

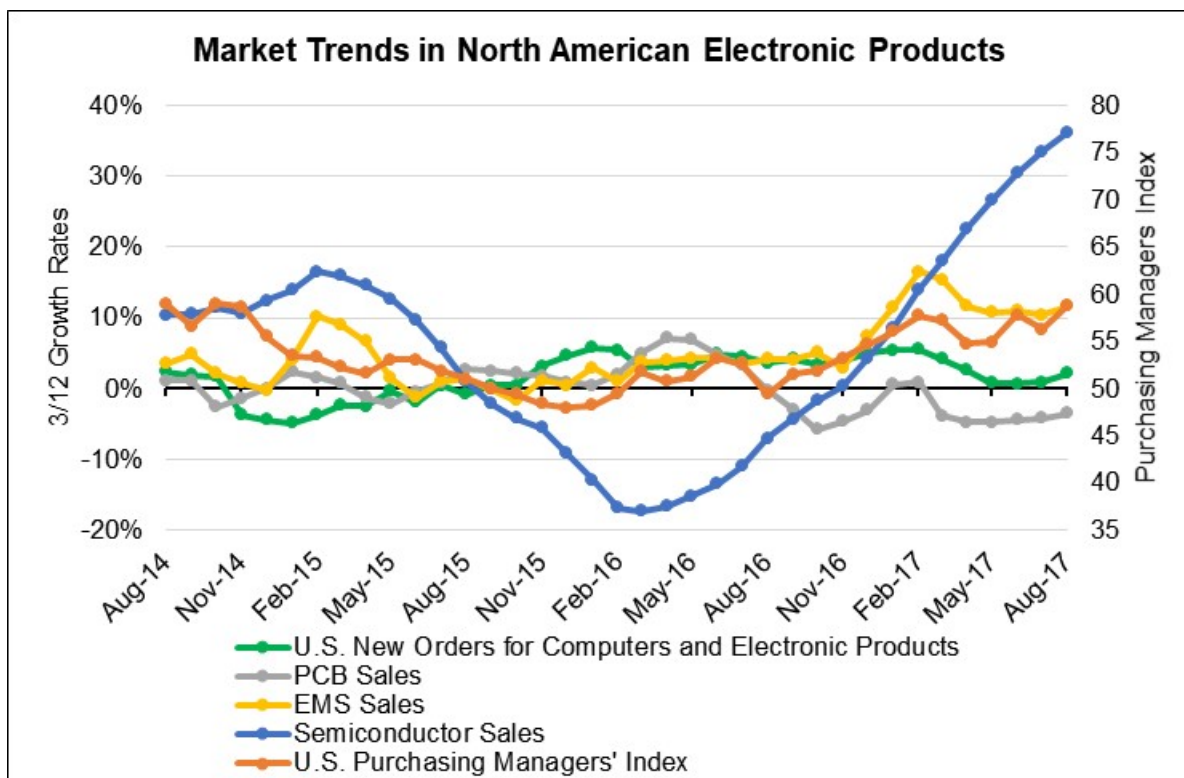
October 2017

North American Electronics Business is Looking Up

Based on three-month rolling averages, year-on-year growth in North American semiconductor sales continued its upward climb in August 2017. Sales growth by electronics manufacturing services (EMS) companies grew and remained strong. Printed circuit board (PCB) sales continued below last year's levels but have shown signs of gradual strengthening.

The U.S. Purchasing Managers' Index (PMI), which tends to lead industry sales by two to six months, remains solidly positive (above 50). The 3/12 rate of change for U.S. new orders for electronic products also strengthened but continued at a modest pace.

Another leading indicator, IPC's PCB book-to-bill ratio, is based on three-month rolling averages of orders and sales, and normally leads industry sales by three to nine months. The ratio has been in positive territory for the past seven consecutive months, driven by growth in orders and weak sales. The book-to-bill ratio climbed to 1.15 in August 2017, its highest level in 12 years. Ratios above parity (1.00) indicate greater demand than supply, which may be a precursor of sales growth for electronics manufacturers. These indicators suggest the likelihood of sales growth in the industry later this year and in early 2018, but with some volatility.



Notes:

1. Three-month rolling averages iron out some of the volatility in monthly data to show clearer trends.
2. This information is provided by IPC — Association Connecting Electronics Industries®.
3. Other industry data can be found at www.ipc.org.
4. The U.S. Department of Commerce revised its historical data on U.S. new orders and issued new data on May 18, 2017. The graph above reflects the revised data, showing that U.S. new orders have been positive for the past twenty months.
5. IPC's EMS and PCB 3/12 rate-of-change data going back to March 2017 have been updated as of July 2017.

Sources: IPC statistical programs for the EMS and PCB industries; SIA for semiconductor data; U.S. Census Bureau for U.S. new orders for computer and electronic products; and Institute for Supply Management for the U.S. Purchasing Managers' Index.