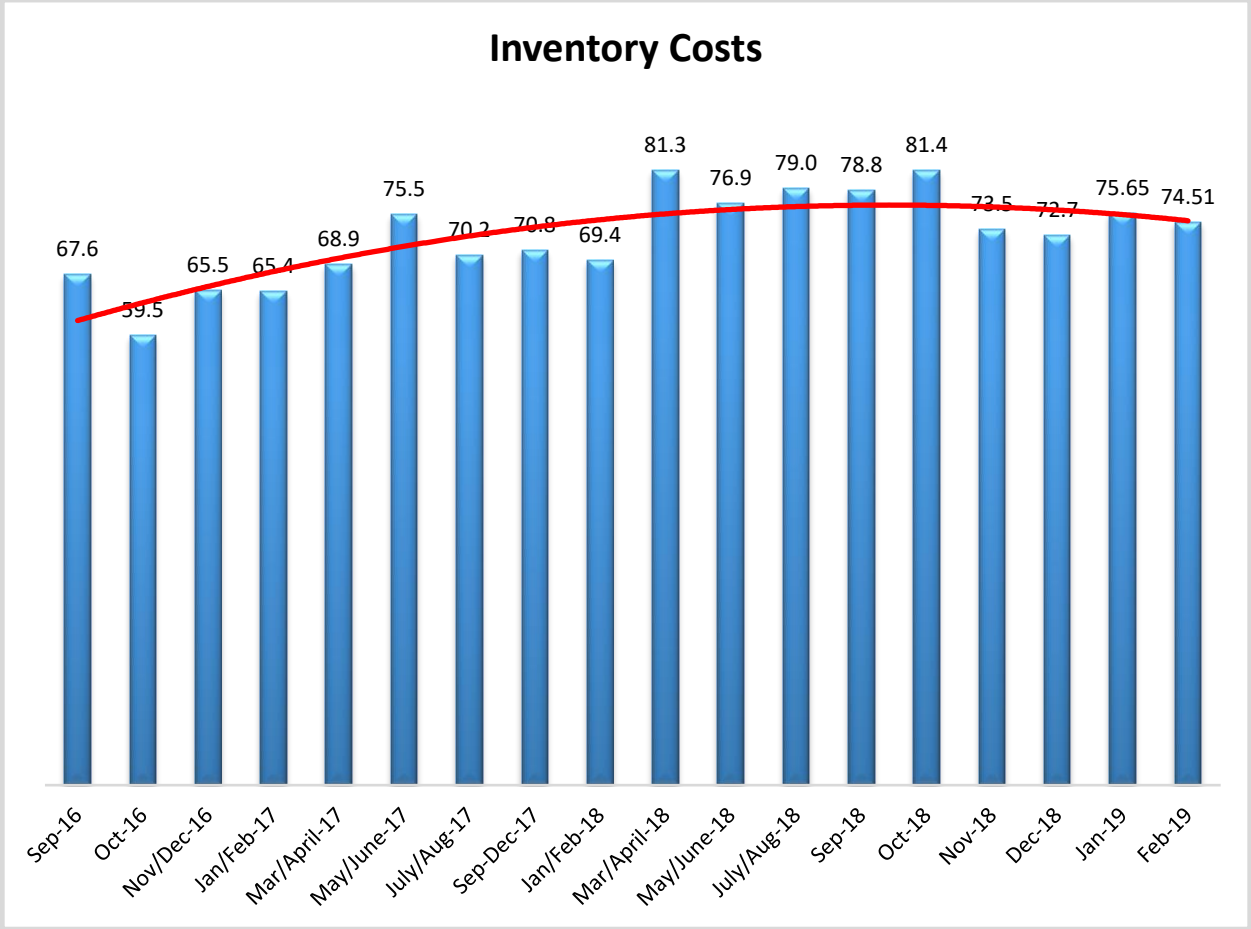
The current reading of 67.6 is slightly above the all-time average value for this metric, which is 63.6. The long-term trend-line shows that values are expected to stay in the growth region, that is, above 50, for the near future. If current trends continue, it could fall below 50 at some point in the future. When asked to predict what will conditions will be like 12 months from now, the average value is 63.0, indicating inventory levels are expected to be higher than current levels. This value is slightly below last month's year-ahead prediction of 65.7, which indicates a consistent prediction of increasing levels next year.



Inventory Costs

Given the high levels of inventory growth, it is not surprising that inventory costs are also increasing. The current value is very close to the previous value of 75.65, so the last four readings have been in the same growth range, representing a stable growth rate after a significant decline from October. These continued high levels indicate strong continued growth in inventory costs, and at a higher level than the first year and a half of the data. The current value is 6.1 points higher than the 69.4 value last year at this time. The current value is also above the long-term average of 72.6, another sign that costs are expected to rise by a greater than expected amount.

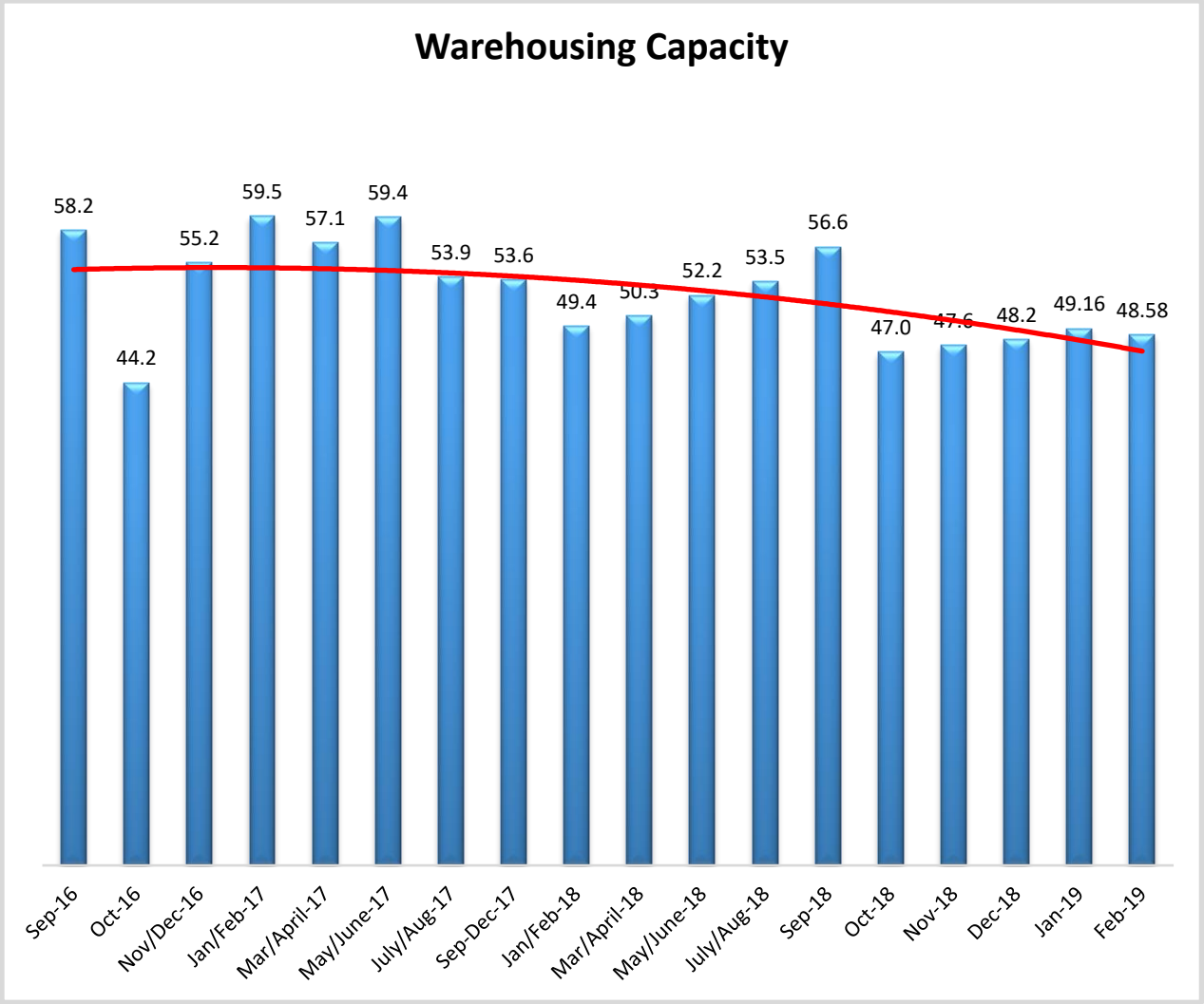
Because costs have stayed above 50 consistently, costs are expected to continue to grow, and the trend-line shows that cost growth has been increasing, but seems to be flattening. If current trends continue, the inventory cost index is expected to continue to increase for the foreseeable future. Looking forward at the next 12 months, the predicted Inventory Cost index is 73.2. Respondents clearly expect inventory costs to continue to be high for the next 12 months.



Warehousing Capacity

The Warehousing Capacity Index registered 48.58 percent in February 2019. This represents a slight decrease (<1%) from the January 2019 reading of 49.16, and a nearly 12 point decrease from the September 2018 reading of 56.64 and is still sharply down from the Jan/Feb 2017 high of 59.5. This is the *fifth lowest* reading ever recorded in the LMI®. It would appear that warehousing capacity is contracting, now five months in a row.

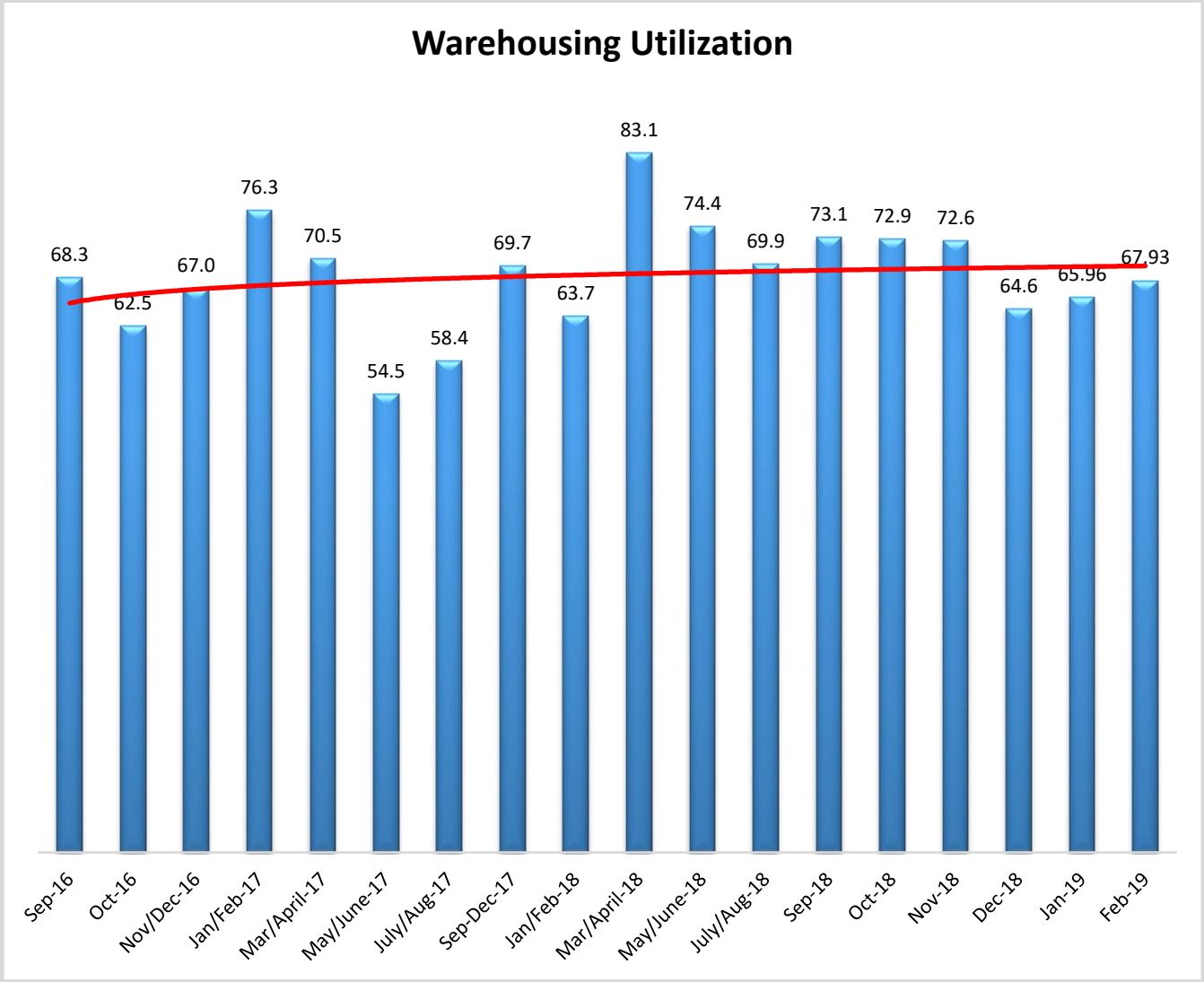
Looking forward at the next 12 months, the predicted Warehousing Capacity index is 54.7, which is up slightly from January's prediction (53.3). This is close to the break-even of 50.0, indicating that respondents are not hopeful we will see significant gains in available capacity over the next 12 months.



Warehousing Utilization

The Warehousing Utilization Index registered 67.93 percent in February 2019. This is a marginal increase of nearly 2% from the January 2019 reading of 65.96, and a still very sharp decline of 4.62 percentage points from the November 2018. This is the second month in a row in increase utilization overall, and is up 13.43 points from the all-time low of 54.5 in June 2017. This, the second month of increased utilization, along with the decreasing capacity, suggesting that the market may be further tightening.

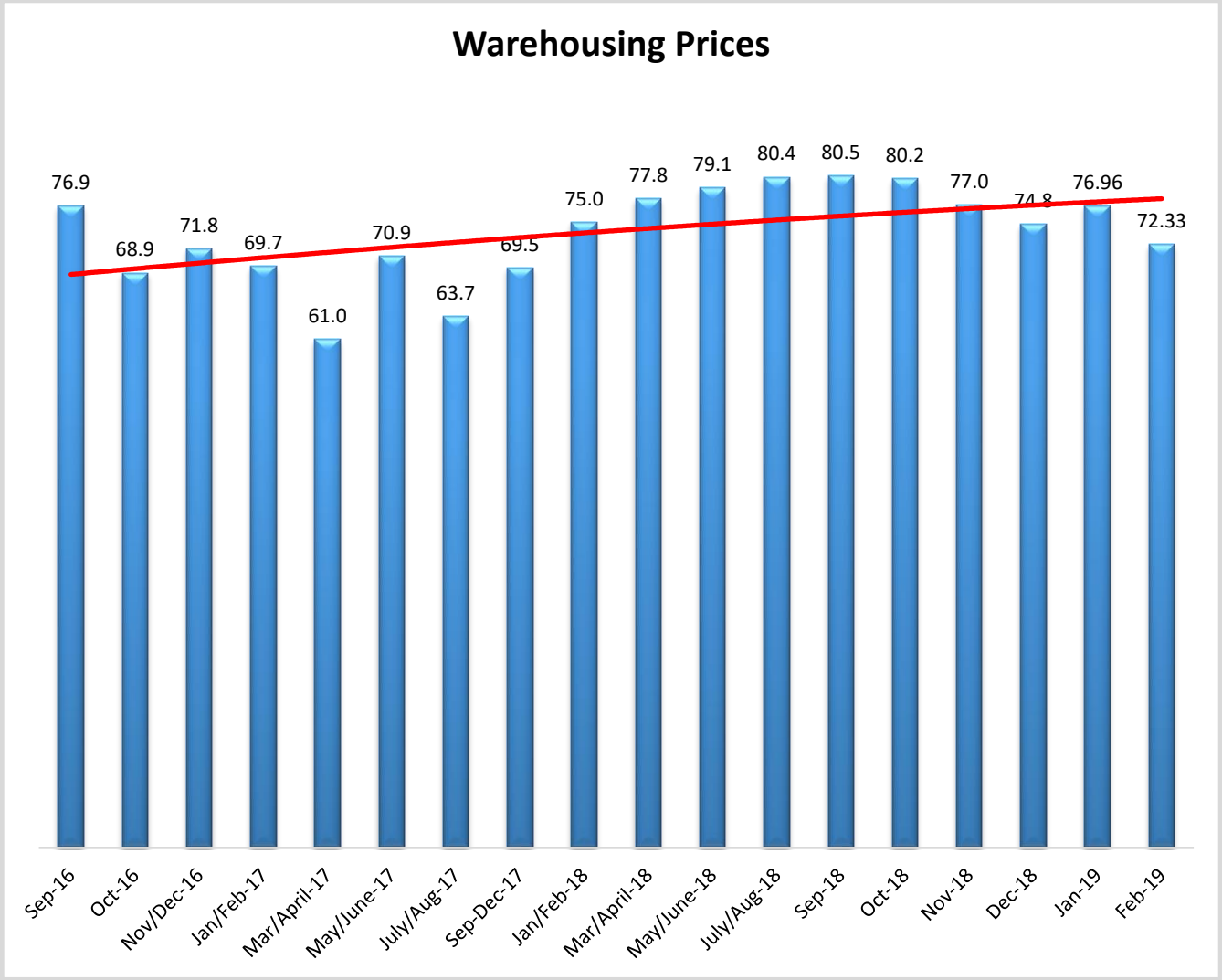
Looking forward at the next 12 months, the predicted Warehousing Utilization index is 68.4, which is up slightly from January's prediction (67.9), indicating that firms anticipate utilizing existing warehouse capacity consistently over the next year.



Warehousing Prices

Finally, the Warehousing Prices Index registered 72.33 percent in February 2019. This is a somewhat sharp decrease of 4.63 percentage points from the January 2019 reading of 76.96, and a rebound to a point closer to the to the December 2018 level. This also continues the pattern from November and December, with a decreasing rate of increase on warehousing prices. With the decrease in capacity, the increase in utilization, this increase in the rate of price falls in line with market conditions.

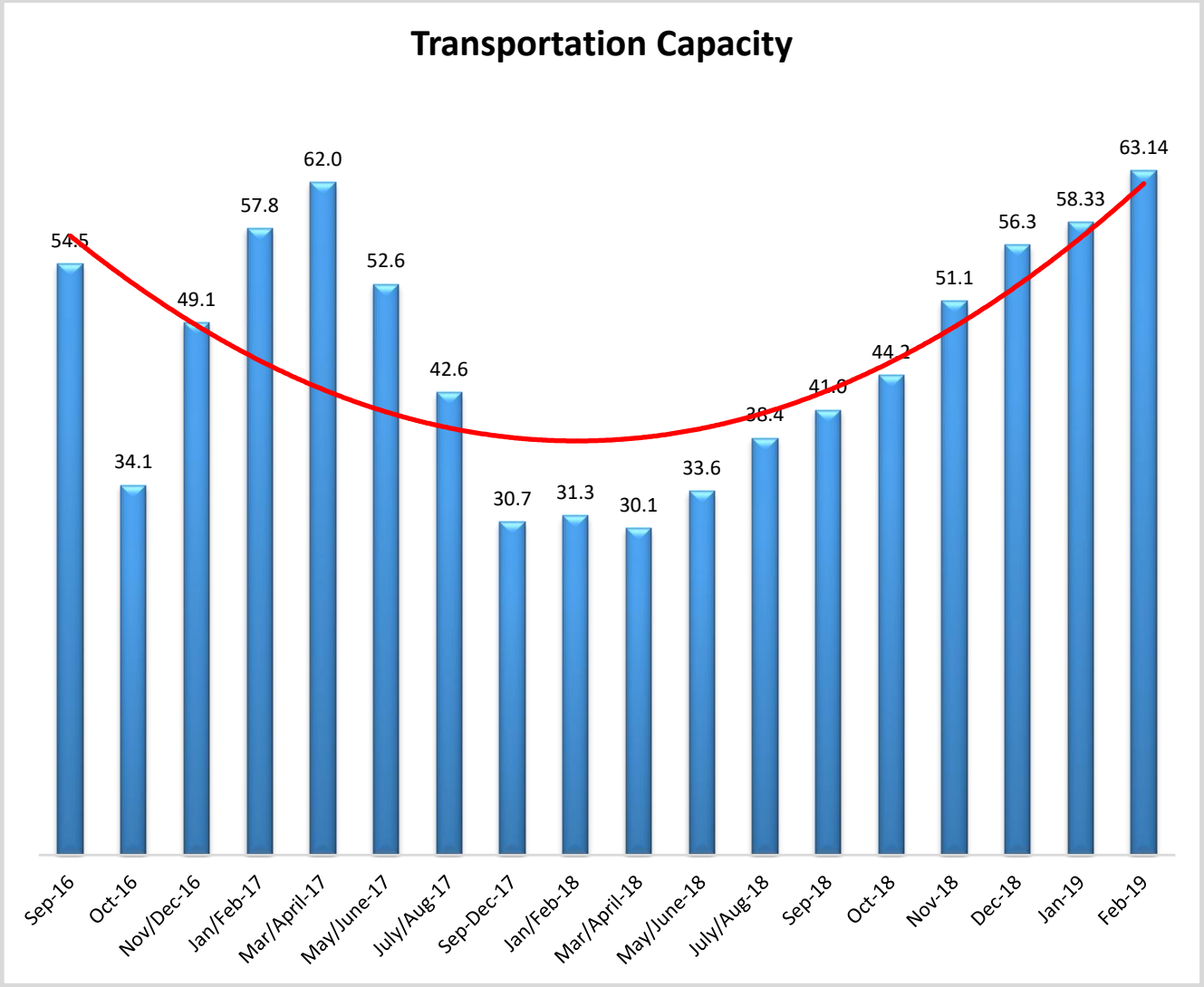
Looking forward at the next 12 months, the predicted Warehousing Prices index is 75.5, which is down from January's prediction (78.8). This indicates that firms are expecting consistent, significant growth in Warehouse Prices over the next 12 months.



Transportation Capacity

The Transportation Capacity Index registered 63.1 percent in February 2019. This is an increase of 4.8 percentage points from the January reading of 58.3. The upward trend in transportation capacity is continuing, the latest reading being the eighth consecutive period showing an increase from the previous reading. Further, a reading above 50 percent indicates expansion, and this is the fourth consecutive reading above 50.

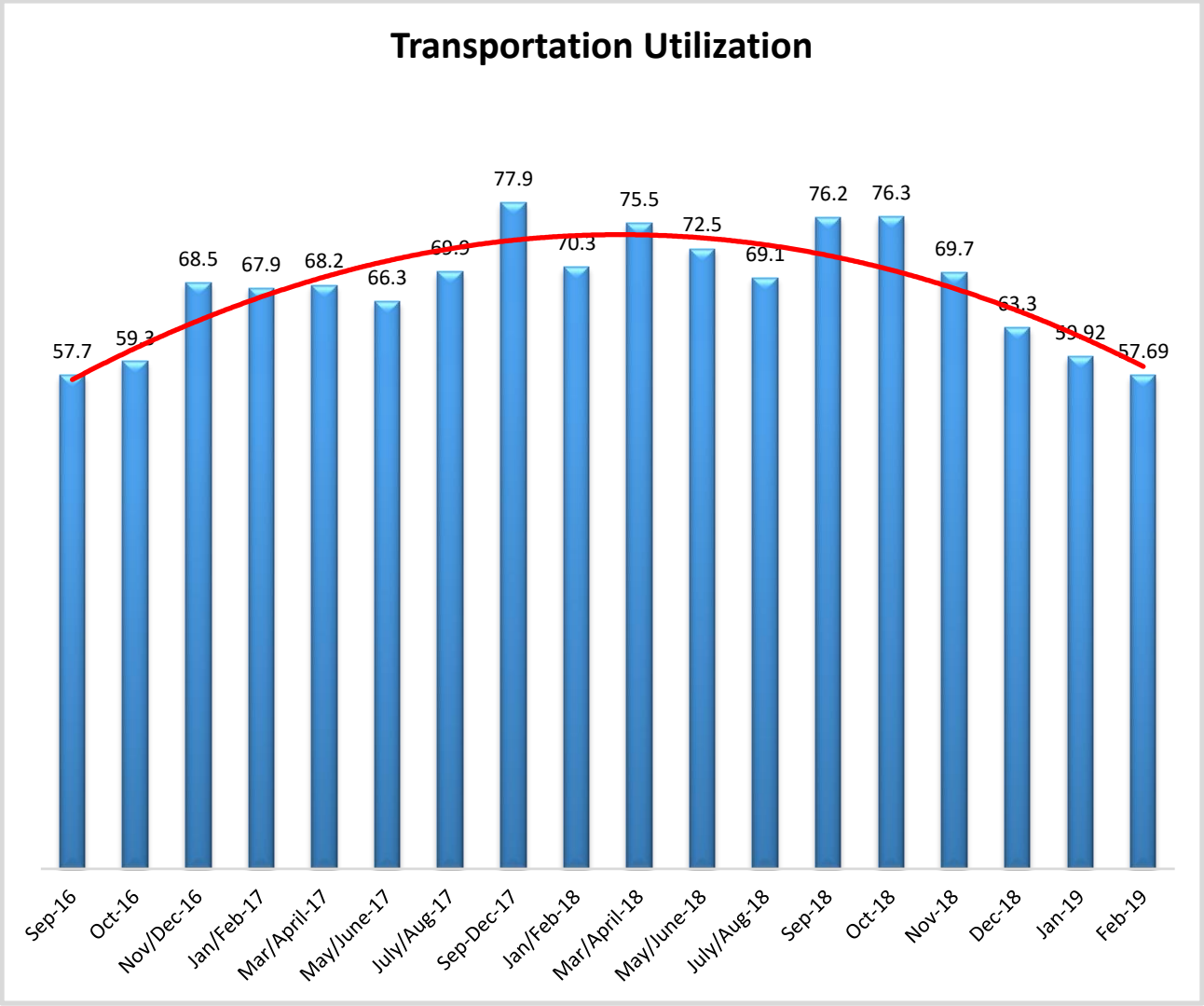
It should be noted the data also indicates a score of 57.3 percent for the next year. This is a 1.7 percent increase in future expectations when compared to January data.



Transportation Utilization

The Transportation Utilization Index registered 57.7 percent in February 2019. This is a decrease of 2.2 percentage points from the January reading of 59.9. This score indicates a continuing expansion trend in transportation utilization, but the rate of the increase is continuing to slow down. Historically, it is the lowest value ever indicated by the Transportation Utilization Index.

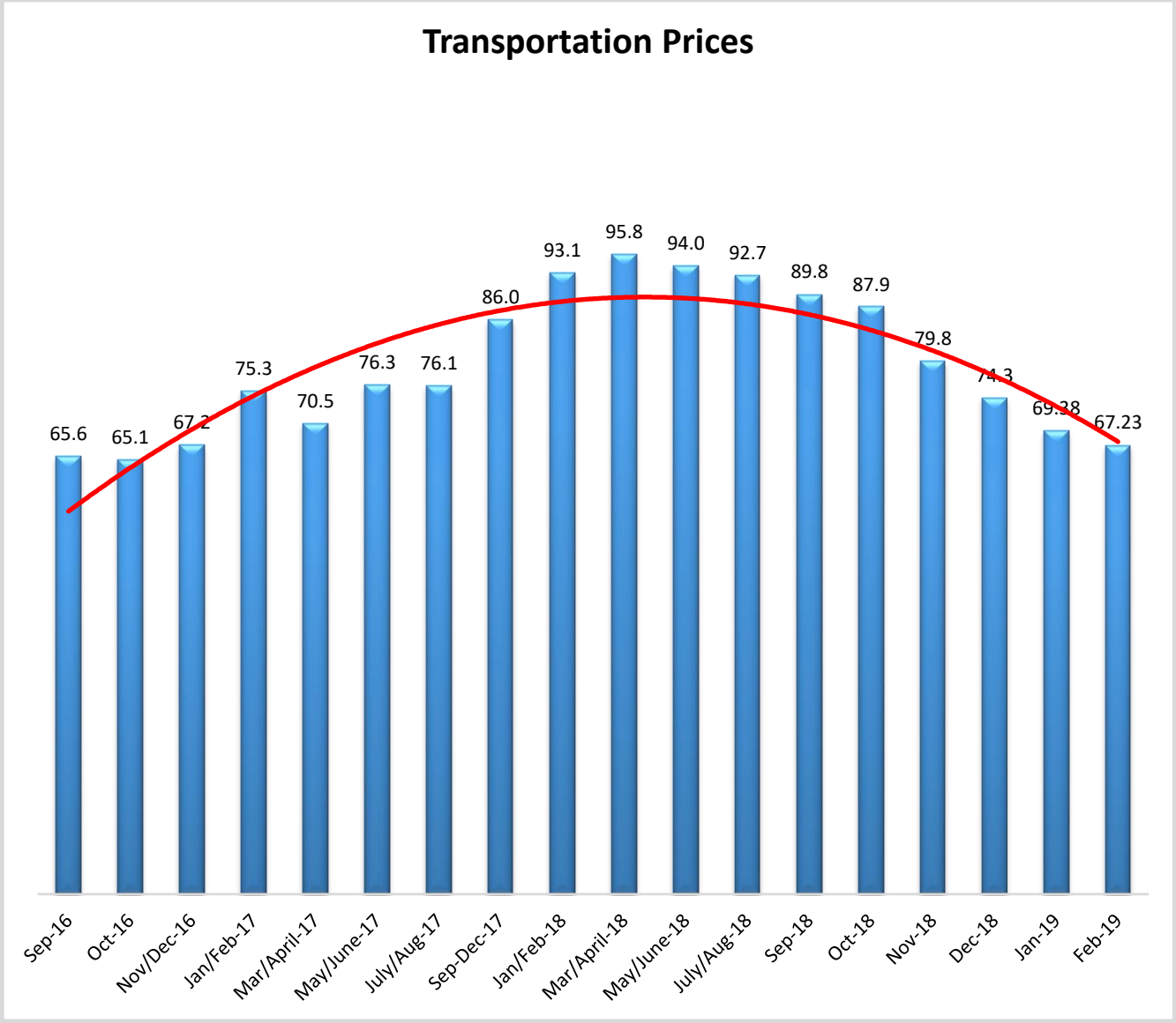
Our future Transportation Utilization Index indicates a 61.2 percent level for the next 12 months. Future expectations are also down 4.4 percent than their January levels.



Transportation Prices

The Transportation Prices Index registered 67.2 percent in February 2019. This is 2.2 percent lower than the January 2018 transportation prices reading of 69.4. Transportation Prices Index is continuing to come off its historical highs, with the latest reading being the eighth consecutive decrease from the all-time high registered in March-April 2018.

The future expectations for transportation prices are at 74.8 percent, indicating that the upward pressure on transportation prices is likely to persist over the next 12 months. Yet, it should be noted that the future price expectations are also slightly (.4 percent) lower than they were in January.



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 = 0.5 * 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, Rochester Institute of Technology and Rutgers University, supported by CSCMP.