



# Purchases Report

January 2019

## Table of Content

**Highlights**

**Long-Term Trends**

**Analysis of Quarterly Data**

**Analysis of Monthly Data**

**Appendix**

### ***Important notes:***

*As of November 2016, unless explicitly specified otherwise, RTA uses 3-month moving average for reporting on inventory (including historical data), hence, affecting calculated values of purchases and Inventory-to-Sales Ratio. In this way, any exaggerations that might be manifest in monthly purchases data, due to regular inventory counts by members, are not emphasized.*

*Highlighted areas in the graphs represent time of recessions.*

*Explanation about how to read box plots and histograms can be found in the Appendix section.*

### **Copyright: Railway Tie Association, 2018.**

*Disclaimer: The data and report presented herein are based solely on RTA member monthly reports on production and inventory. Occasionally, members send corrections to previously submitted data. If and when these corrections are received they are incorporated at that time. Users of this report should note while all care is taken to accurately compile the data submitted by member companies, that no warranty is made as to the accuracy of any RTA member reports.*

## Highlights

This year started with increased production and purchases. Since purchases were stronger than production, the inventory was still in declining trend. As a result, the Inventory-to-Sales ratio was virtually flat, and remained very close to extremely low levels.

## Long-Term Trends

In January, production dropped at a 12.5% annual rate.

Purchases came down at a 11.1% annual rate.

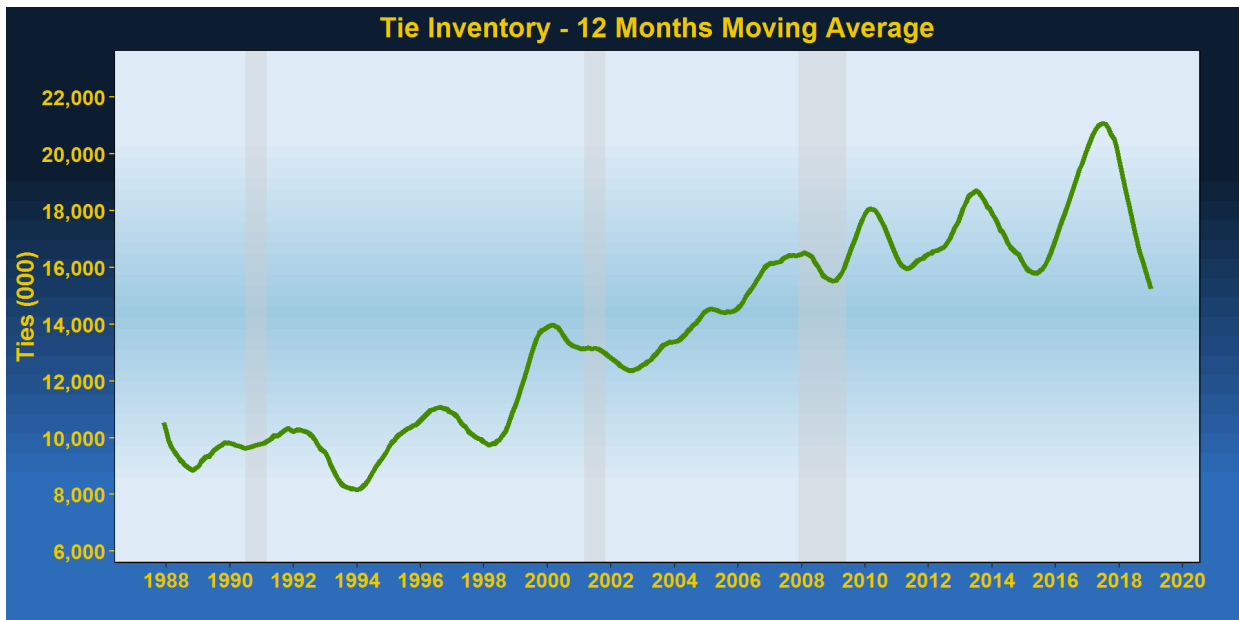
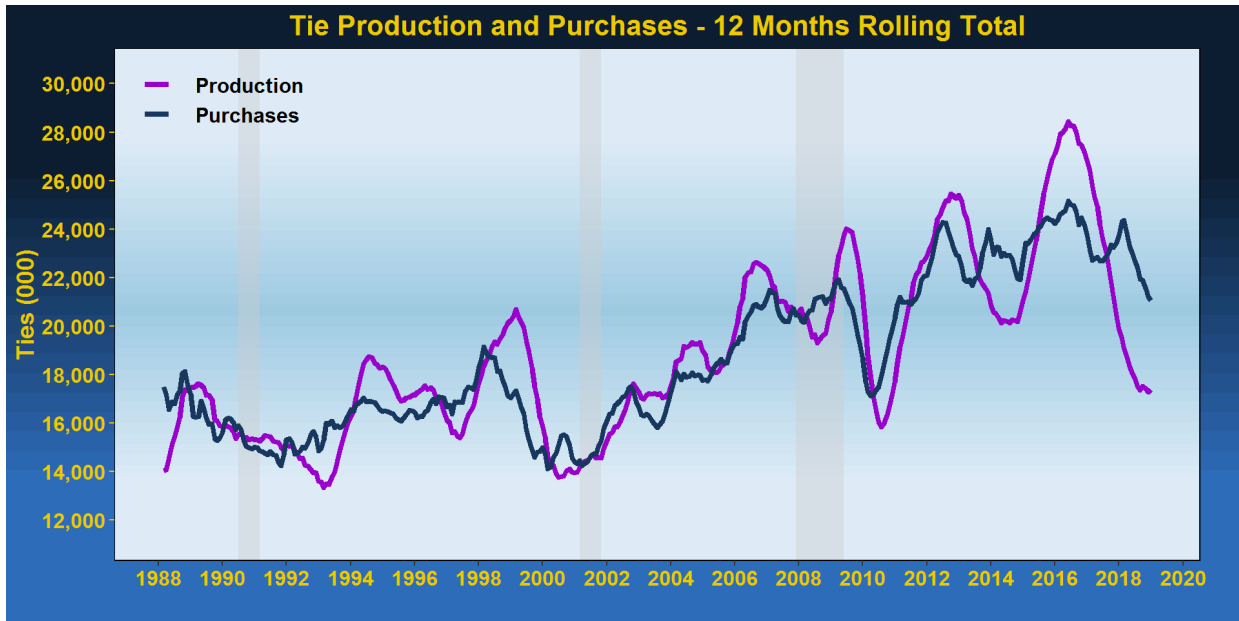
Inventory's 12 month moving average (12MMA) came down by 22.8% from year ago levels.

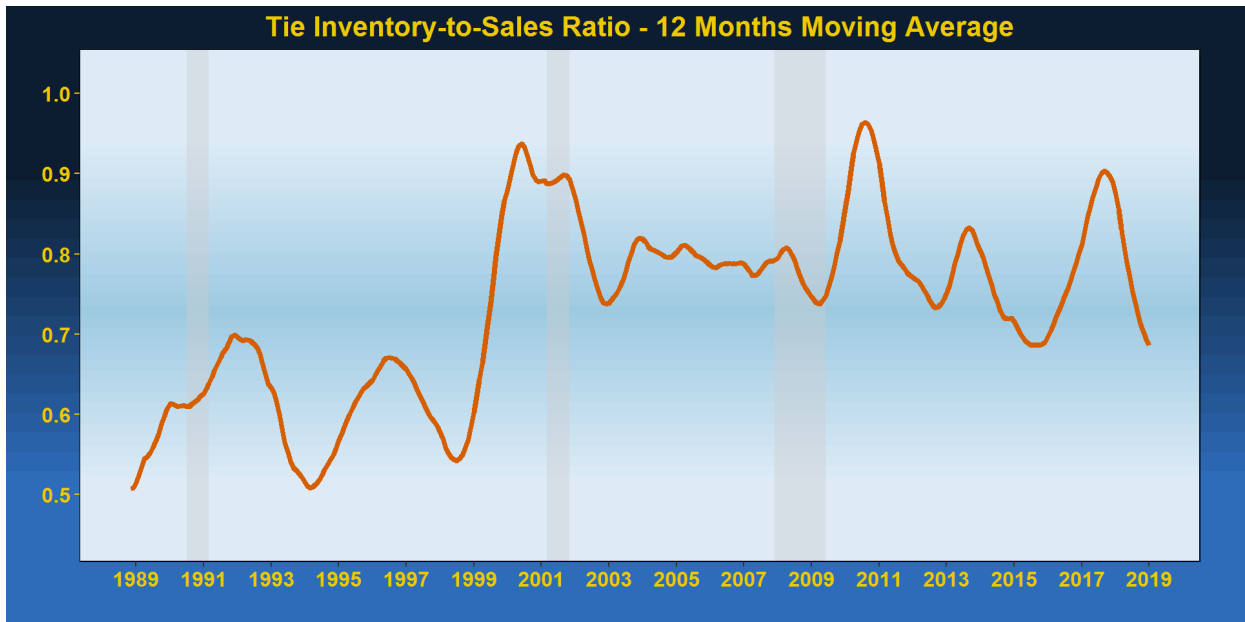
Inventory-to-Sales Ratio's 12MMA dropped from 0.88 to 0.69.

### Table of Annual Observations

Production and Purchases are 12 months rolling totals, Inventory and ISR are 12MMA

Date	Production	Purchases	Inventory	ISR
January 2018	19,887	23,700	19,747	0.88
January 2019	17,394	21,068	15,248	0.69





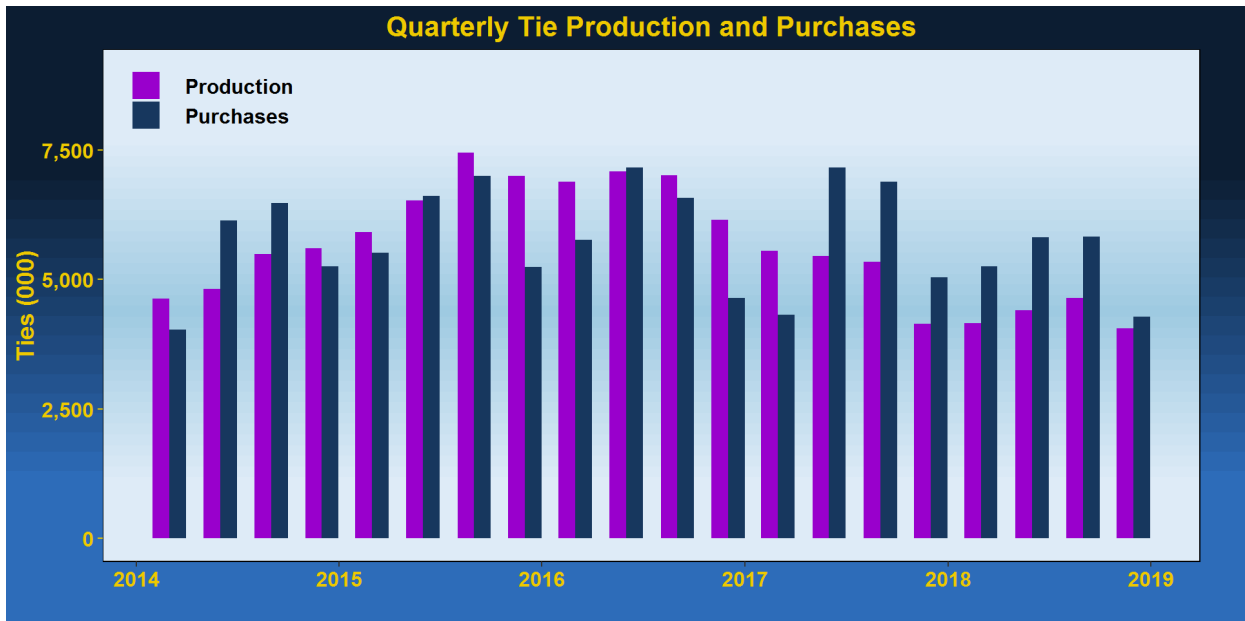
## Analysis of Quarterly Data

Production in Q4 came down by 12.6% from last quarter and fell by 2% from year ago.  
 For the same intervals, purchases dwindled by 26.4% and declined by 15% respectively.  
 Inventory's 3MMA came down by 1.5% from last quarter and fell by 21.3% from year ago levels.  
 From Q3 to Q4, the 3MMA of Inventory-to-Sales Ratio remained flat at 0.67. One year ago, the ratio was 0.8.

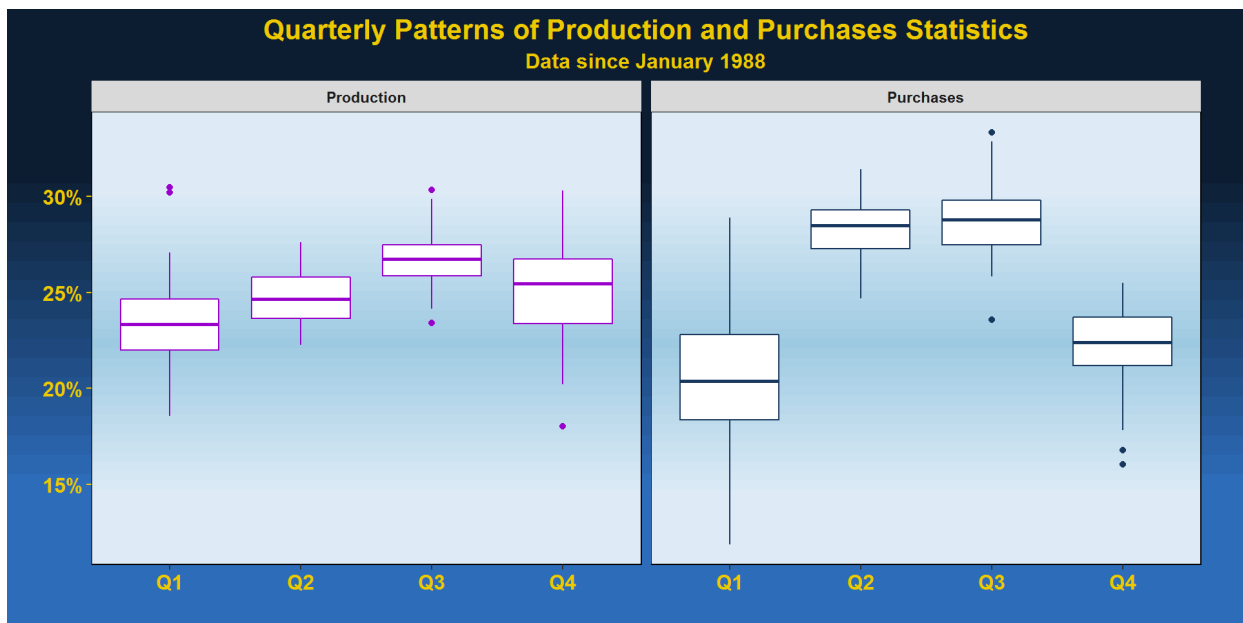
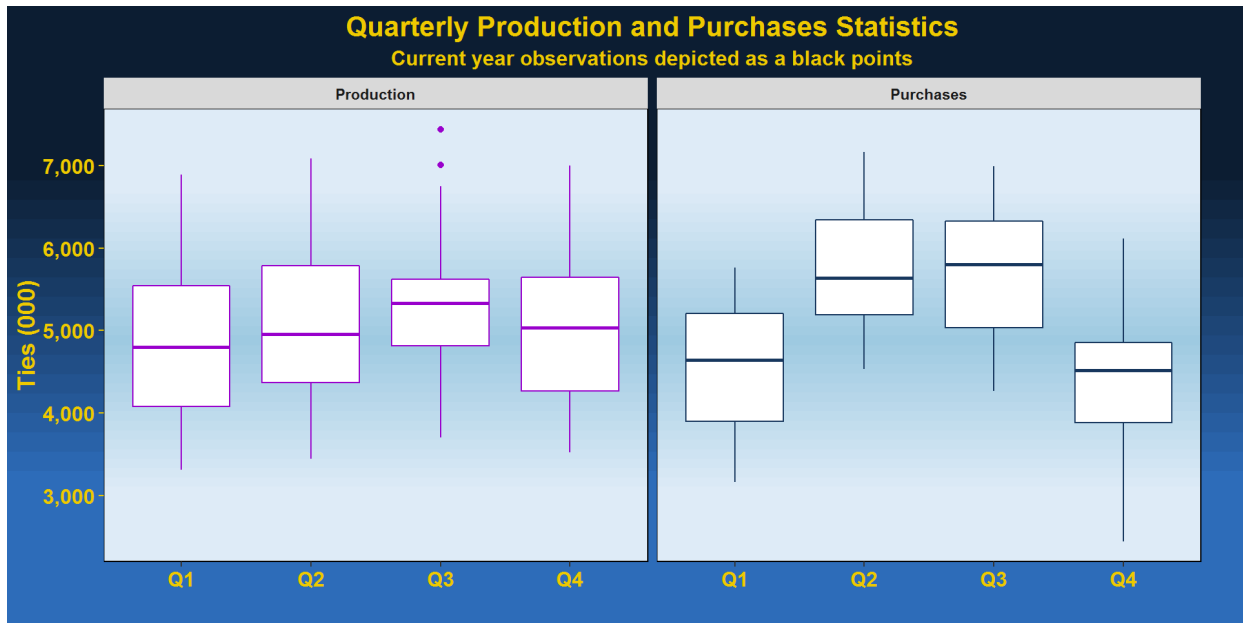
### Table of Quarterly Observations

*Production and Purchases Quarterly Sum, Inventory and ISR - 3MMA*

Date	Production	Purchases	Inventory	ISR
December 2017	4,145	5,043	18,328	0.80
September 2018	4,649	5,824	14,651	0.67
December 2018	4,063	4,285	14,429	0.67



Quarterly pattern of production and purchases uses data from January 2000. The top graph shows data analysis within each quarter. It shows the median, upper quartile and lower quartile boundary (a more detailed explanation is available in the Appendix section). It also displays what the production and purchases were in each quarter of reporting year represented by black points in relation to quarterly statistical values. The second graph shows the contribution of each quarter to the total annual production and purchases.



## Analysis of Monthly Data

Production advanced by 23.3% from last month and grew by 8.4% from year ago.

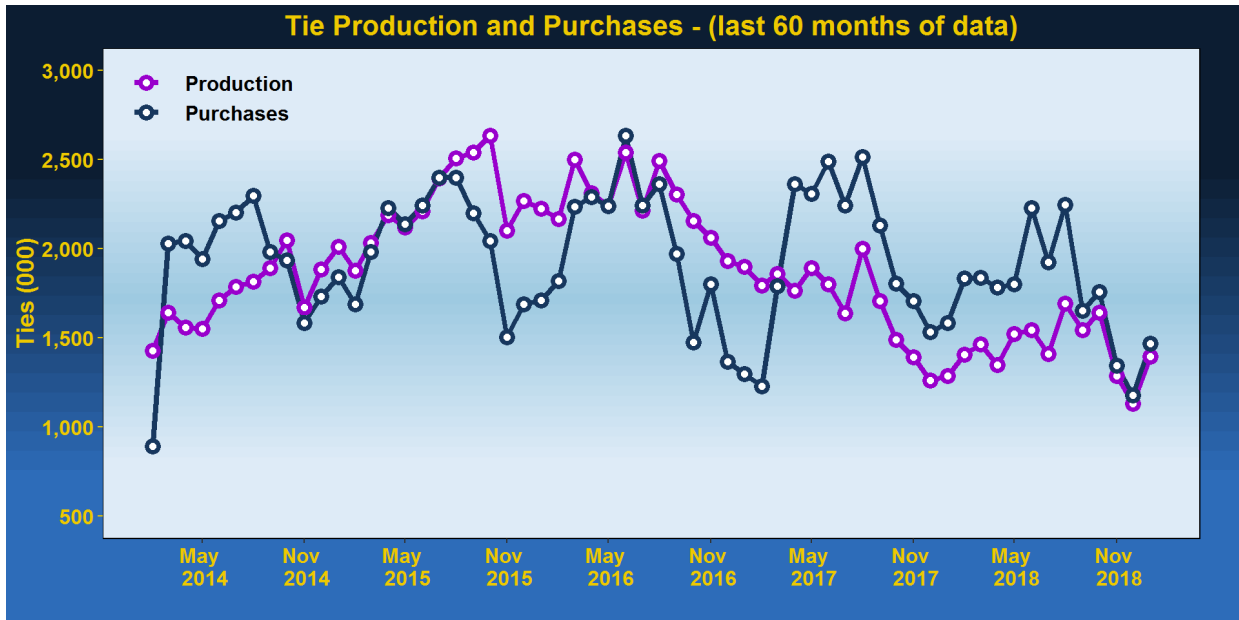
For the same time intervals, purchases grew by 24.4% and declined by 7.4% respectively.

Inventory fell by 0.5% and declined by 20.4% from year ago levels.

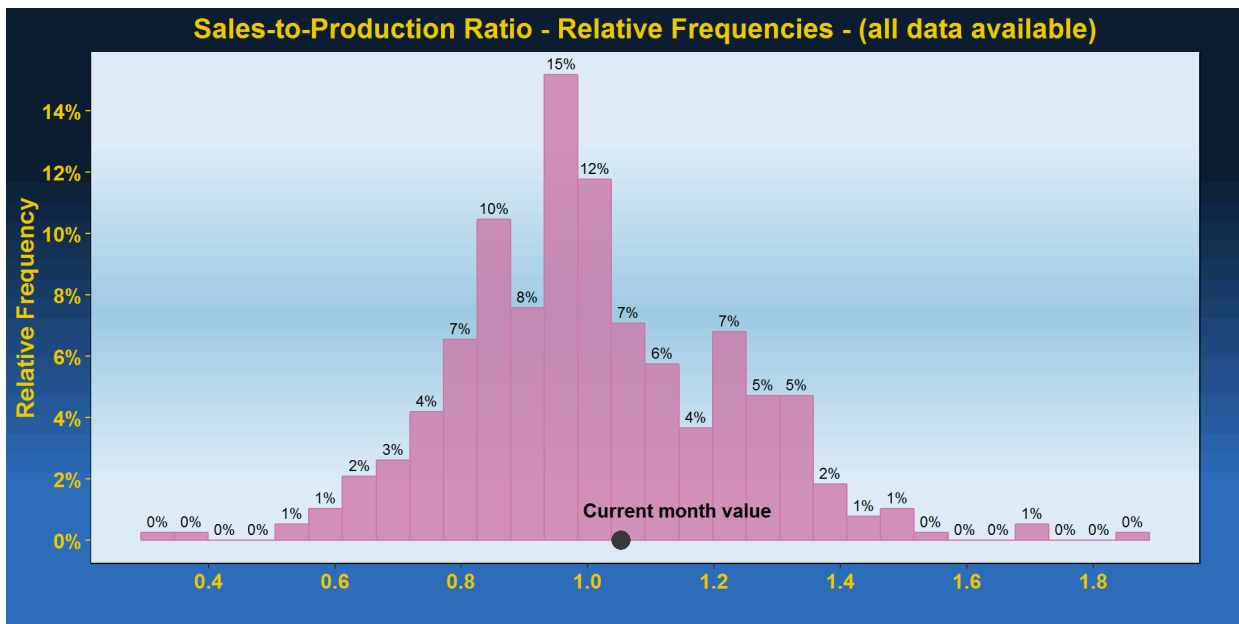
The Inventory-to-Sales Ratio remained flat at 0.68 from month ago, and from a year ago, the ratio decreased from 0.76.

**Table of Monthly Observations**

Date	Production	Purchases	Inventory	ISR
January 2018	1,286	1,585	18,029	0.76
December 2018	1,131	1,180	14,429	0.68
January 2019	1,395	1,468	14,356	0.68

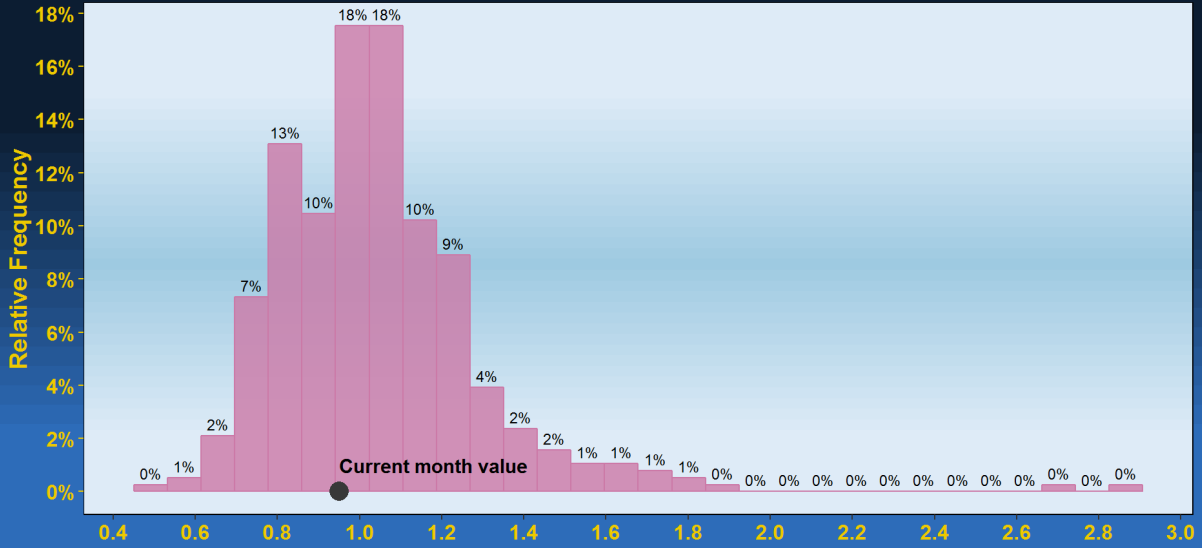


Sales-to-Production Ratio shows the replenishment/diminishment of inventory. Ratio above one signals diminishment and ratio below one replenishment of inventory stock.



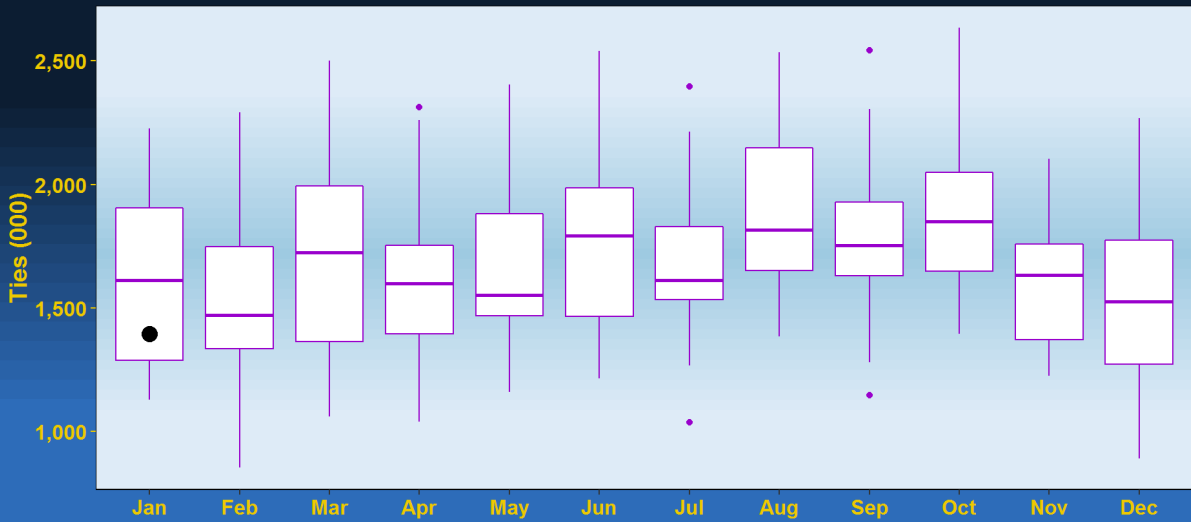
The following graph tells the same story as the graph above, just the ratio is reversed - Production-to-Sales Ratio.

### Production-to-Sales Ratio - Relative Frequencies - (all data available)



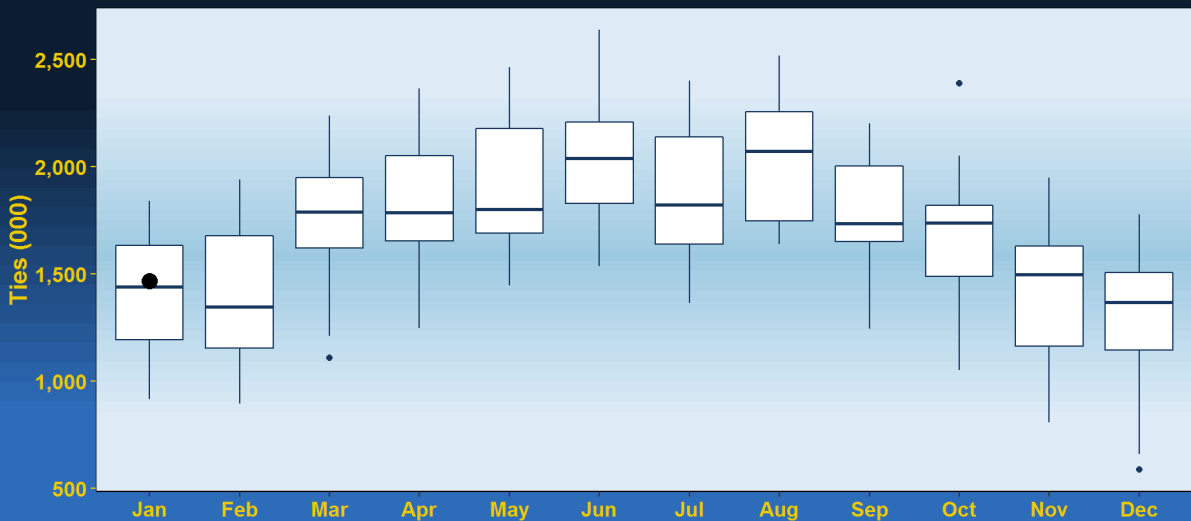
### Monthly Production Statistics - (data since 2000)

Current year observations depicted as a black points



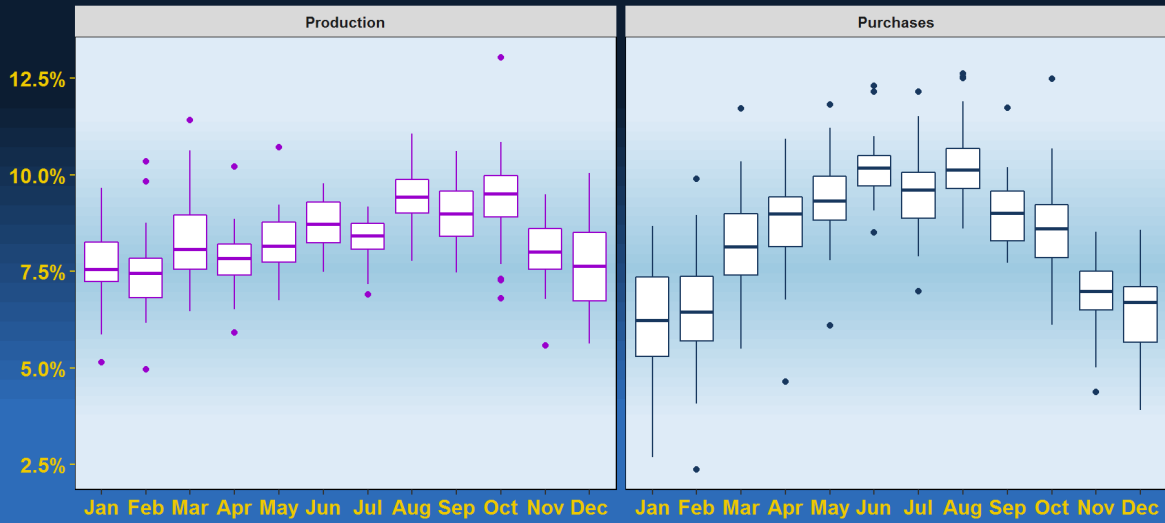
### Monthly Purchases Statistics - (data since 2000)

Current year observations depicted as a black points

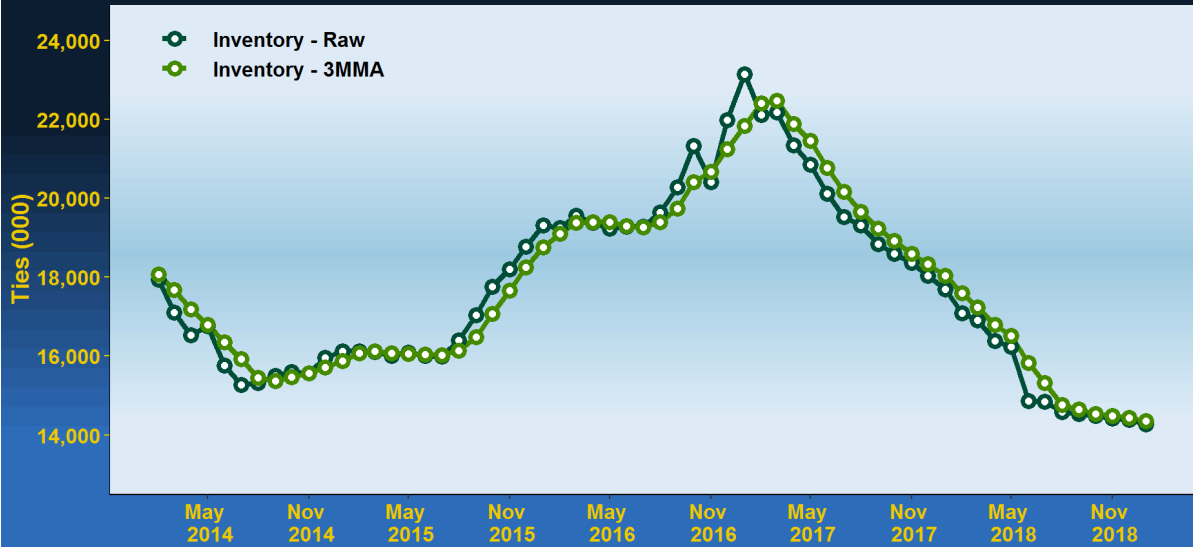


### Monthly Pattern of Production and Purchases Statistics - Percent of Annual Total

Data since January 1988



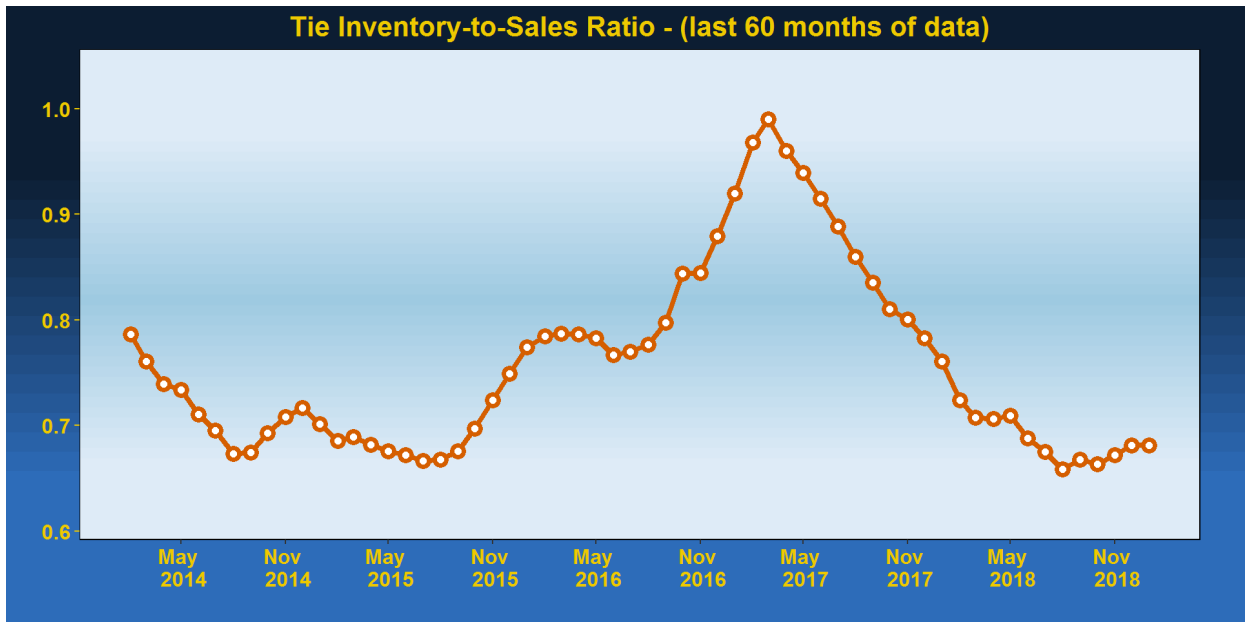
### Tie Inventory - Raw Monthly and 3MMA Data - (last 60 months of data)



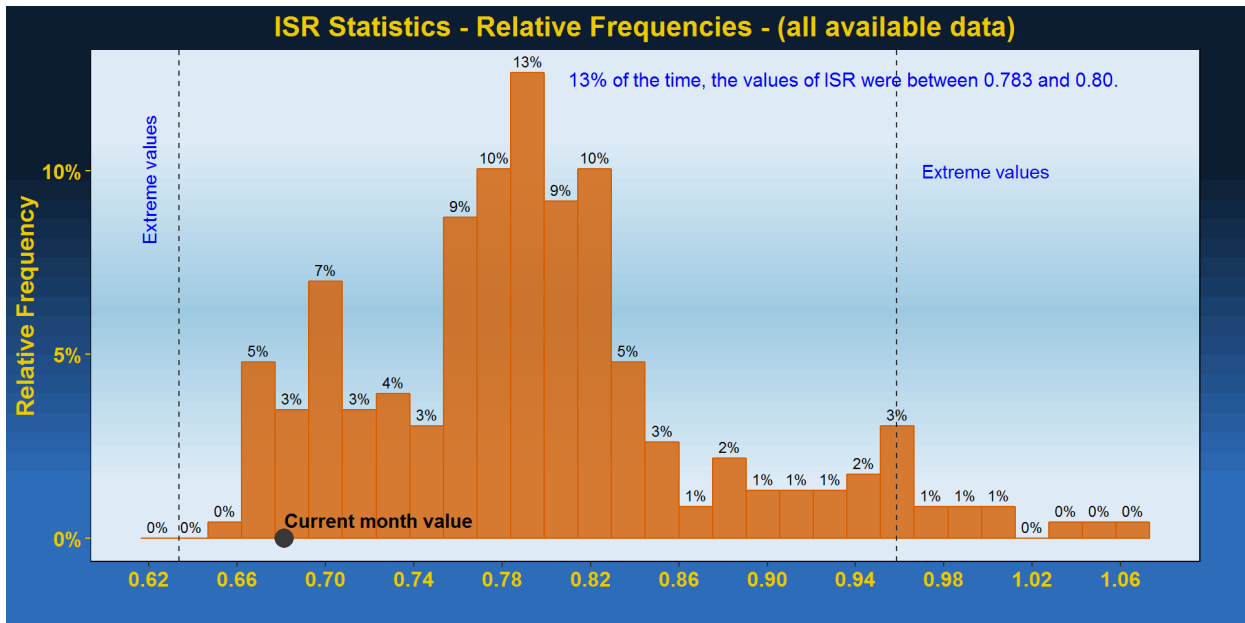
### Monthly Patterns of Inventory - (data since 2000)

Monthly average depicted with solid green line, current year observations depicted as a black points





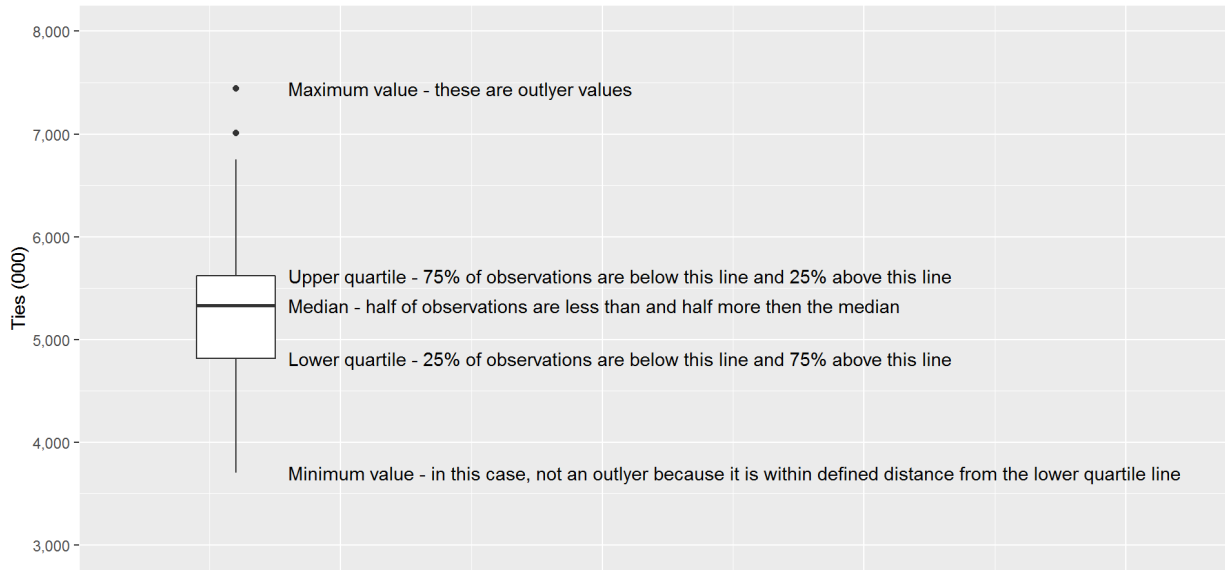
Inventory-to-Sales Ratio (ISR) histogram of relative frequencies shows the monthly ISR data distribution and the black point represents the value for current reporting month.





# Appendix

## Box Plot Explained



## Histogram of Relative Frequencies Explained

