



Purchases Report

December 2023

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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.

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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

In the last month of 2023, the twelve months rolling total of purchases continued an upward trend. This was also the case for production. Analysis of quarterly data showed production significantly above expectation and purchases significantly below the seasonal median. Analysis of the monthly data showed a similar picture.

Long-Term Trends

Production expanded at a 26.4% annual rate.

Purchases rose at a 4.9% annual rate.

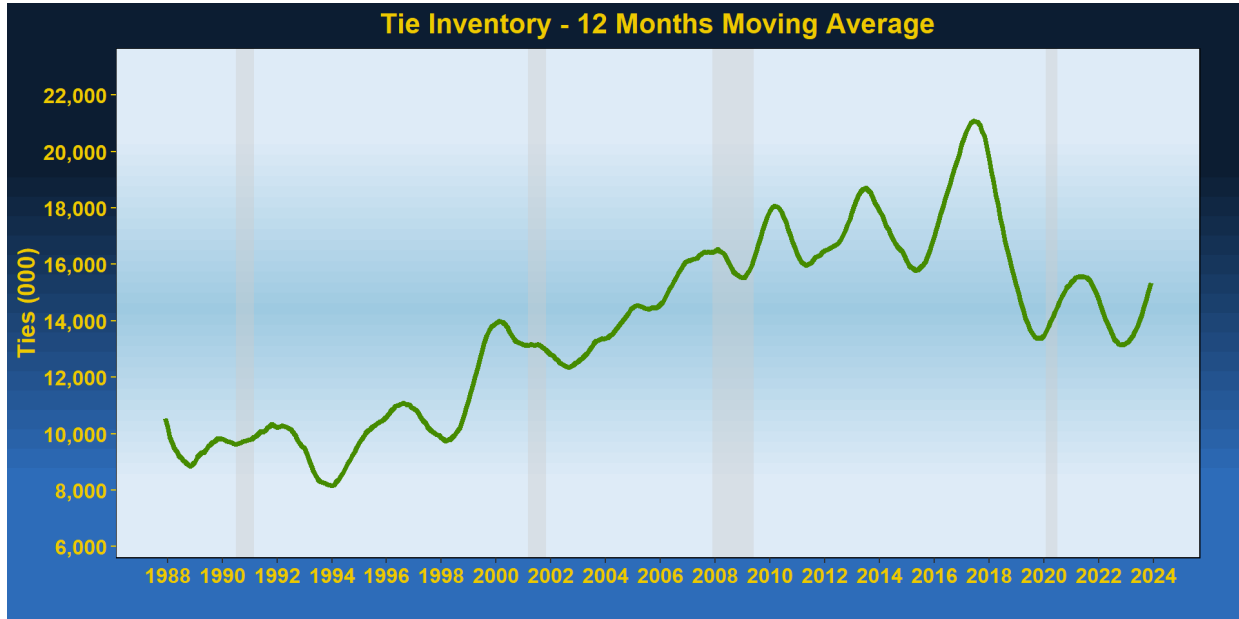
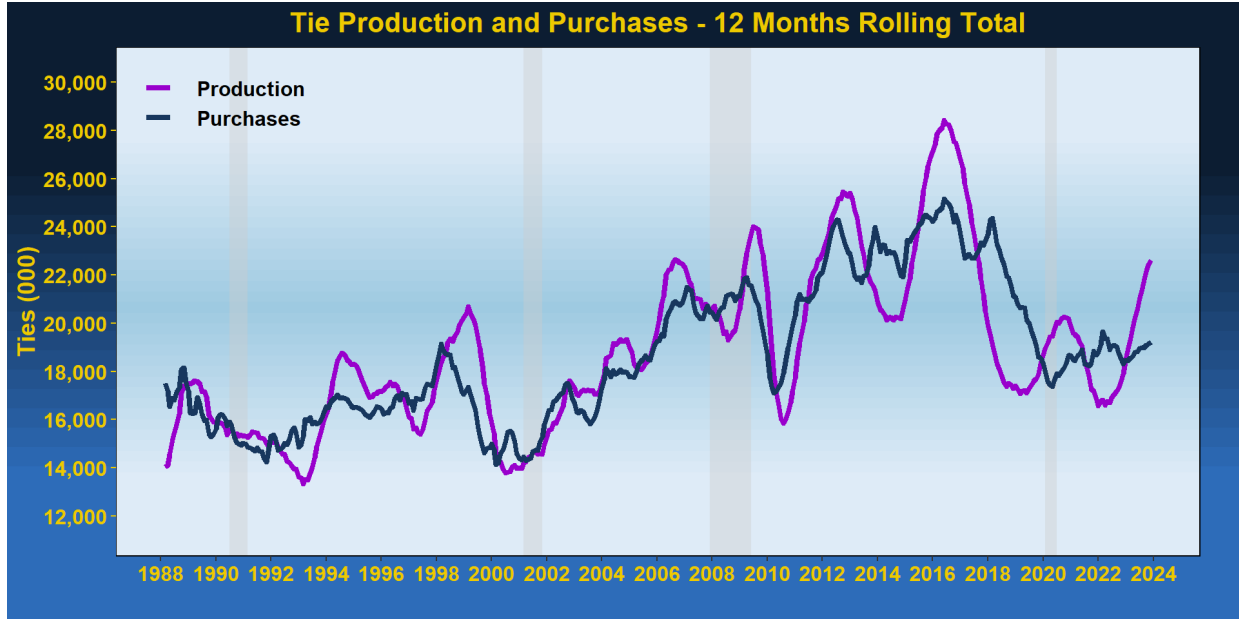
Inventory's 12 month moving average (12MMA) grew by 16.7% from a year ago levels.

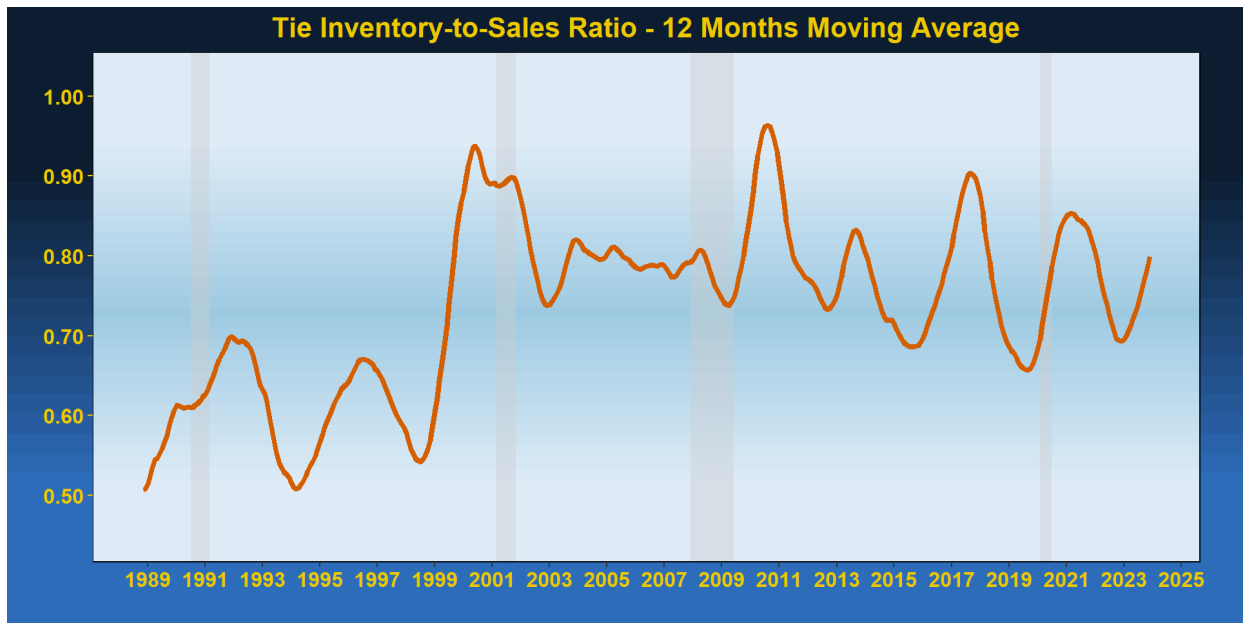
Inventory-to-Sales Ratio's 12MMA grew from 0.69 to 0.8.

Table of Annual Observations

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

Date	Production	Purchases	Inventory	ISR
December 2022	17,905	18,311	13,155	0.69
December 2023	22,628	19,208	15,349	0.80





Analysis of Quarterly Data

Production in Q4 declined by 6.2% from last quarter and expanded by 18.4% from a year ago.

For the same intervals, purchases fell by 19% and expanded by 6% respectively.

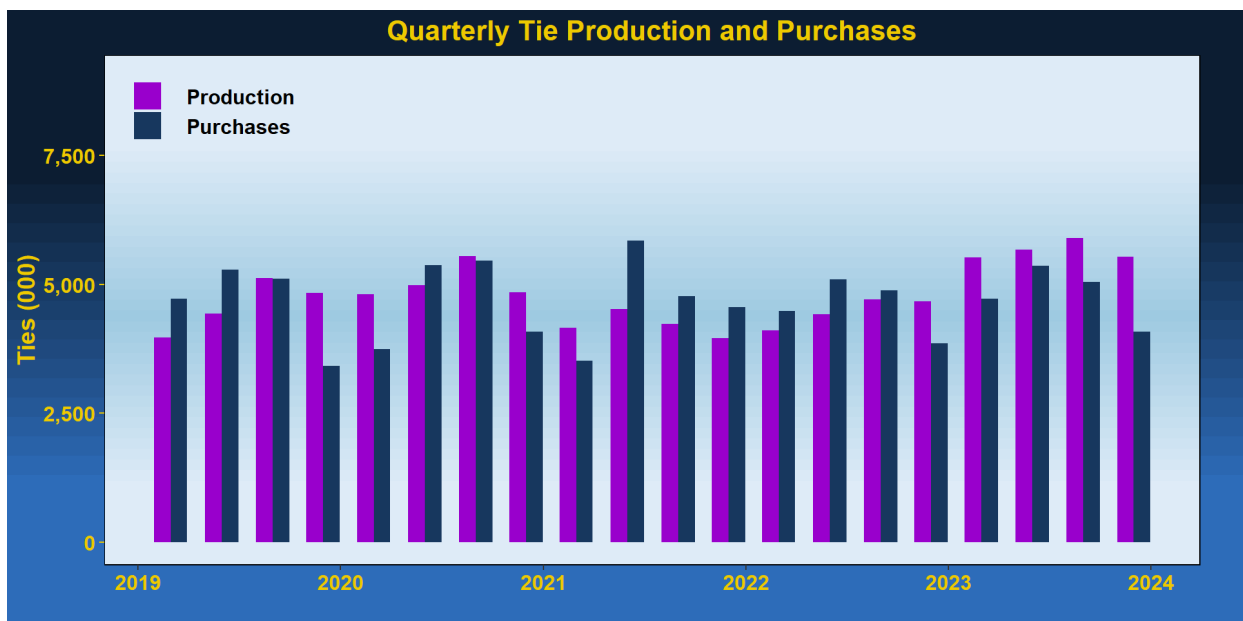
Inventory's 3MMA expanded by 9.3% from last quarter and rose by 25.3% from a year ago levels.

From Q3 2023 to Q4 2023, the 3MMA of Inventory-to-Sales Ratio increased from 0.8 to 0.86. One year ago, the ratio was 0.71.

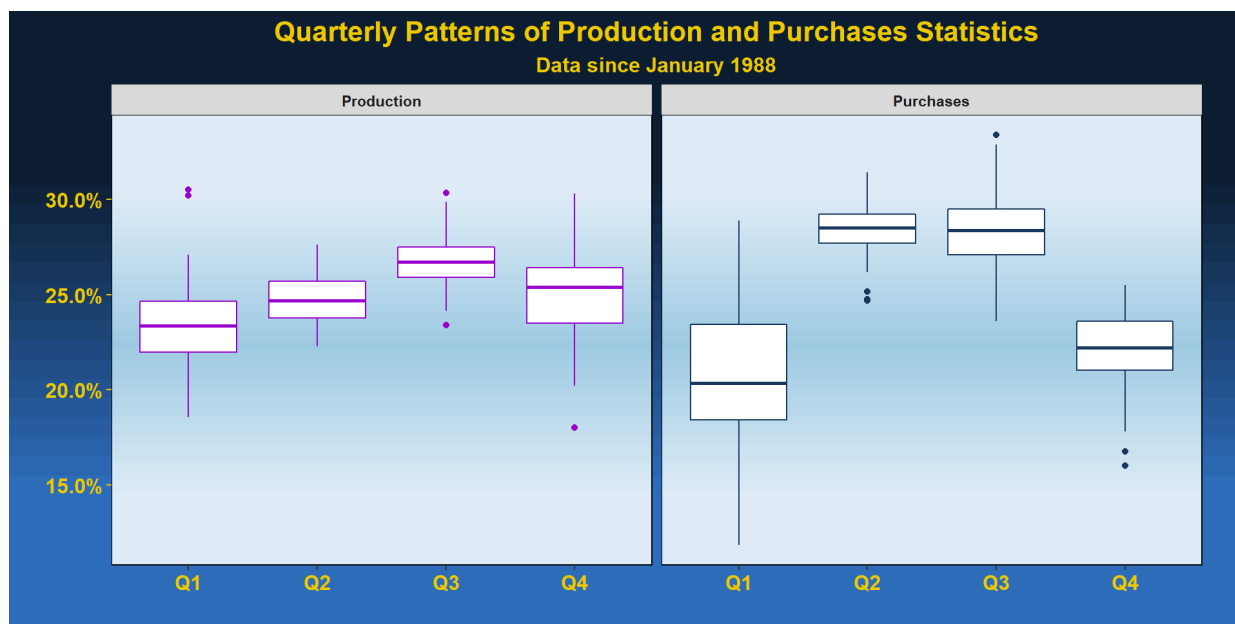
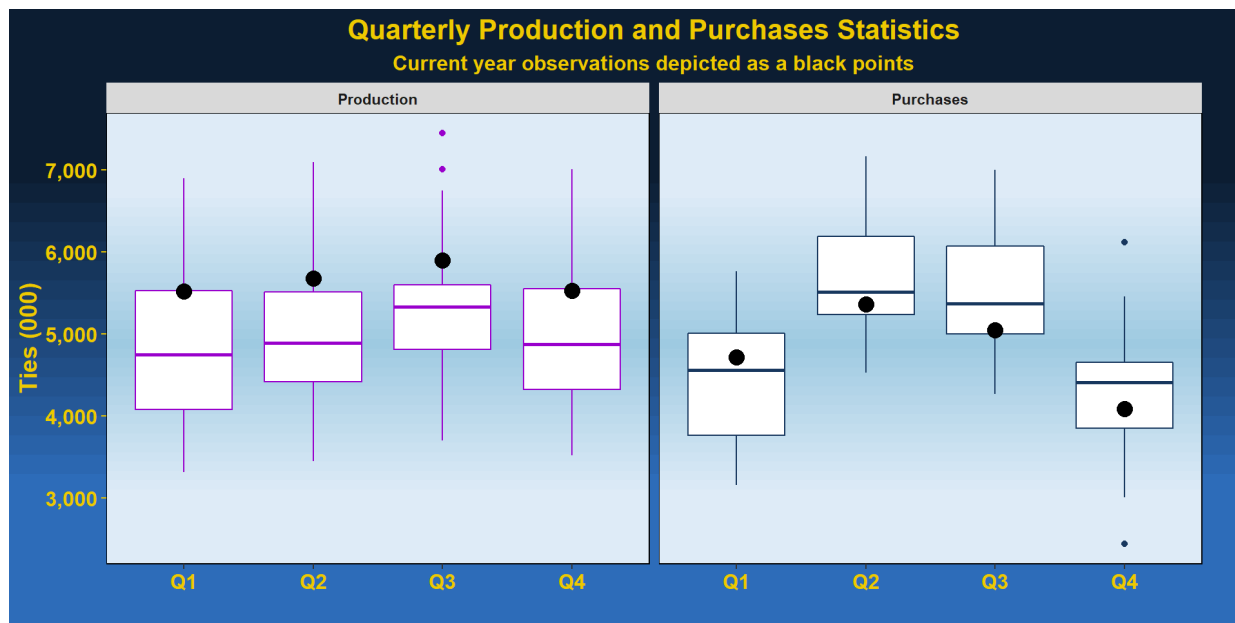
Table of Quarterly Observations

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

Date	Production	Purchases	Inventory	ISR
December 2022	4,672	3,855	13,515	0.71
September 2023	5,896	5,047	15,492	0.80
December 2023	5,530	4,086	16,936	0.86



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 decreased by 6.8% from last month and advanced by 13.8% from a year ago.

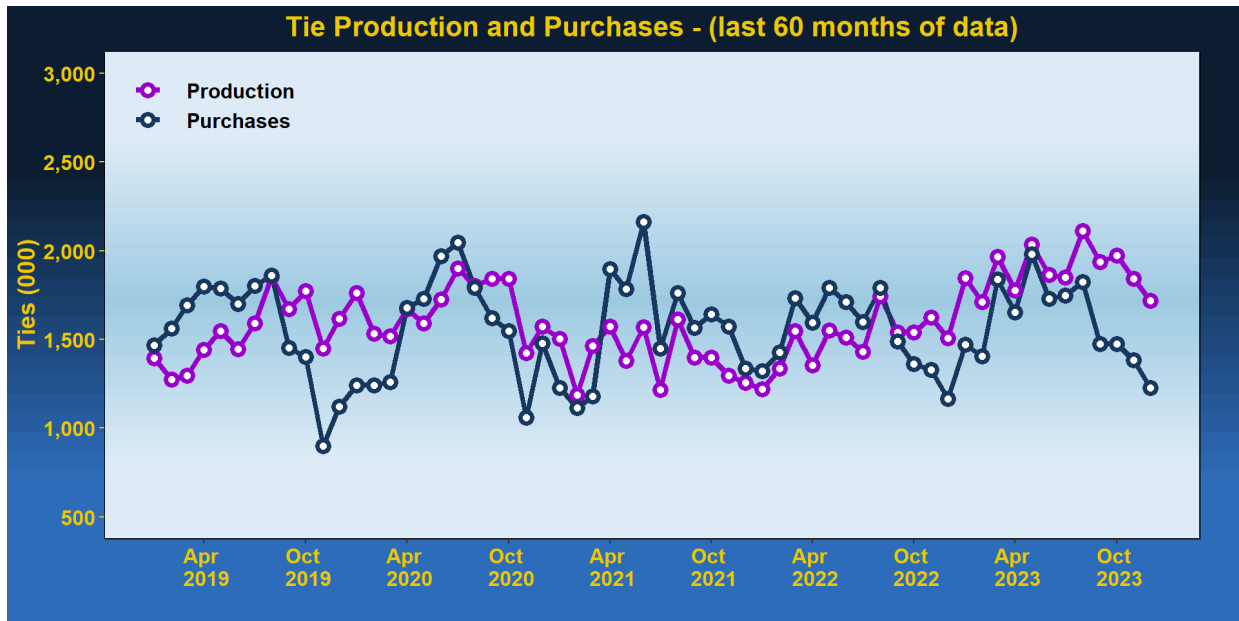
For the same time intervals, purchases dwindled by 11.5% and rose by 5.4% respectively.

Inventory levels rose by 3% from last month and grew by 25.3% from a year ago levels.

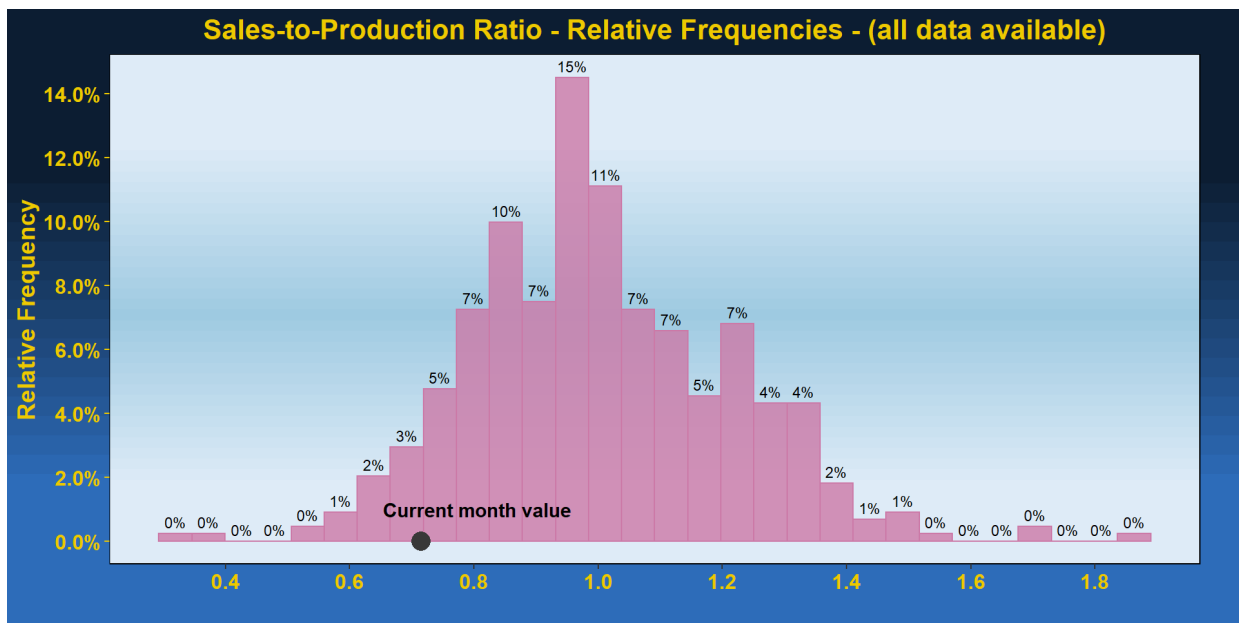
From month ago, the Inventory-to-Sales Ratio expanded from 0.86 to 0.88 and from year ago the ratio rose from 0.74.

Table of Monthly Observations

Date	Production	Purchases	Inventory	ISR
December 2022	1,509	1,164	13,515	0.74
November 2023	1,842	1,385	16,445	0.86
December 2023	1,717	1,226	16,936	0.88

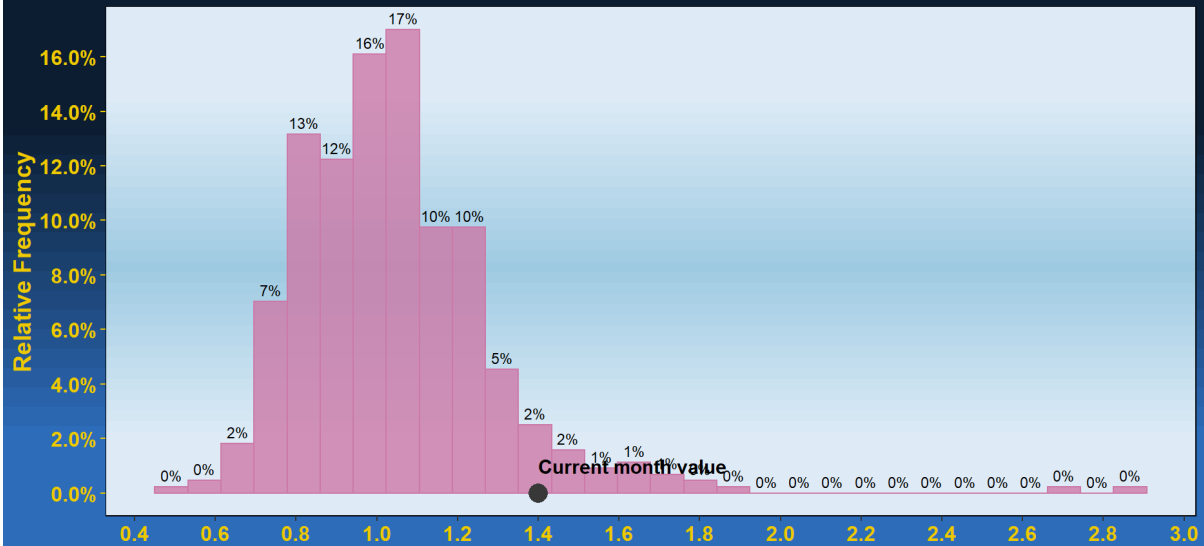


Sales-to-Production Ratio shows the replenishment/diminishment of inventory. Ratio above one signals diminishment and ratio below one replenishment of inventory stock.



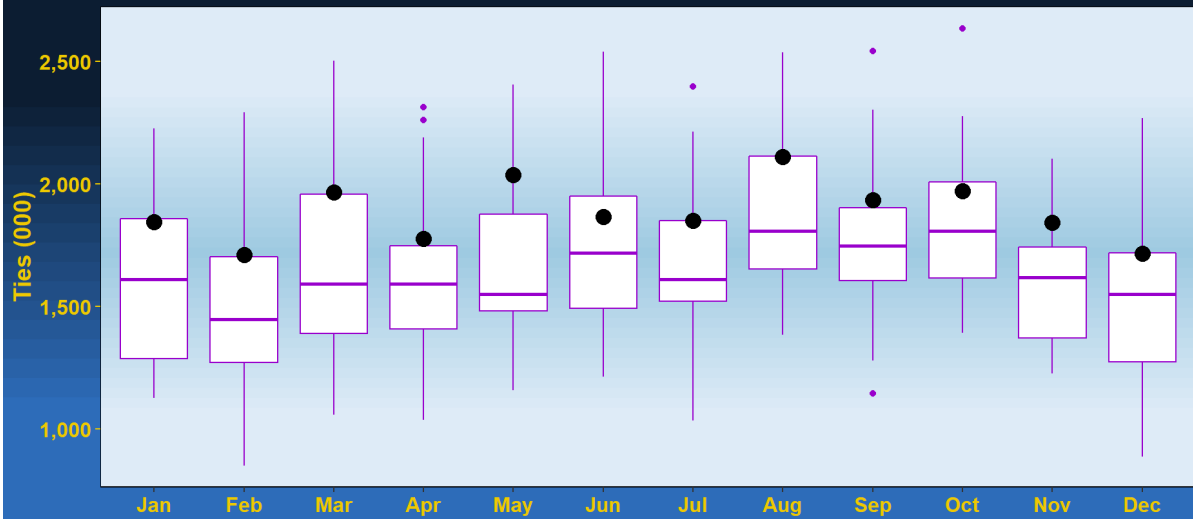
The following graph tells the same story as the graph above, just the ratio is reversed - Production-to-Sales Ratio.

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



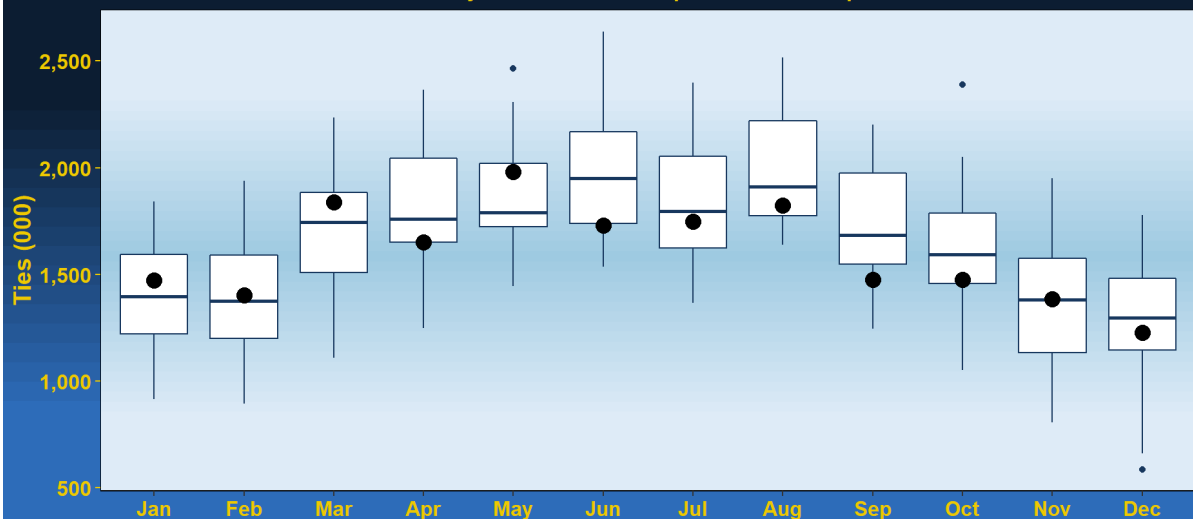
Monthly Production Statistics - (data since 2000)

Current year observations depicted as a black points



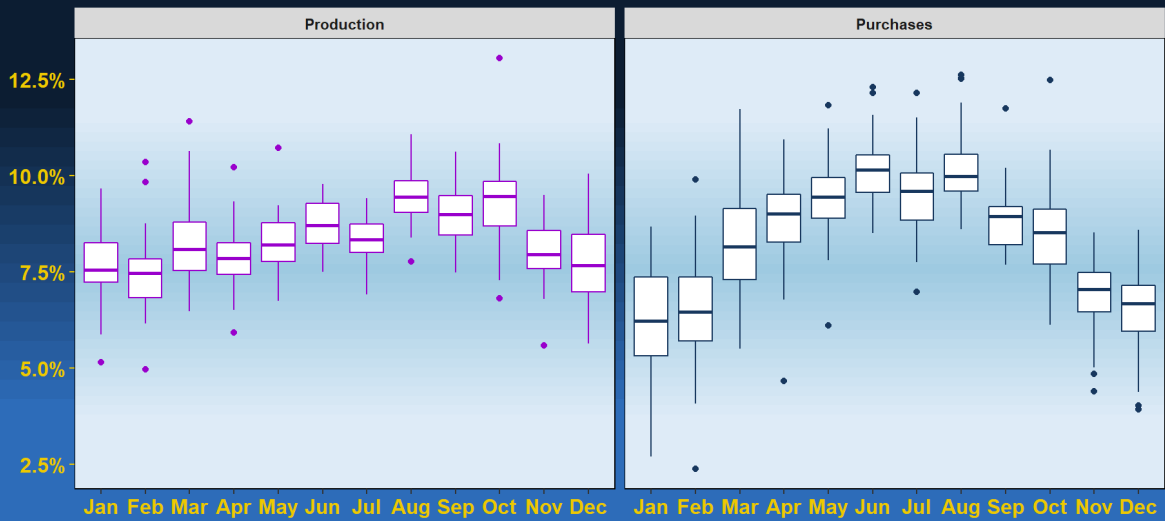
Monthly Purchases Statistics - (data since 2000)

Current year observations depicted as a black points

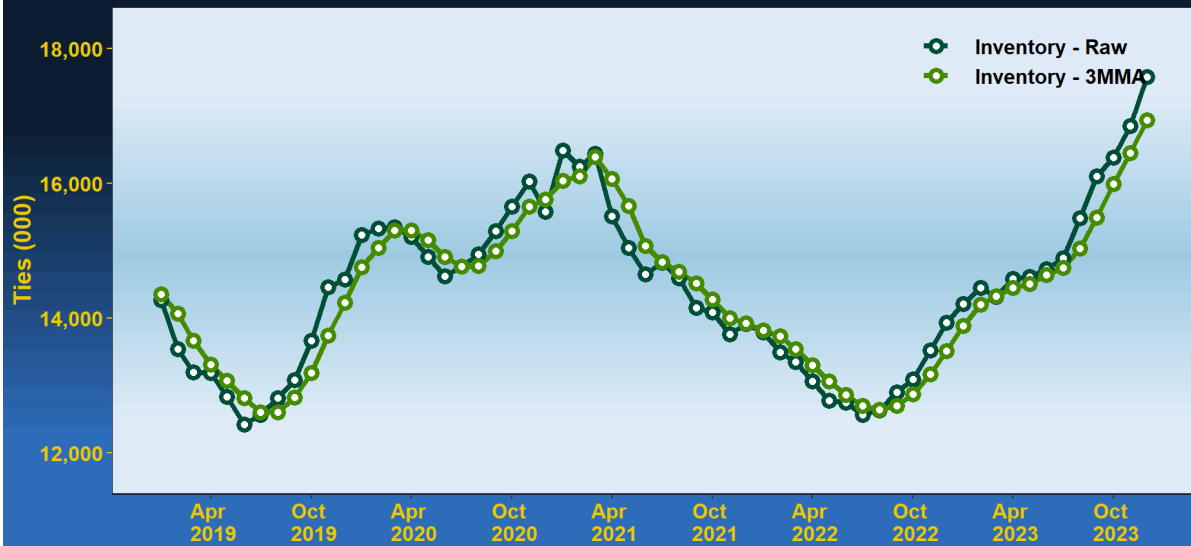


Monthly Pattern of Production and Purchases Statistics - Percent of Annual Total

Data since January 1988



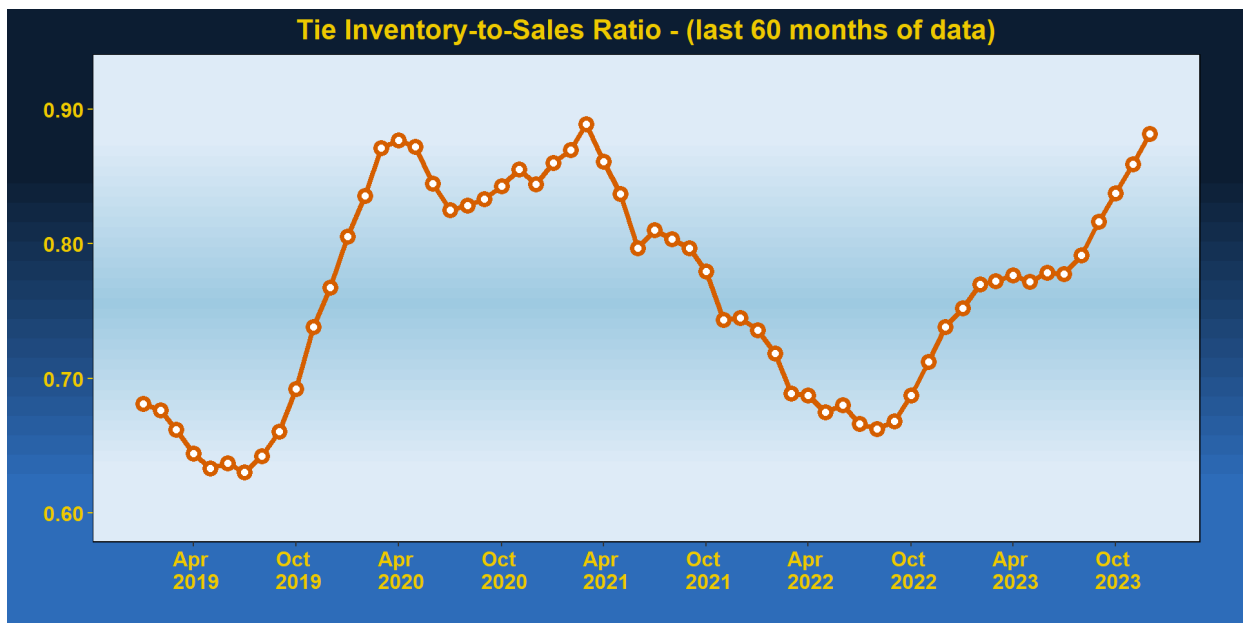
Tie Inventory - Raw Monthly and 3MMA Data - (last 60 months of data)



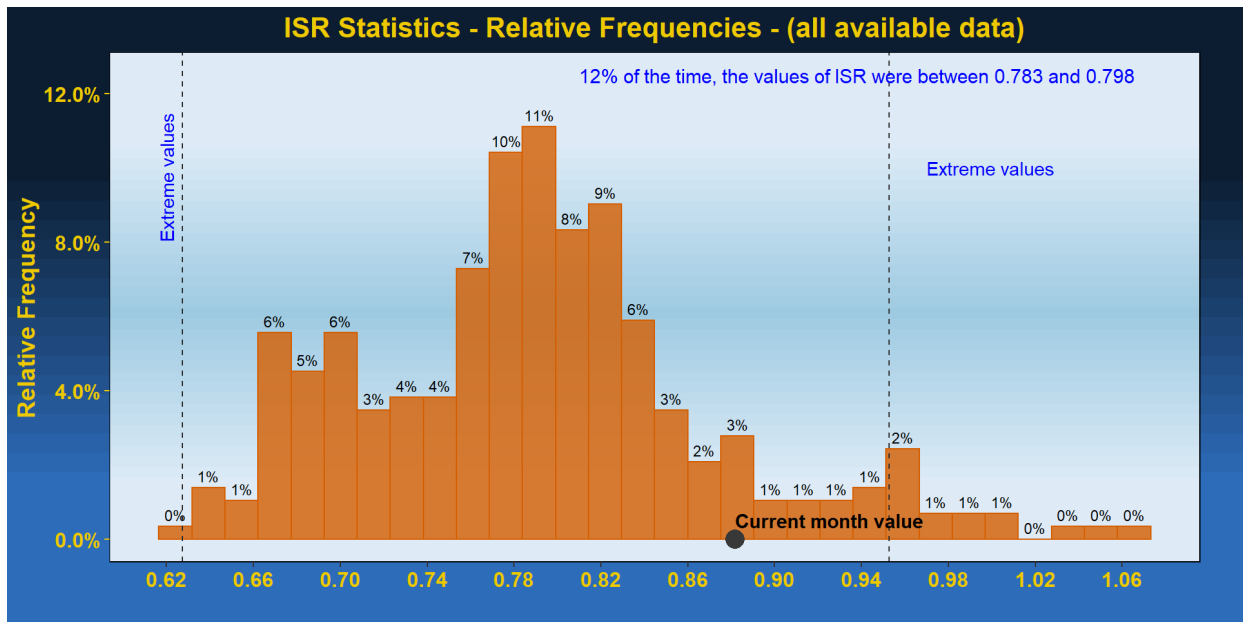
Monthly Patterns of Inventory - (data since 2000)

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





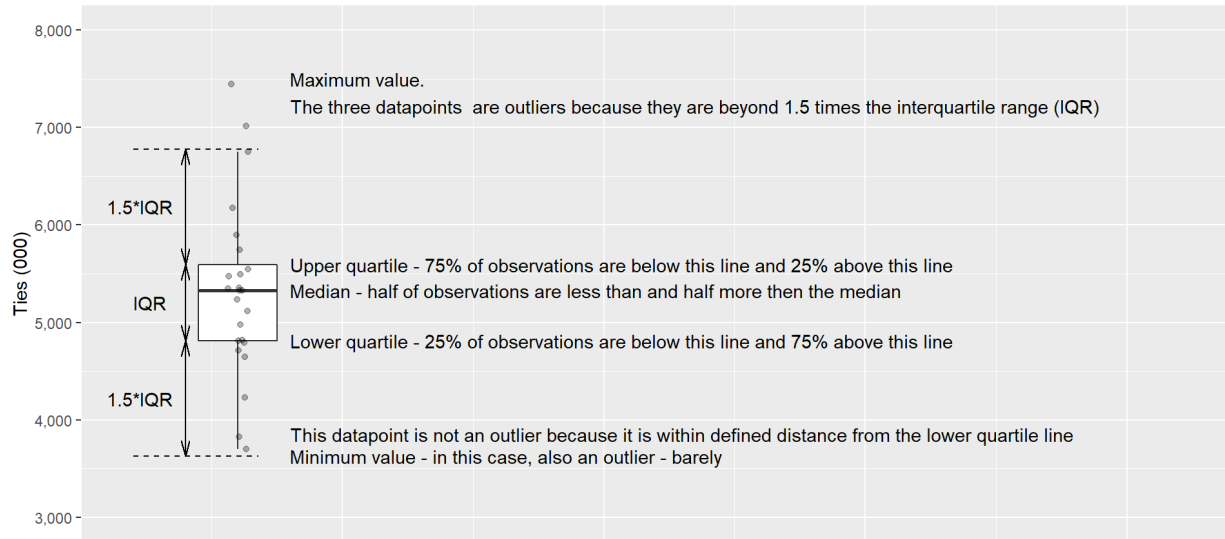
Inventory-to-Sales Ratio (ISR) histogram of relative frequencies shows the monthly ISR data distribution and the black point represents the value for the current reporting month.



Appendix

Box Plot Explained

Underlying data displayed as 'jittered' points



Histogram of Relative Frequencies Explained

