



TPC Semiconductor Market Survey

August 13, 2021

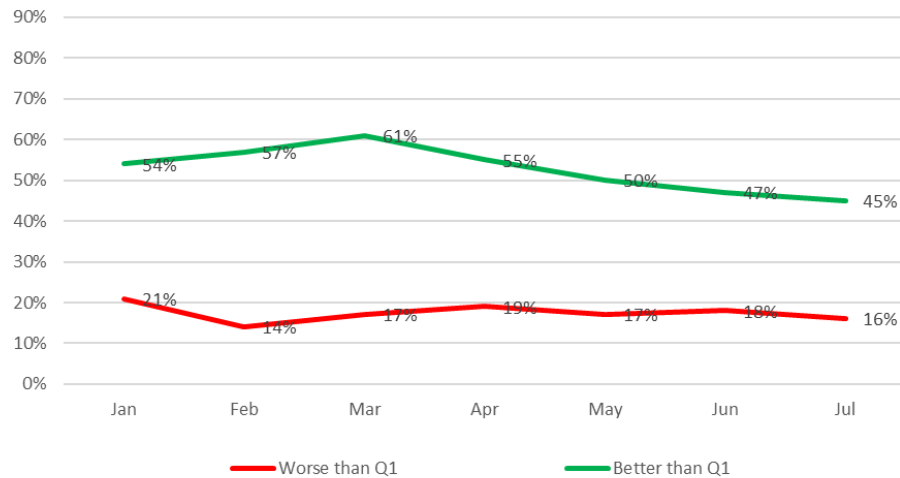
TPC June 2021 Survey Summary

*Survey Date: 8/6-8/9 Respondents: ~8,600 Location: Worldwide (~80% Asia) Who: Active Electronics Industry Professionals
Response Composition (multiple choices): Industrial 39%, Auto 18%, Comm 21%, Computing 22%, Mobile 29%, Data Ctr 19%, Other 13%*

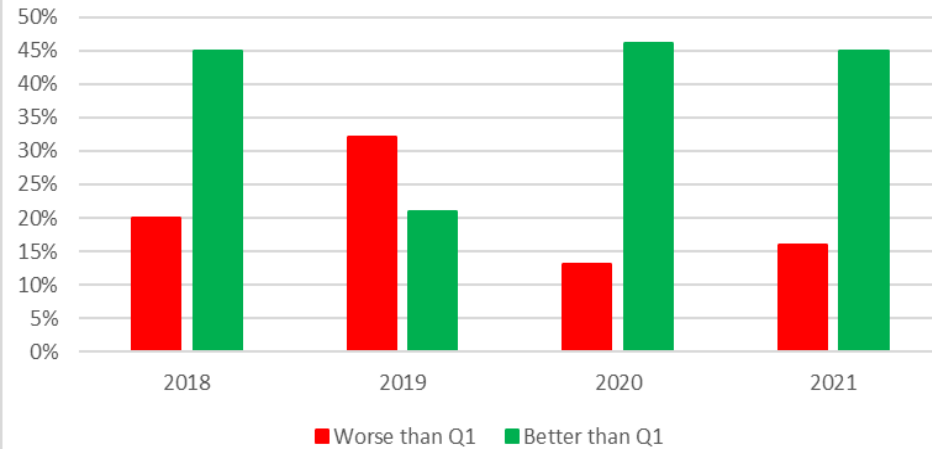
- We recently completed our monthly survey (~8,600 respondents) which saw decreases in both C2Q21 and C3Q21 growth; but continued improvement in seasonality expectations. The bookings outlook for C2Q and C3Q remained fairly consistent with last month. However, by far, the majority of responses still see growth in both C2Q and C3Q. We also had our 1st glimpse into C4Q's outlook which shows less demand growth vs. C3Q, but at much better seasonality.
- The survey showed a growth outlook for C2Q21 weakening vs. last month with 45% expecting q/q growth vs. 47% previously and 16% see it as weaker vs. 18% last month. The C3Q outlook decreased with 49% expecting q/q growth vs. 56% previously; while only 12% see it as weaker vs. 11% last month.
- The survey showed an increase in bookings outlook for C2Q21 with 34% expecting improving bookings vs. C1Q compared to 31% last month; while 12% now expect weaker bookings vs. 11% last month. Bookings outlook for C3Q21 was flattish with 18% expecting improving bookings vs. C2Q compared to 15% last month; while 28% now expect weaker bookings vs. 24% last month. For reference, general WW book to bills are still in the 1.10-1.25 range.
- Backlog cancellation expectations (slide 7) has shown increase in cancellations over the past 3 months but is still in the "average" range. Inventories (slide 9) has also shown a steady increase for C3Q.
- While availability of DRAM and NAND improved slightly, capacitors and microcontrollers continue to be the most problematic area.
- Pricing has been on a trend of increasing due to tighter product availability, with C3Q responses indicating continued increases in pricing. We are seeing another round of price increases (especially in MCU's and PMIC's) by key Analog suppliers that began July 1.
- We continue to see a significant shortage of supply that is being driven by demand (especially in the Auto and Mobile sectors). We believe this will remain strong throughout the year and into at least mid-22.

Q/Q Demand Growth Outlook

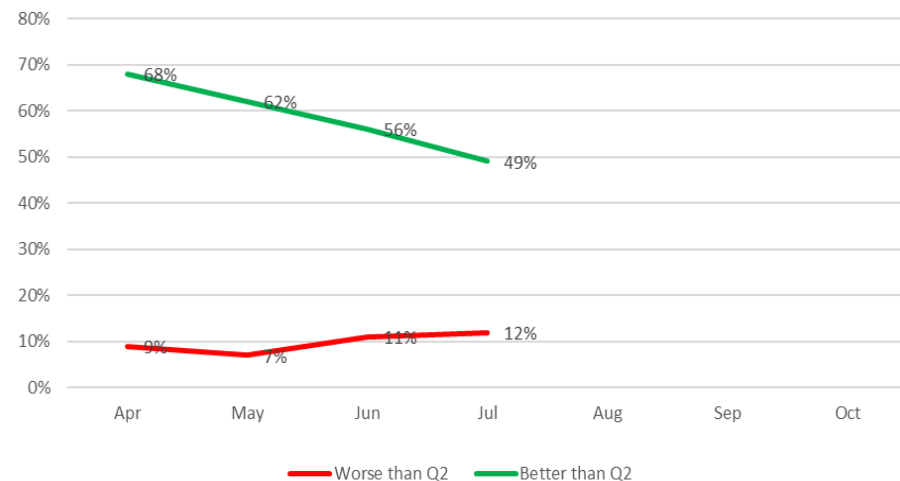
C2Q21 Growth Expectations



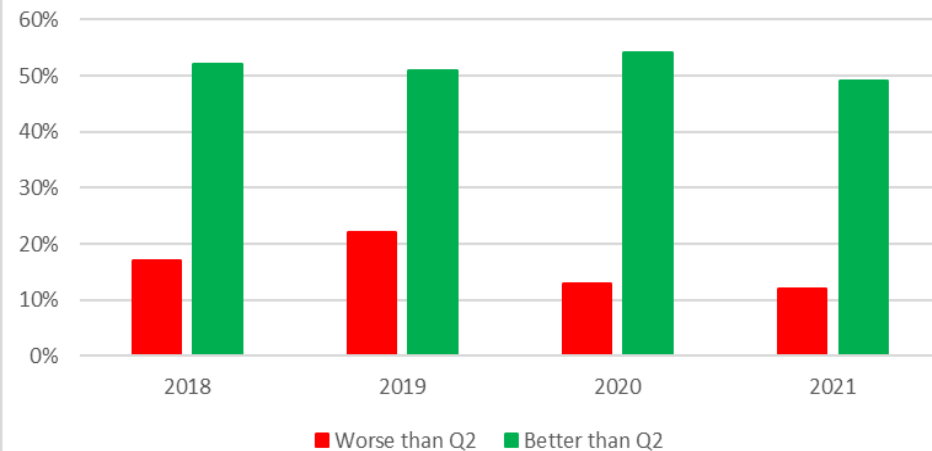
C2Q Growth Expectations vs. C1Q



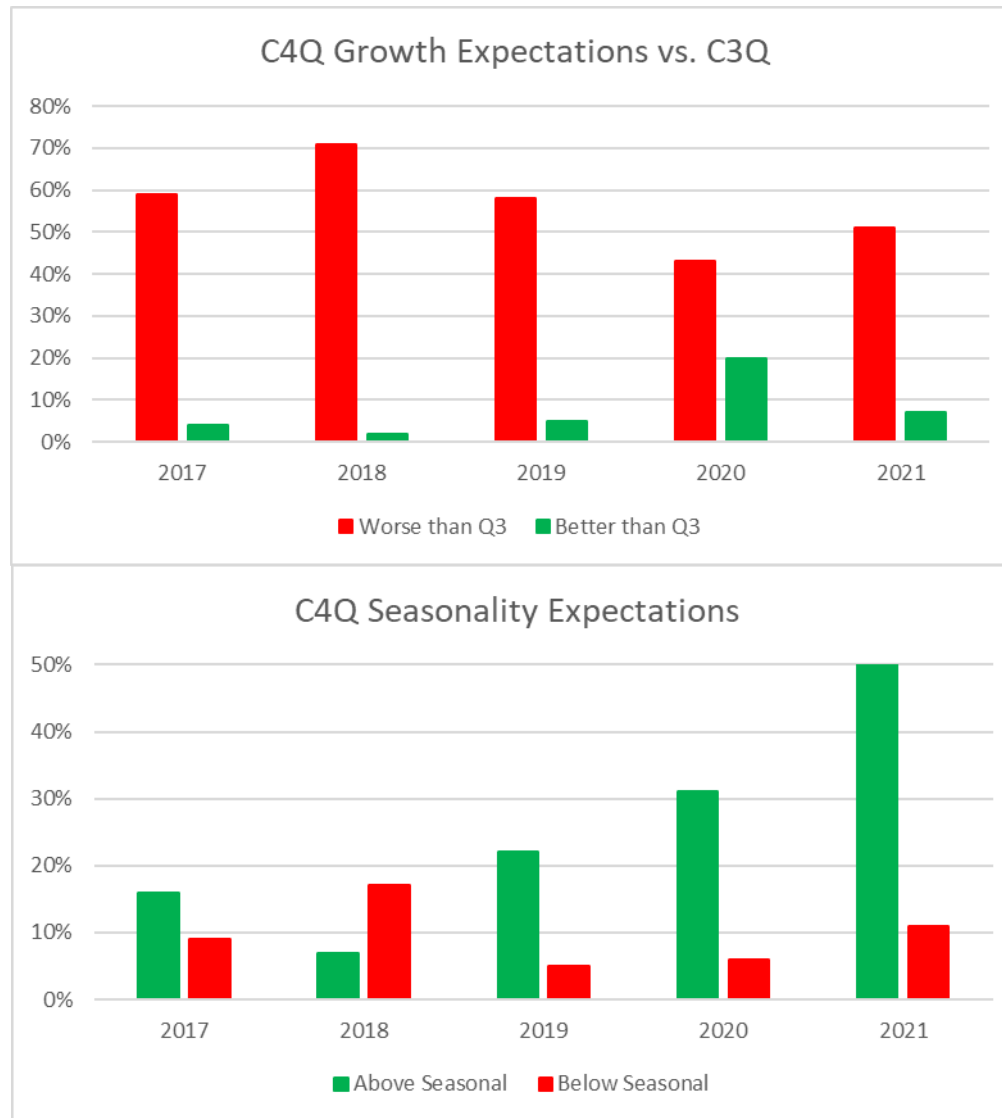
C3Q21 Growth Expectations



C3Q Growth Expectations vs. C2Q

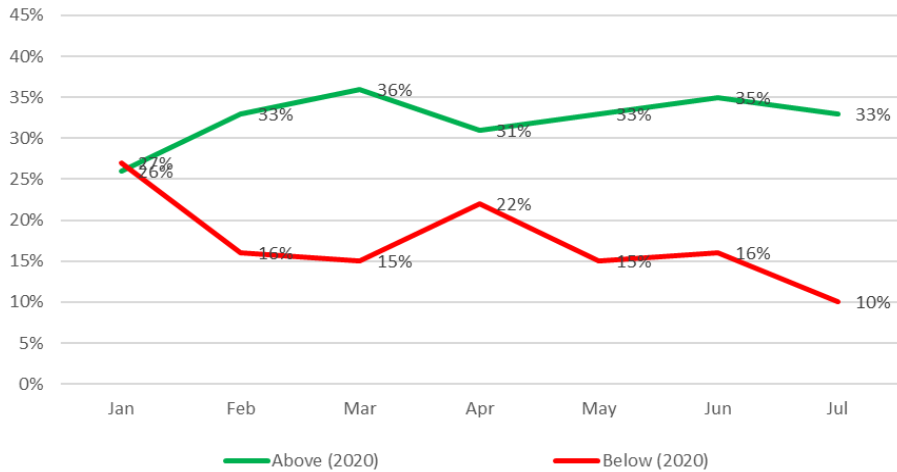


C4Q21 Demand Growth Outlook

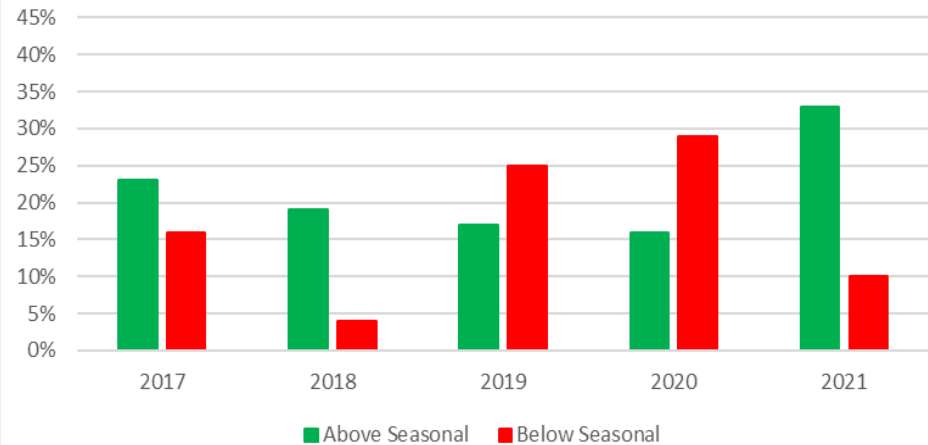


Q/Q Seasonality Expectations

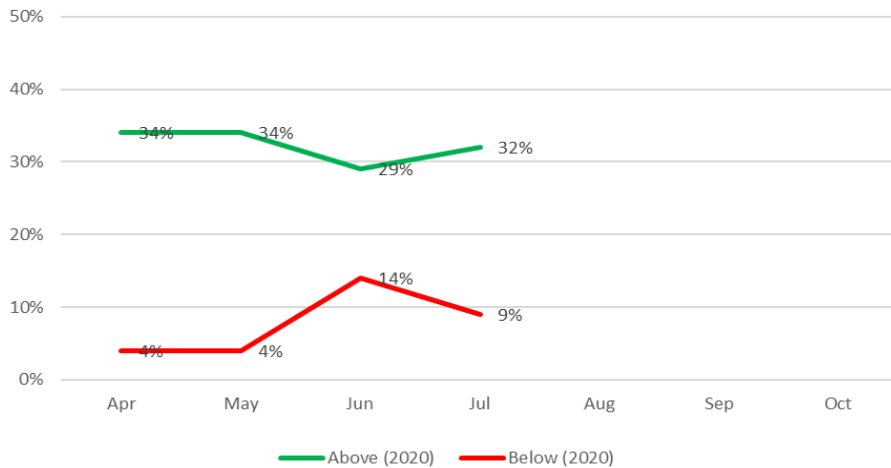
C2Q21 Seasonality Expectations



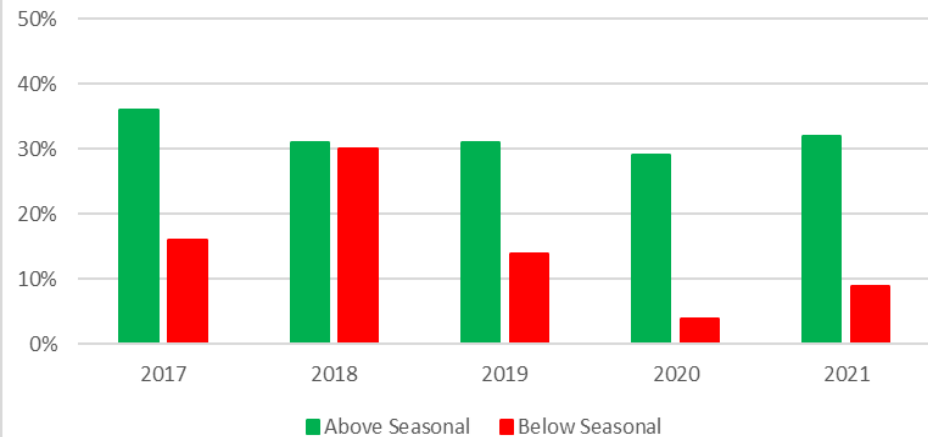
C2Q Seasonality Expectations



3Q21 Seasonality Expectations

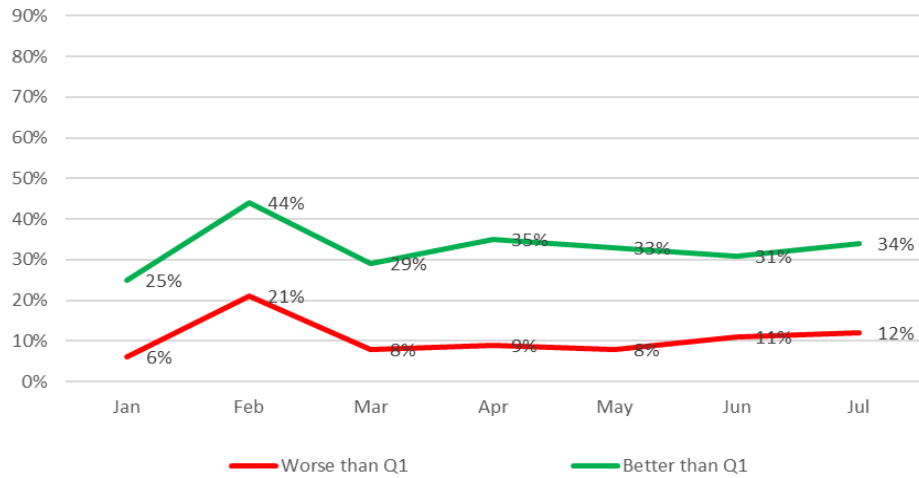


C3Q Seasonality Expectations

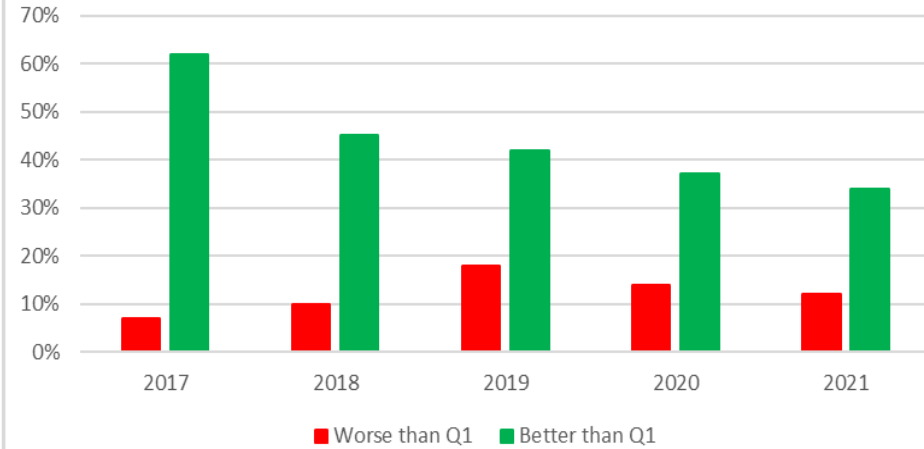


Q/Q Bookings Growth Expectations

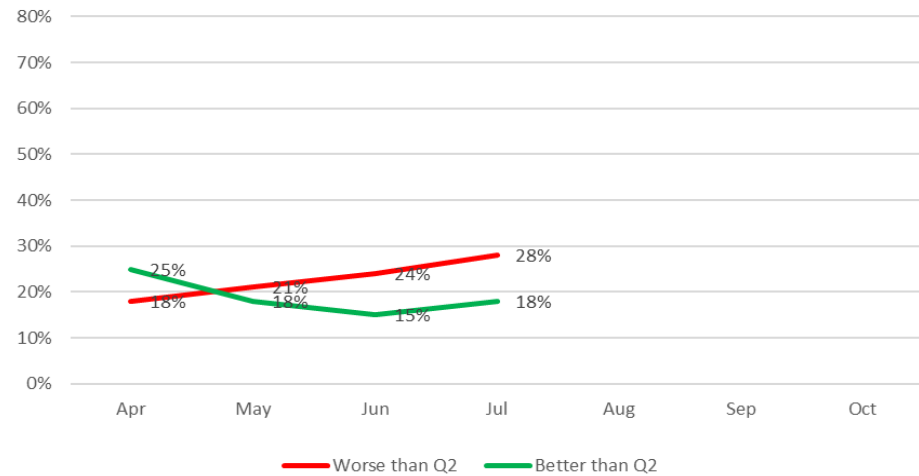
C2Q21 Bookings Expectations



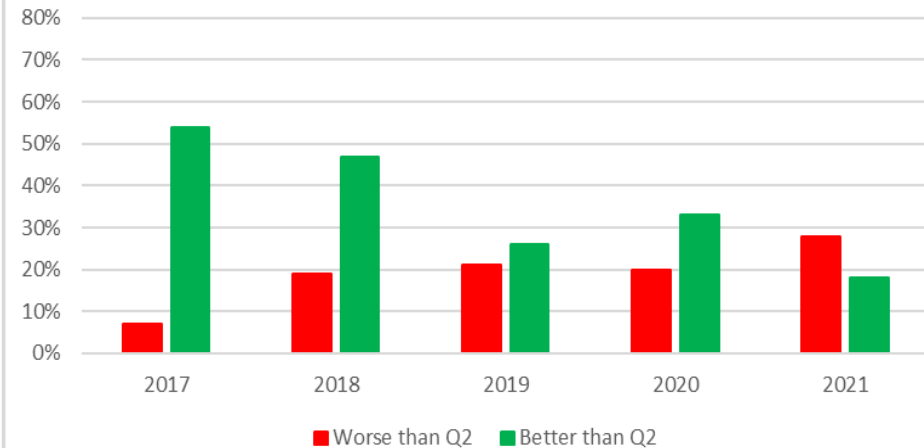
C2Q Bookings Expectations



C3Q21 Bookings Expectations

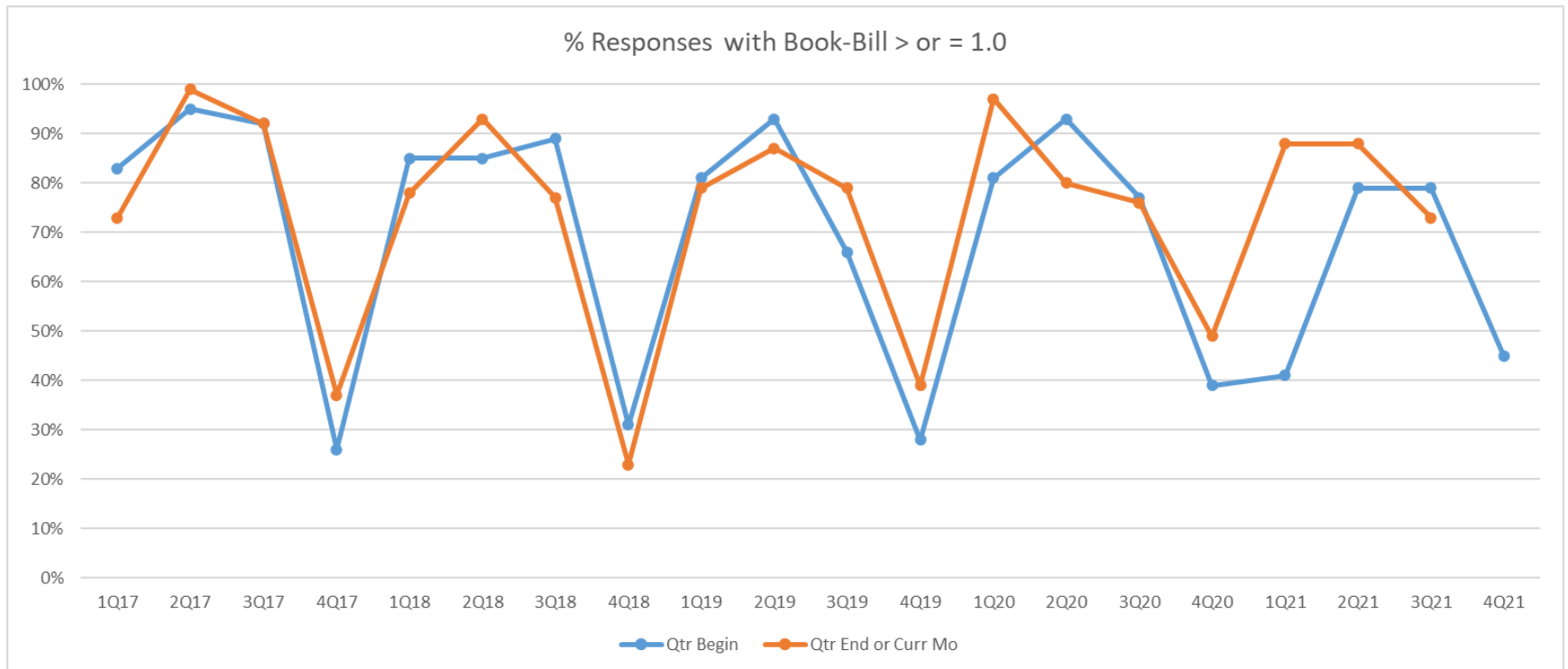


C3Q Bookings Expectations



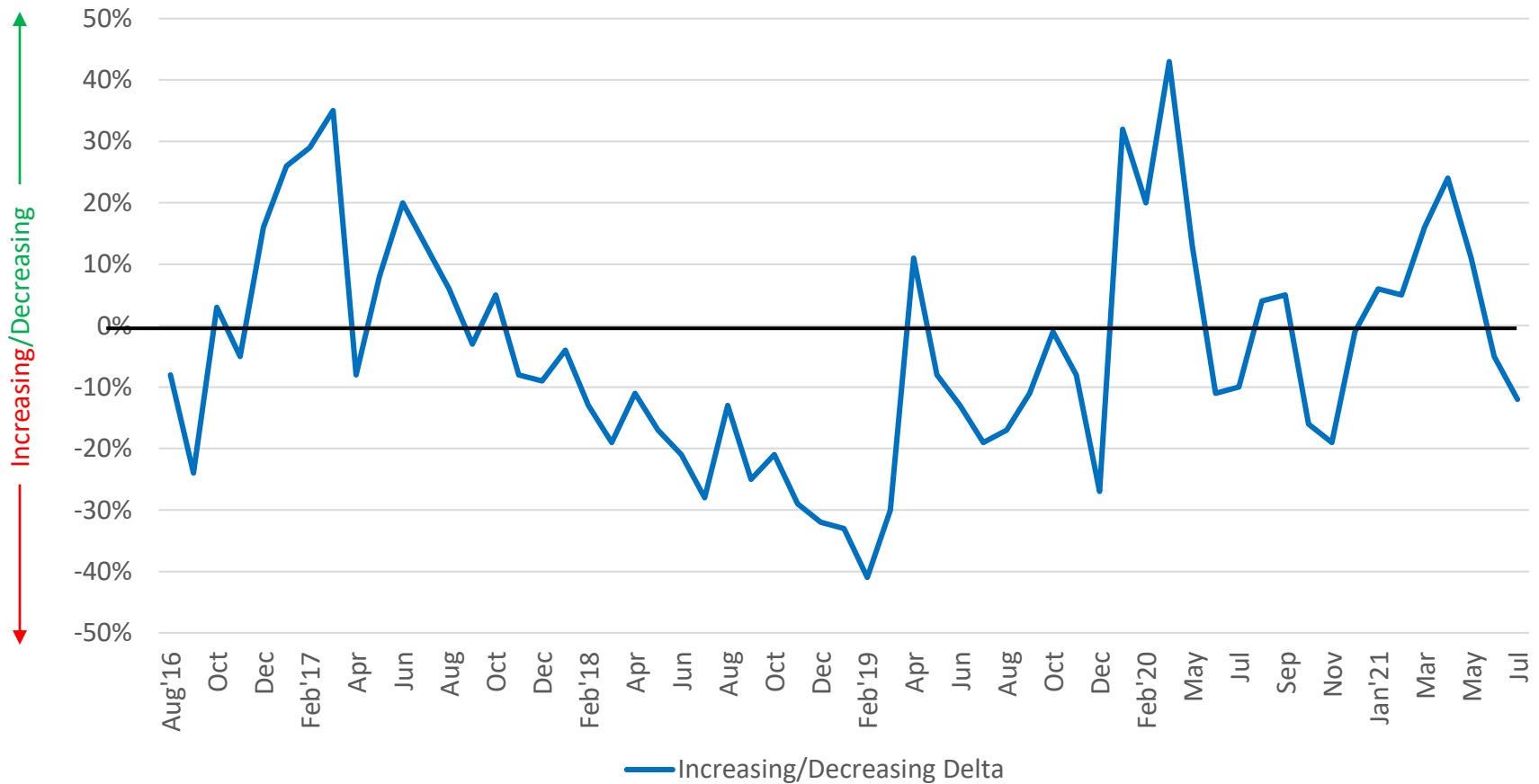
Book to Bill History & Trends

(Calendar quarters)



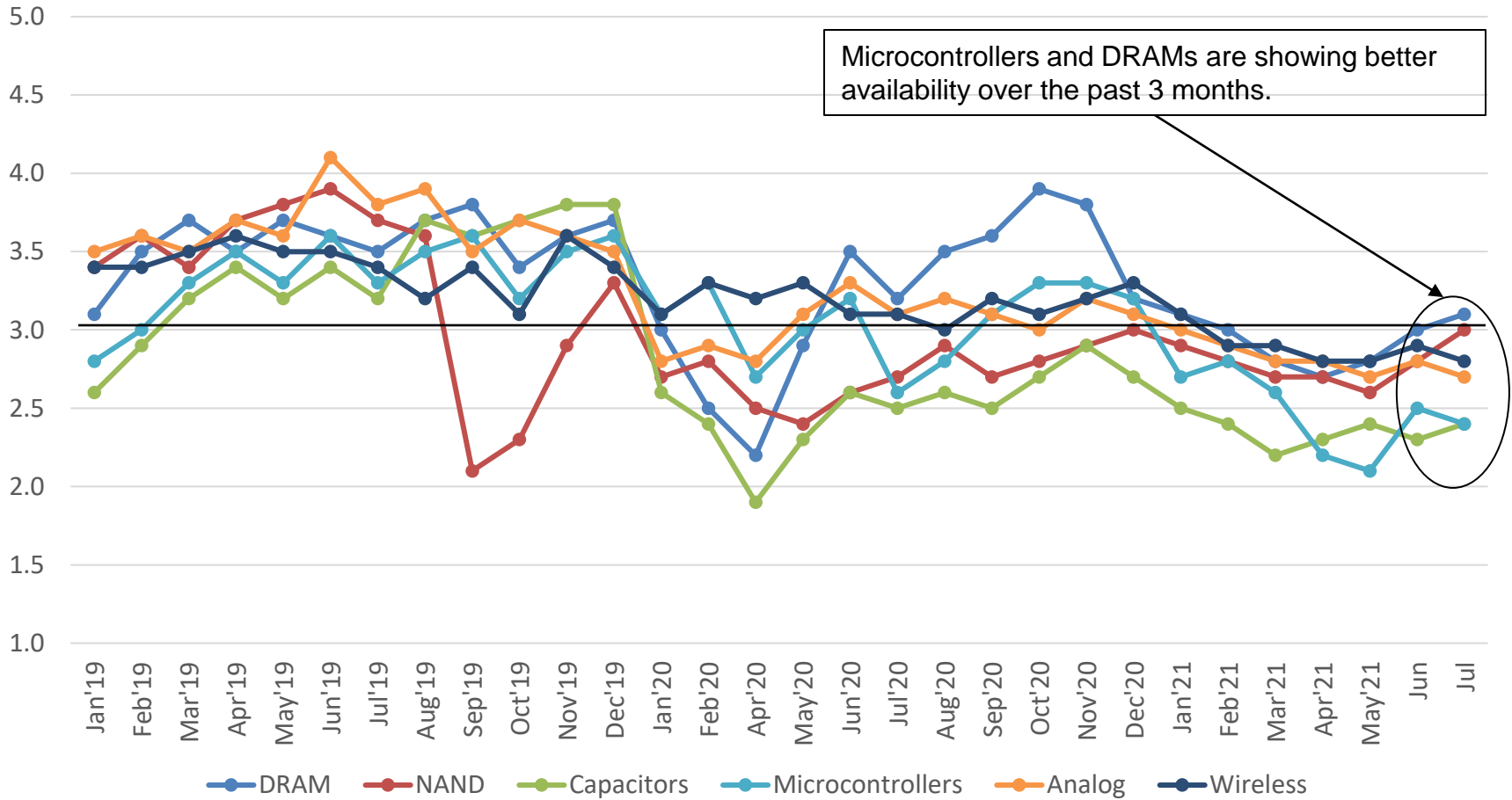
Backlog Order Cancellations vs. 30 Days Ago

(Delta between increasing and decreasing cancellations – Higher % is more positive)



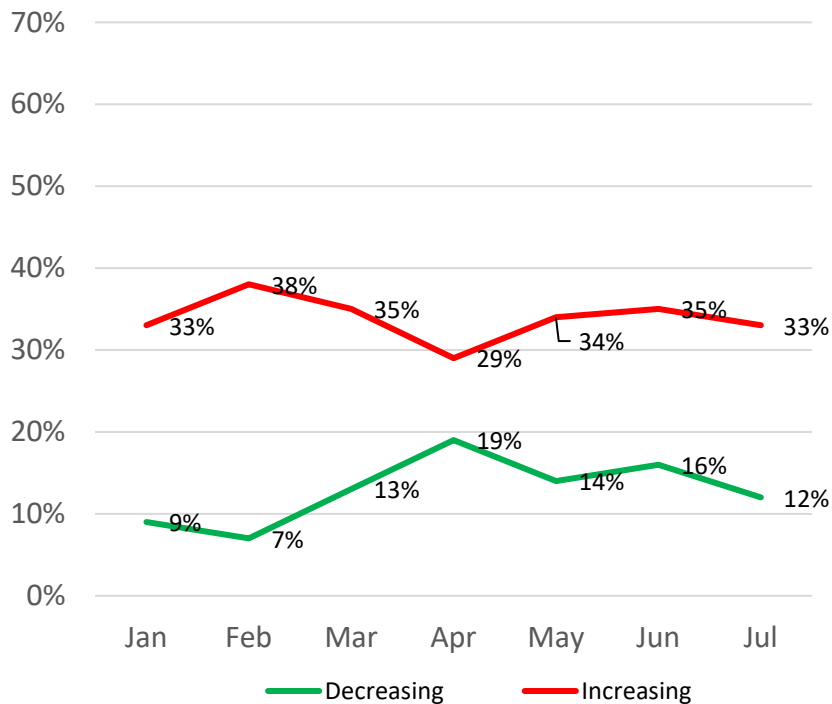
Inventory Status

(Using a scale of 1 to 5 with 1 being extremely low inventory, 3 being the normal amount, and 5 being extremely high; how do you view inventory levels for the following products?)

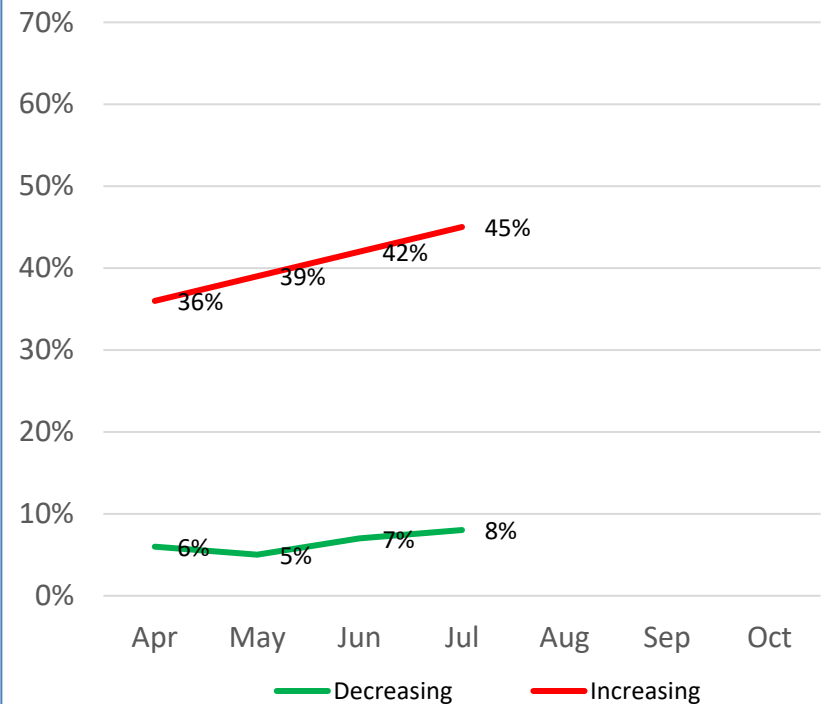


Q/Q Inventory Growth

C2Q21 Inventories vs. C1Q21

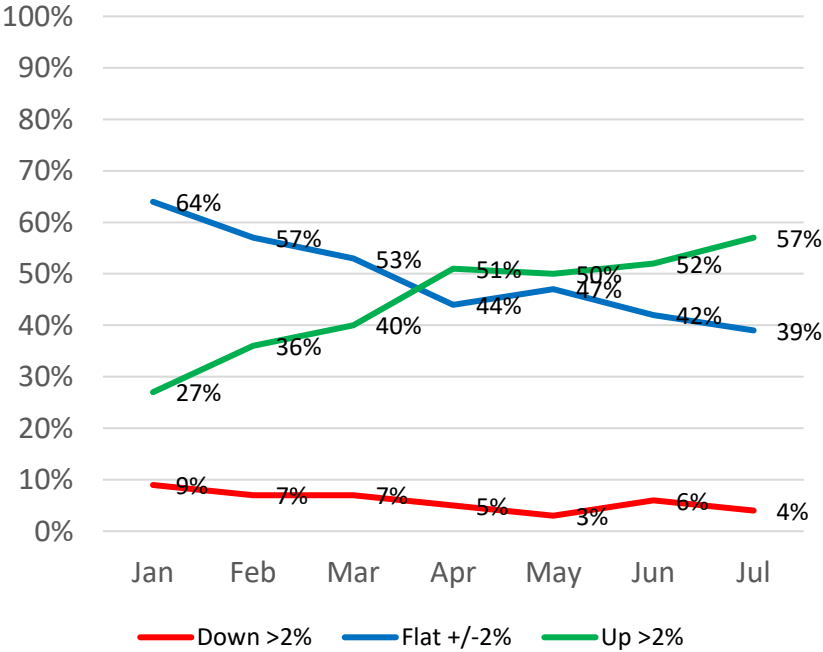


C3Q21 Inventories vs. C2Q21

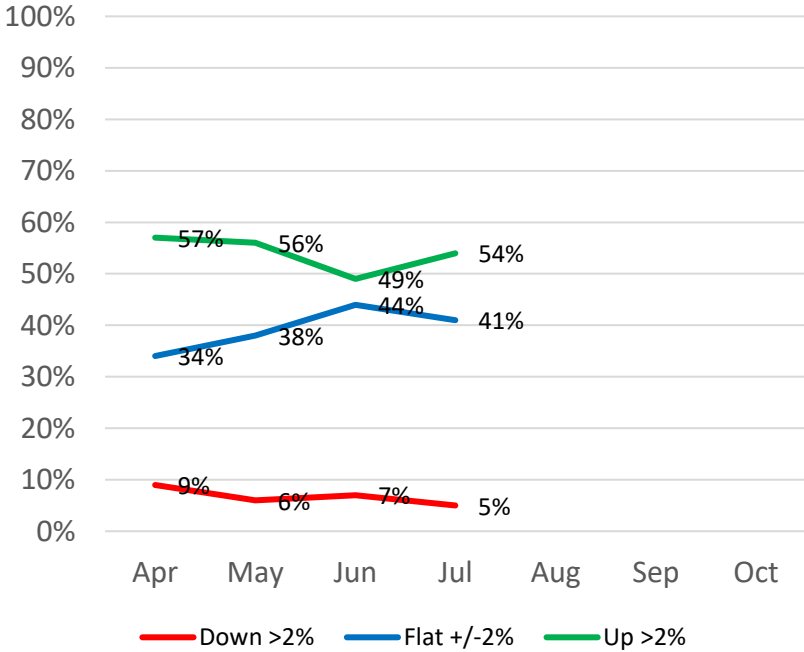


Q/Q Pricing Trends

C2Q21 Pricing vs. C1Q21



C3Q21 Pricing vs. C2Q21



Vertical Outlook

The outlook for Communications continues to be above previous years while Auto continues to erode

