Table of Contents
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.

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 June, the tie production’s 12-month moving average continued in its declining trend while the purchases growth rate was positive. As a result, the inventory and inventory-to-sales ratio growth slowed down again. On a quarterly basis, purchases were above and production was well below seasonal medians. Monthly analysis showed a similar picture for June.

Long-Term Trends
Production dropped at a 3.5% annual rate.
Purchases expanded at a 7.1% annual rate.
Inventory’s 12 month moving average (12MMA) increased by 8.6% from year ago levels.
Inventory-to-Sales Ratio’s 12MMA advanced from 0.77 to 0.85.
### Table of Annual Observations

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

<table>
<thead>
<tr>
<th>Date</th>
<th>Production</th>
<th>Purchases</th>
<th>Inventory</th>
<th>ISR</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 2020</td>
<td>19,751</td>
<td>17,652</td>
<td>14,317</td>
<td>0.77</td>
</tr>
<tr>
<td>June 2021</td>
<td>19,061</td>
<td>18,907</td>
<td>15,554</td>
<td>0.85</td>
</tr>
</tbody>
</table>
Analysis of Quarterly Data

Production in Q2 expanded by 8.8% from last quarter and decreased by 9.3% from year ago. For the same intervals, purchases rose by 66.2% and advanced by 8.7% respectively. Inventory’s 3MMA came down by 8.1% from last quarter and expanded by 1% from year ago levels. From Q1 to Q2 2021, the 3MMA of Inventory-to-Sales Ratio declined from 0.87 to 0.83. Year ago, the ratio was 0.86.

Table of Quarterly Observations

<table>
<thead>
<tr>
<th>Date</th>
<th>Production</th>
<th>Purchases</th>
<th>Inventory</th>
<th>ISR</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 2020</td>
<td>4,986</td>
<td>5,377</td>
<td>14,913</td>
<td>0.86</td>
</tr>
<tr>
<td>March 2021</td>
<td>4,154</td>
<td>3,517</td>
<td>16,393</td>
<td>0.87</td>
</tr>
<tr>
<td>June 2021</td>
<td>4,521</td>
<td>5,846</td>
<td>15,068</td>
<td>0.83</td>
</tr>
</tbody>
</table>
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 rose by 13.5% from last month and dwindled by 9.2% from year ago.

For the same time intervals, purchases grew by 21.2% and grew by 9.9% respectively.

Inventory levels declined by 3.8% from last month and rose by 1% from year ago levels.

From month ago, the Inventory-to-Sales Ratio decreased from 0.84 to 0.8, and from year ago, the ratio fell from 0.84.
### Table of Monthly Observations

<table>
<thead>
<tr>
<th>Date</th>
<th>Production</th>
<th>Purchases</th>
<th>Inventory</th>
<th>ISR</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 2020</td>
<td>1,726</td>
<td>1,969</td>
<td>14,913</td>
<td>0.84</td>
</tr>
<tr>
<td>May 2021</td>
<td>1,381</td>
<td>1,785</td>
<td>15,664</td>
<td>0.84</td>
</tr>
<tr>
<td>June 2021</td>
<td>1,568</td>
<td>2,164</td>
<td>15,068</td>
<td>0.80</td>
</tr>
</tbody>
</table>

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.
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.

12% of the time, the values of ISR were between 0.783 and 0.798.
Appendix

Box Plot Explained
Underlying data displayed as "jittered" points

- Maximum value.
  The three datapoints are outliers because they are beyond 1.5 times the interquartile range (IQR)

- 1.5*IQR
  Upper quartile - 75% of observations are below this line and 25% above this line
  Median - half of observations are less than and half more than the median
  Lower quartile - 25% of observations are below this line and 75% above this line

- 1.5*IQR
  This datapoint is not an outlier because it is within defined distance from the lower quartile line
  Minimum value - in this case, also an outlier - barely

Histogram of Relative Frequencies Explained

12% of the time, the values of ISR were between 0.795 and 0.81.