

A glowing blue microchip is centered on a circuit board. The chip has a grid of small squares on its surface and is surrounded by intricate circuitry. The entire scene is bathed in a blue light, giving it a futuristic and technological appearance.

TPC Semiconductor Market Survey

January 13, 2020

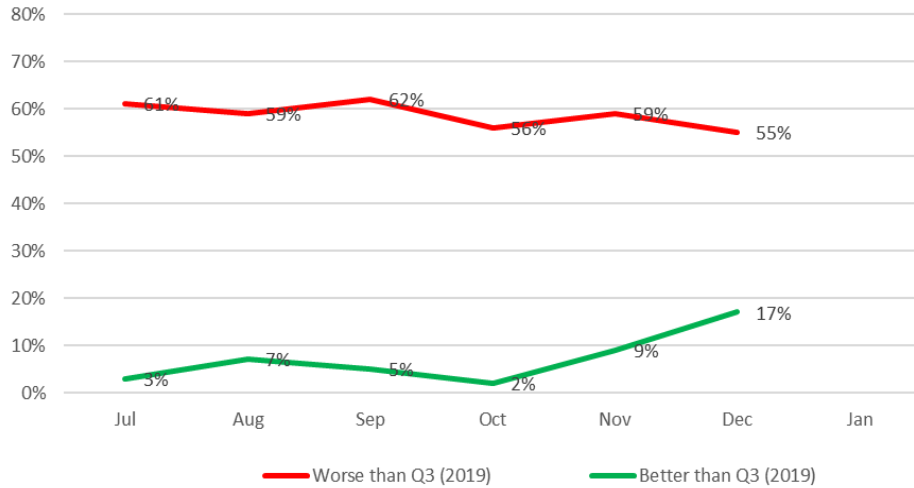
TPC December 2020 Survey Summary

*Survey Date: 1/7-10 Respondents: ~8,800 Location: Worldwide (~80% Asia) Who: Active Electronics Industry Professionals
Response Composition (multiple choices): Industrial 37%, Auto 21%, Comm 19%, Computing 19%, Mobile 27%, Data Ctr 18%, Other 13%*

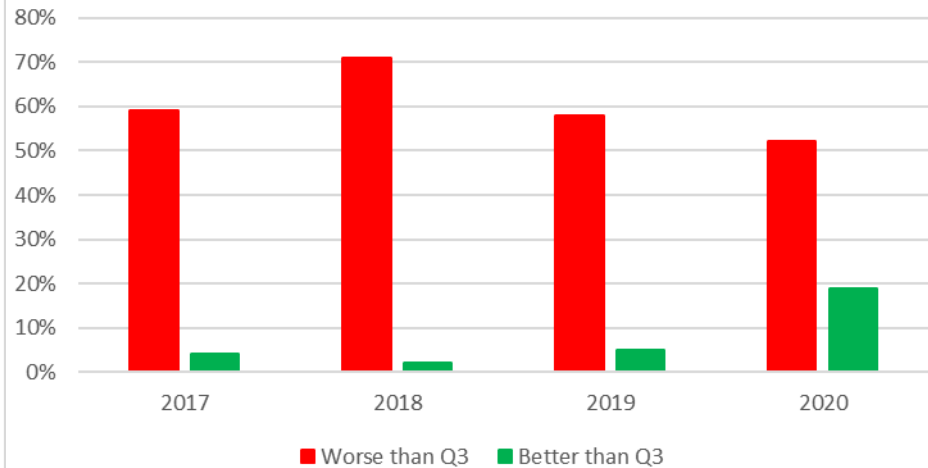
- We recently completed our monthly survey (~8,800 respondents) which saw improvements in both C4Q20 & C1Q21 growth expectations. Additionally, the bookings outlook C1Q improved slightly.
- End customers have become more comfortable with higher inventory levels (as well as wanting additional inventory in some products) due to product availability getting tighter. This is being driven the view that general demand especially in the Auto and Mobile sector will remain strong throughout the year.
- The survey showed a growth outlook for C4Q20 slightly improved vs. last month with 17% expecting q/q growth vs. 9% previously and 55% see it as weaker vs. 59% last month. The C1Q outlook improved with 19% expecting q/q growth vs. 6% previously and now only 52% see it as weaker vs. 61% last month.
- The survey showed improvement in bookings for C1Q21 with 23% expecting improving bookings vs. C4Q compared to 22% last month, and 15% now expect weaker bookings vs. 19% last month.
- Backlog cancellation expectations (slide 6) improved showing a more neutral tone over the last ~6 months but clearly trending towards fewer cancellations.
- Availability of critical parts (slide 7) took a marked decrease towards less availability especially in DRAM and Capacitors.
- We would characterize pricing as starting to increase in some areas due to tighter product availability.

Q/Q Demand Growth Outlook

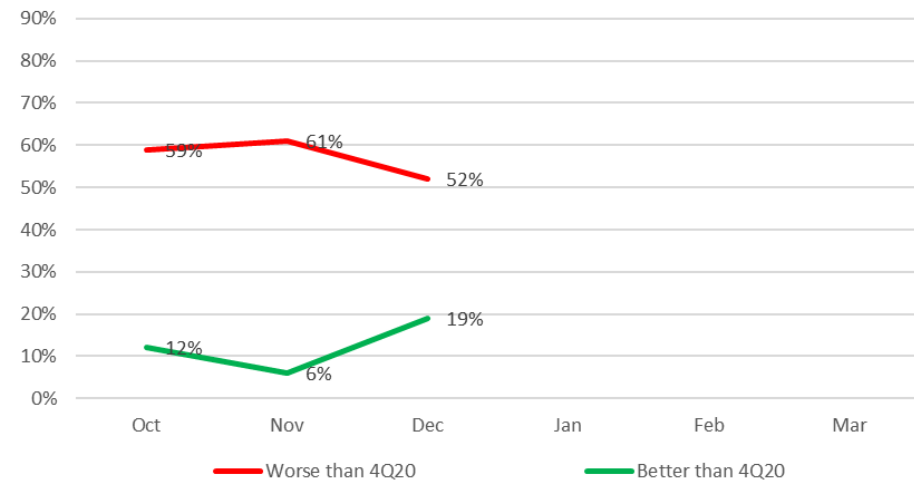
4Q Growth Expectations



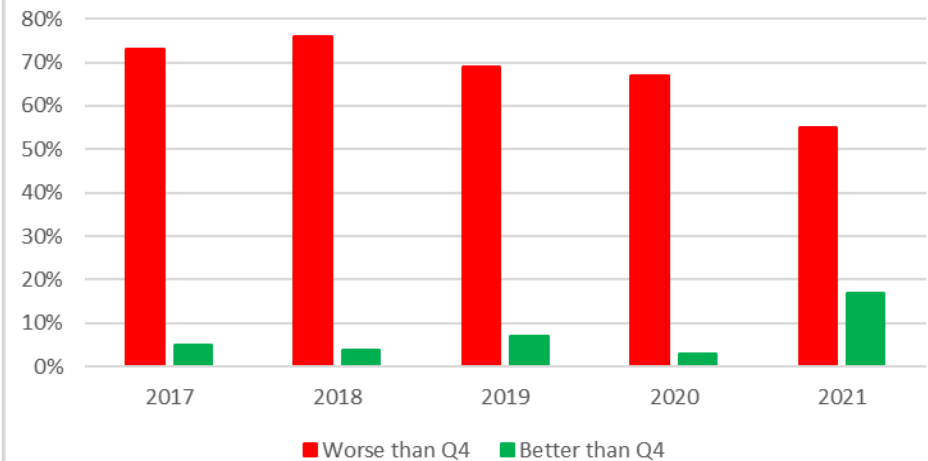
C4Q Growth Expectations vs. C3Q



C1Q Growth Expectations

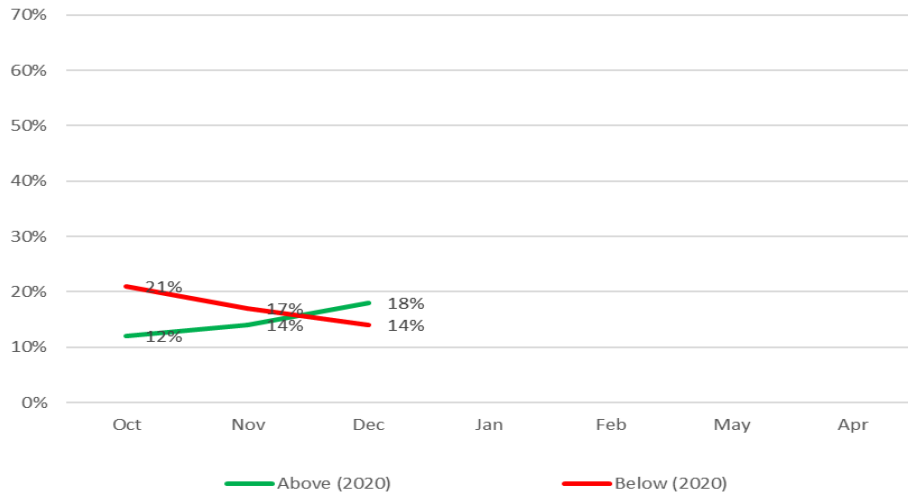


C1Q Growth Expectations vs. C4Q

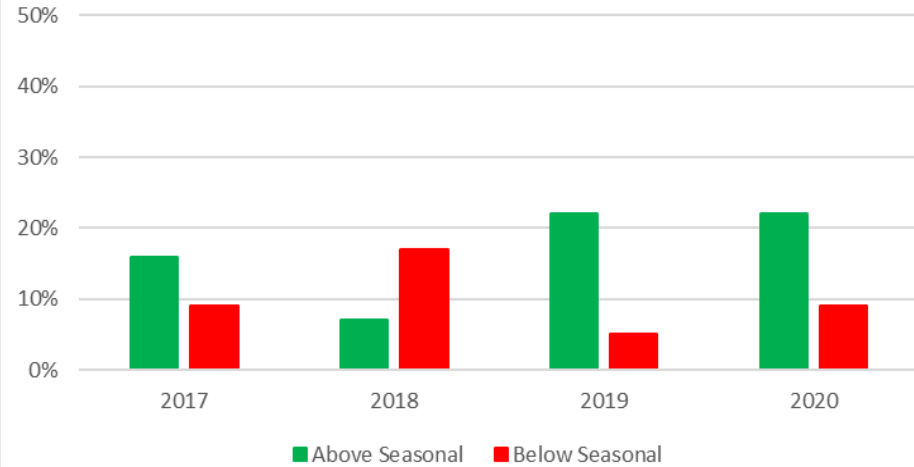


Q/Q Seasonality Expectations

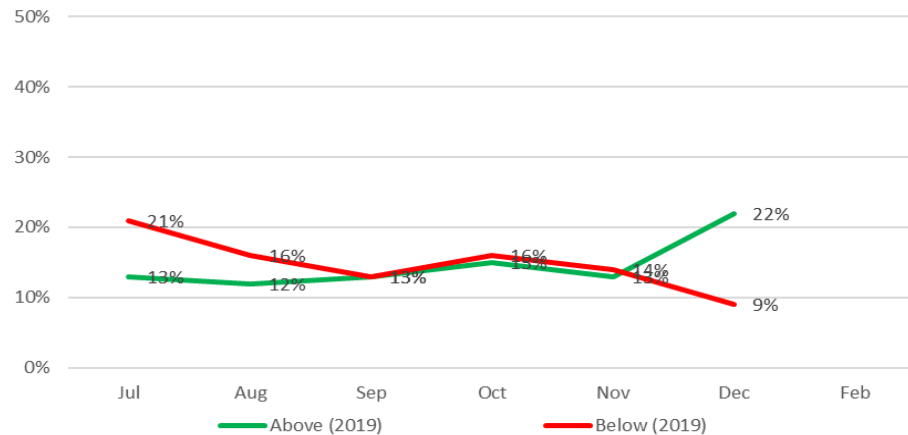
C1Q Seasonality Expectations



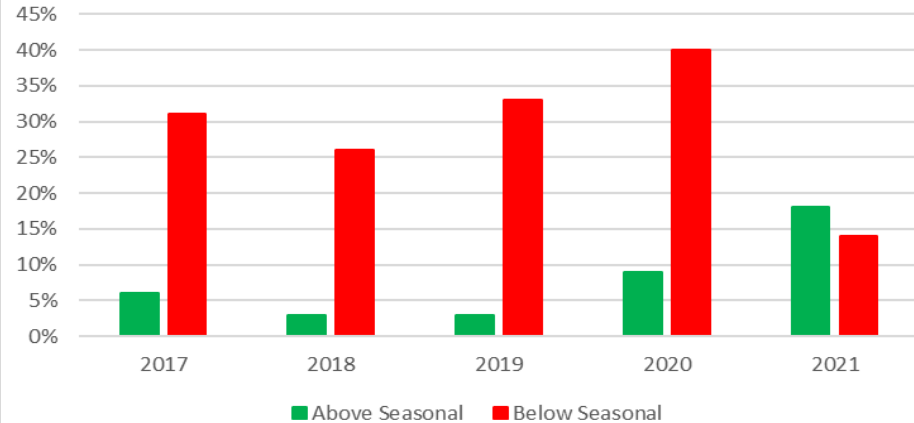
C4Q Seasonality Expectations



4Q Seasonality Expectations

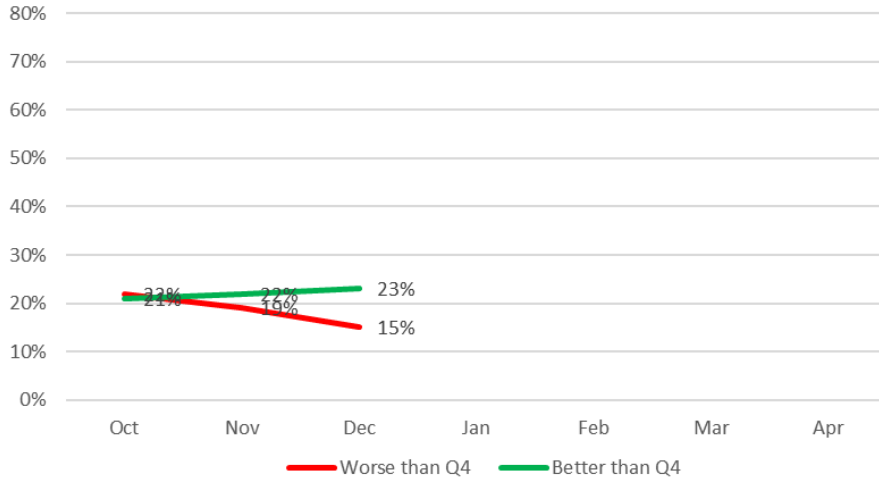


C1Q Seasonality Expectations

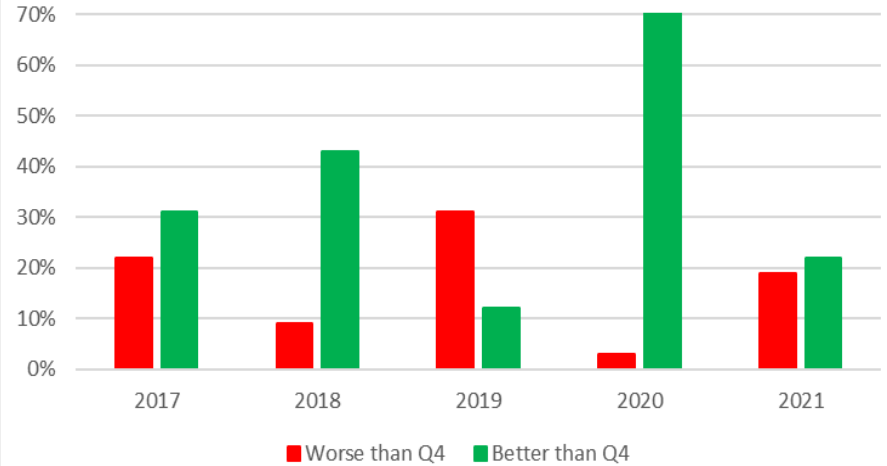


Q/Q Bookings Growth Expectations

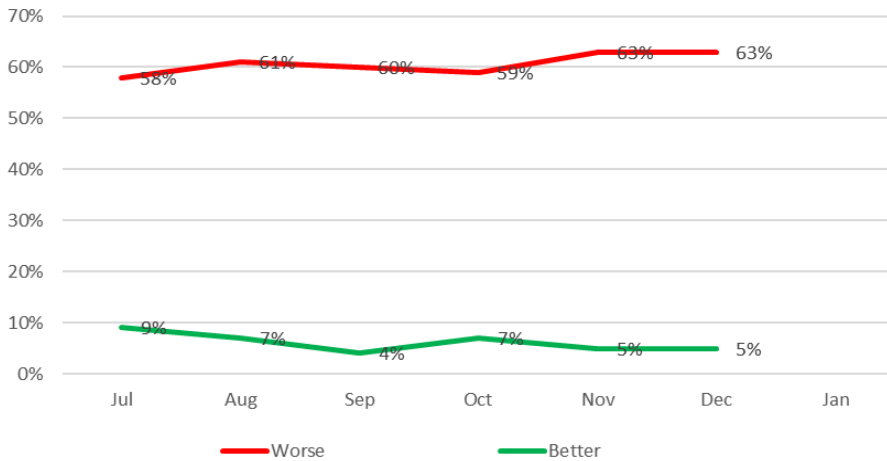
C1Q Bookings Expectations



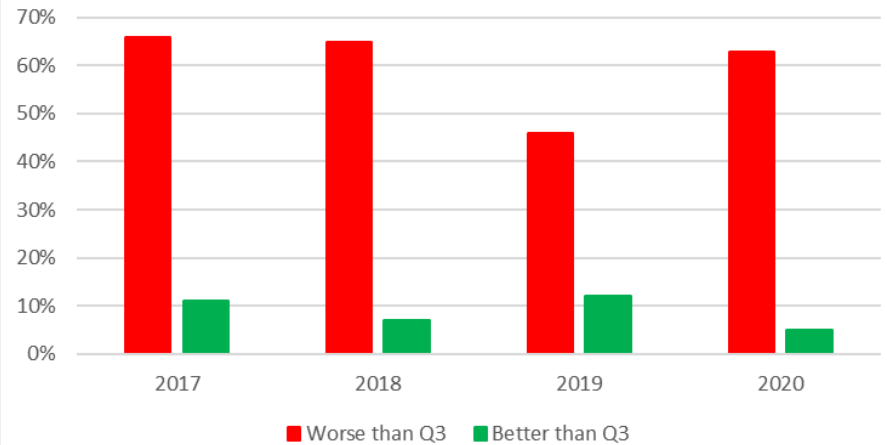
C1Q Bookings Expectations



4Q Bookings Expectations

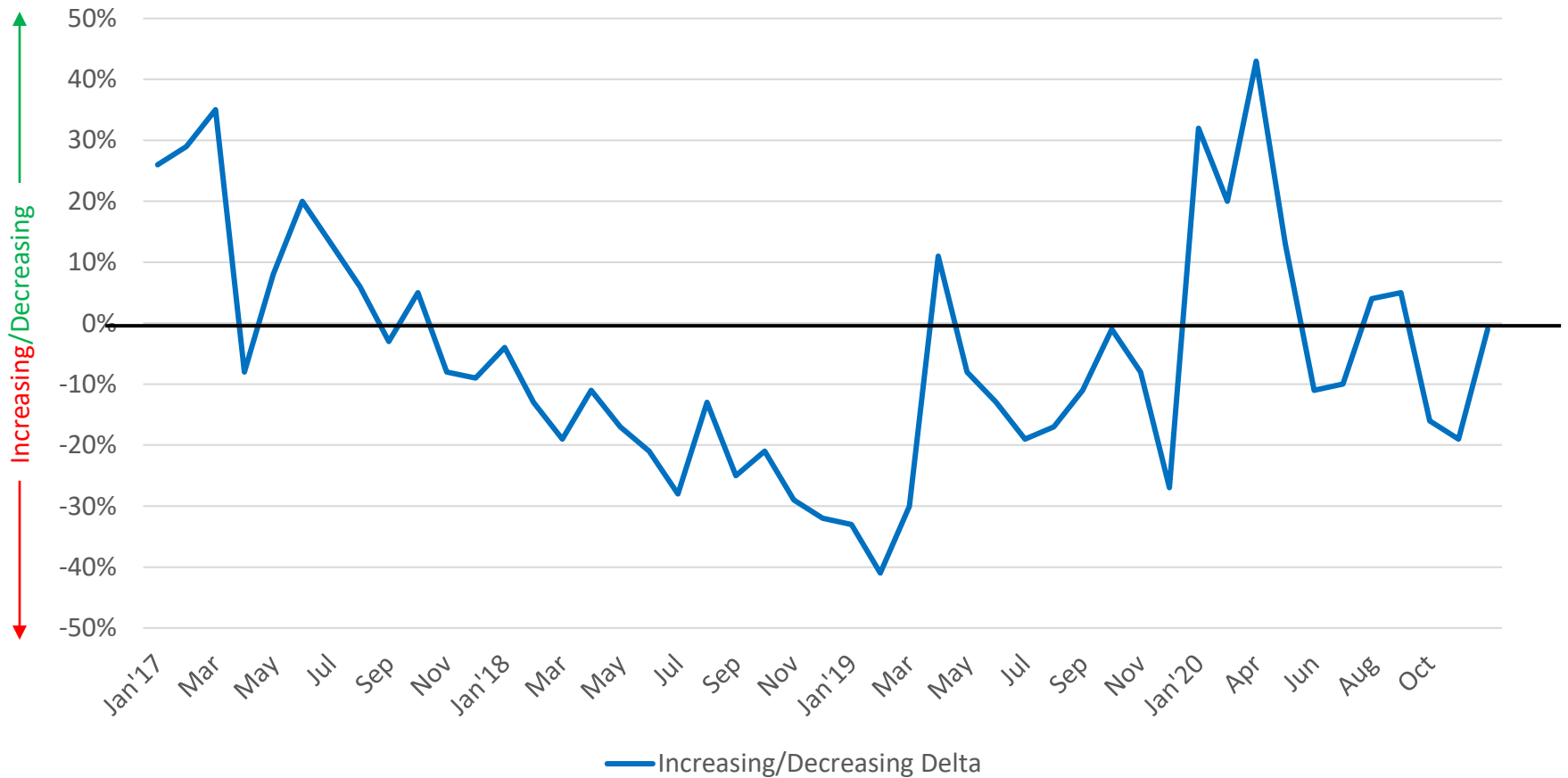


C4Q Bookings Expectations Seasonality



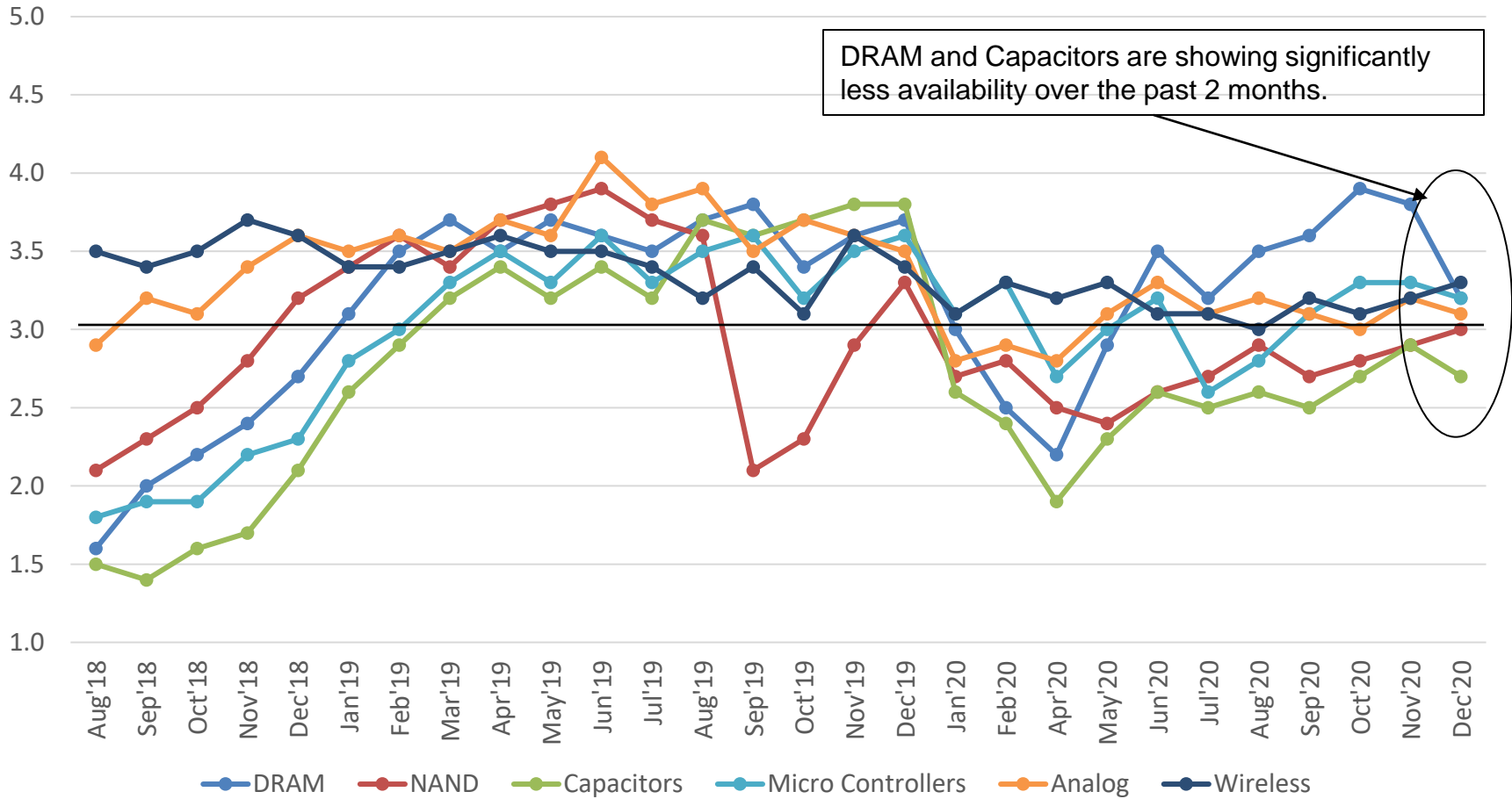
Backlog Order Cancellations vs. 30 Days Ago

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



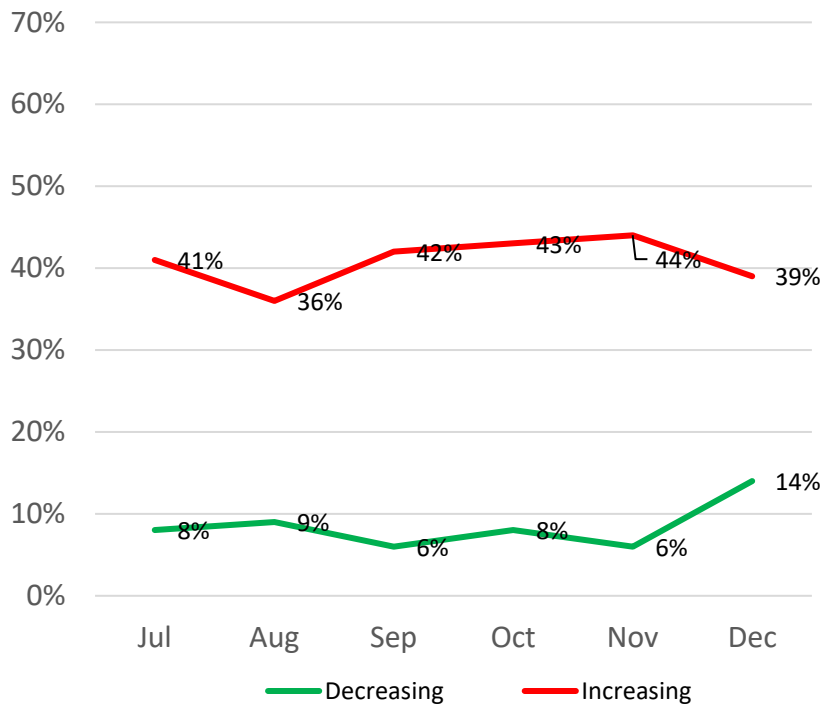
Inventory Status

(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?)

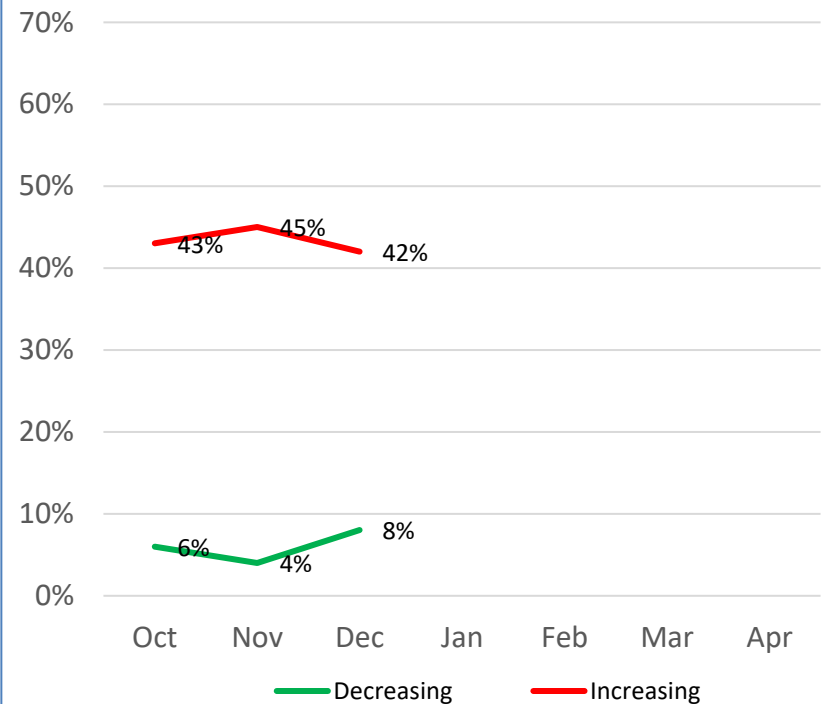


Q/Q Inventory Growth

C4Q20 Inventories vs. C3Q20

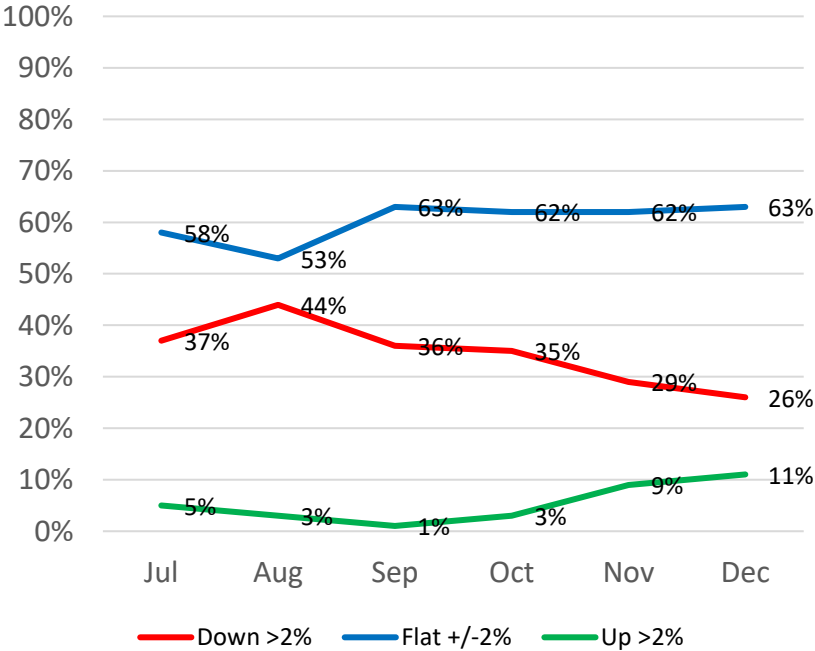


C1Q21 Inventories vs. C4Q20

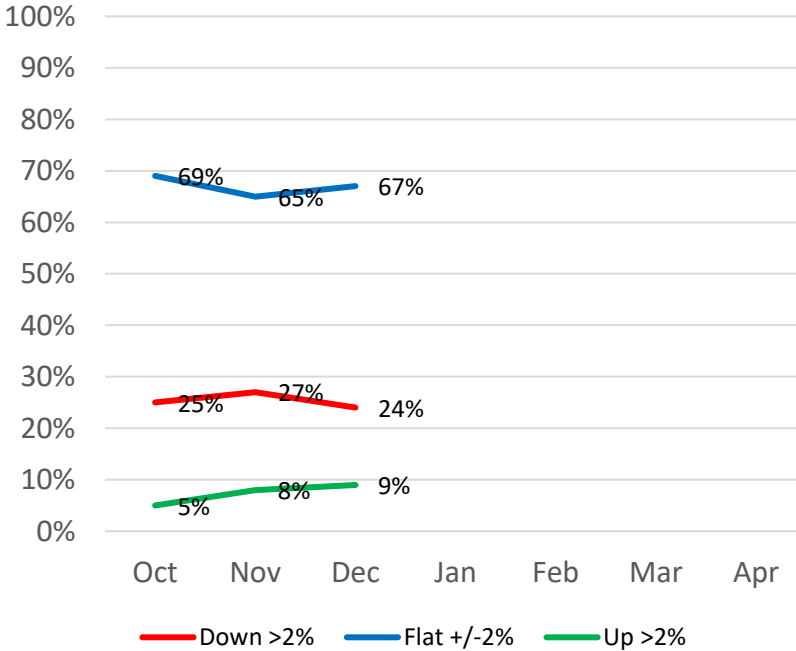


Q/Q Pricing Trends

C4Q20 Pricing vs. C3Q20



C3Q20 Pricing vs. C2Q20



Vertical Outlook

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

