

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**

**October 14, 2021**

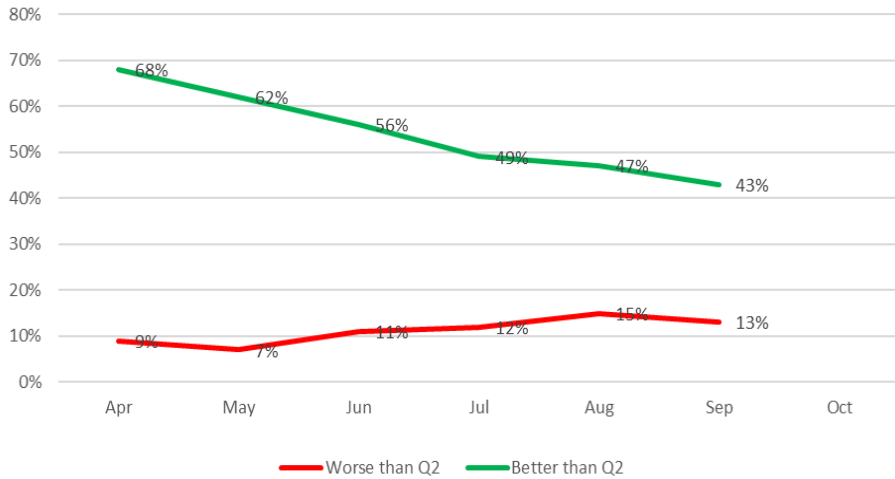
# TPC September 2021 Survey Summary

*Survey Date: 10/8-10/11 Respondents: ~8,000 Location: Worldwide (~80% Asia) Who: Active Electronics Industry Professionals  
Response Composition (multiple choices): Industrial 38%, Auto 19%, Comm 20%, Computing 19%, Mobile 30%, Data Ctr 19%, Other 17%*

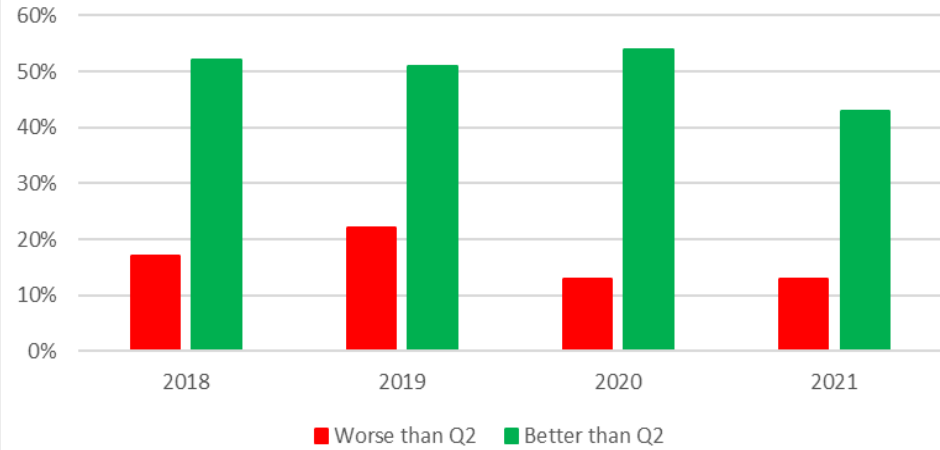
- We recently completed our monthly survey (~8,000 respondents) which saw decreases in both C3Q21 and C4Q21 outlook for growth as well as weakening seasonality expectations.
- Based on our survey's past 3 months of continued negative growth outlook, as well as seeing a continued increase in inventory imbalance (especially Auto), we believe we are in the beginning stages of a slowdown in demand.
- In support of this, we are seeing PCNB, Chromebook, Tablet demand rolling over into CY22 (down at least mid-single digits). We also see China based smartphone production weakening into C1H22.
- Finally, we see additional price increases coming for CY22 (makes the 3+ increases since the beginning of the year); which we believe will lead to some demand destruction.
- The survey showed a growth outlook for C3Q21 weakening vs. last month with 43% expecting q/q growth vs. 47% previously and 13% see it as weaker vs. 15% last month. The C4Q outlook also decreased with only 3% expecting q/q growth vs. 5% previously; while 55% see it as weaker vs. 54% last month.
- Backlog cancellation expectations (slide 7) has now shown increases in cancellations over the past 4 months.
- Inventories (slide 9) has also shown a steady increase for both C3Q and C4Q for the last 3 months
- Key product availability (slide 8) also continues to improve with DRAM and NAND now at normal or slightly above normal levels.

# Q/Q Demand Growth Outlook

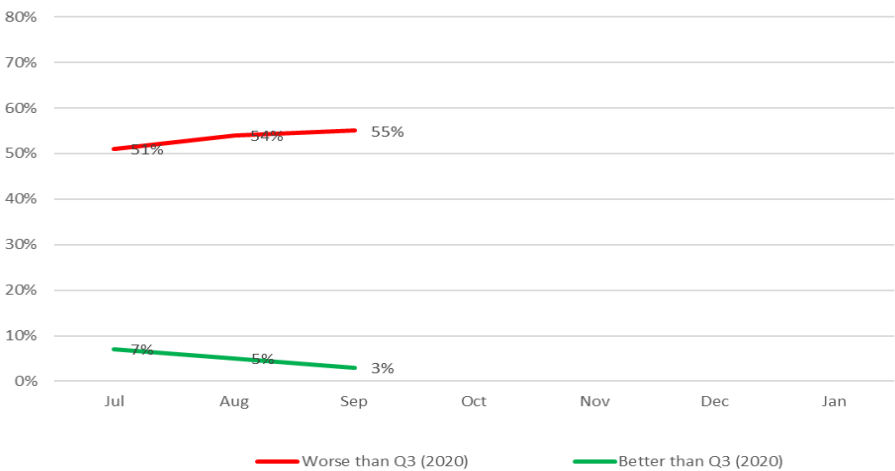
### C3Q21 Growth Expectations



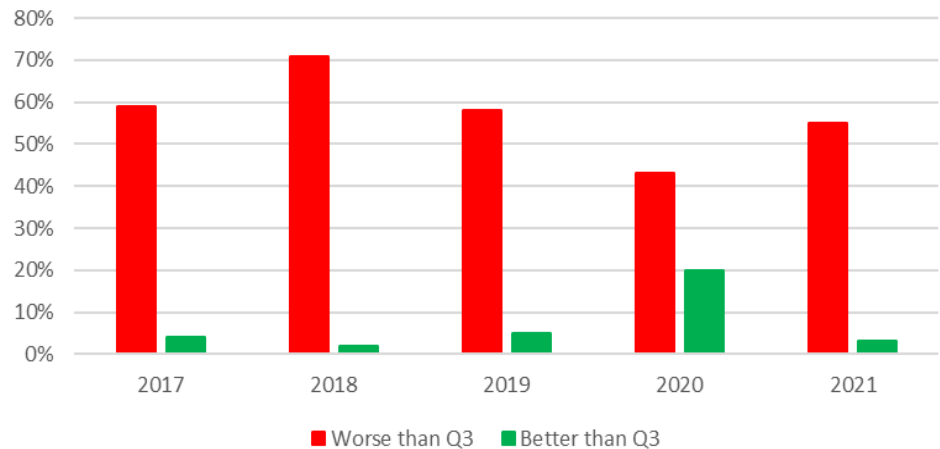
### C3Q Growth Expectations vs. C2Q



### 4Q Growth Expectations

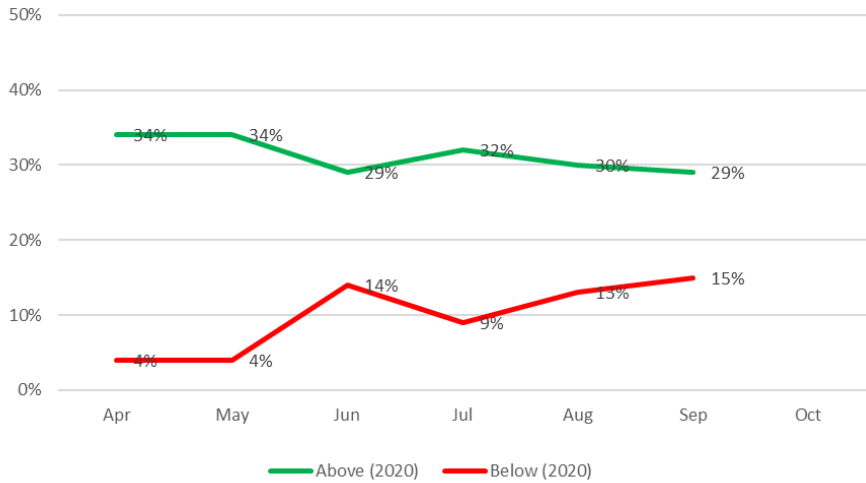


### C4Q Growth Expectations vs. C3Q

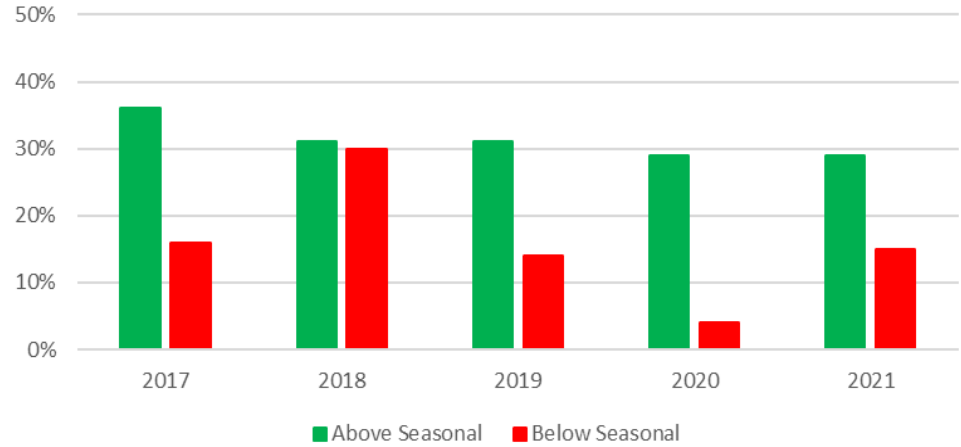


# Q/Q Seasonality Expectations

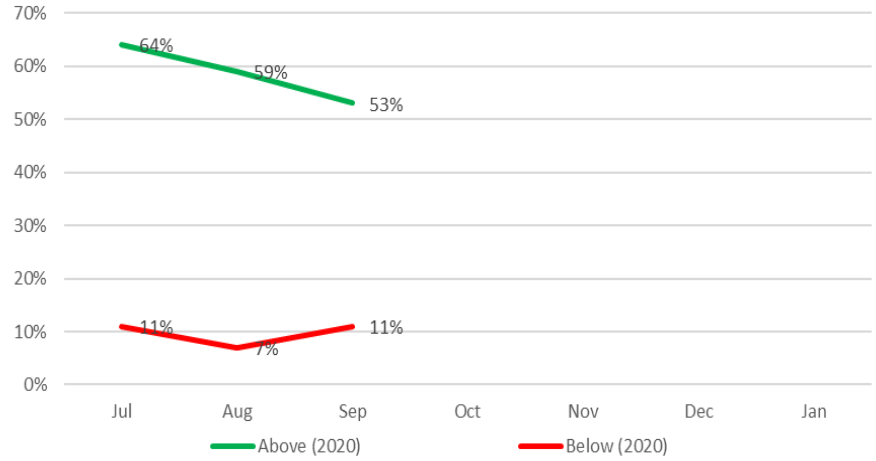
### 3Q21 Seasonality Expectations



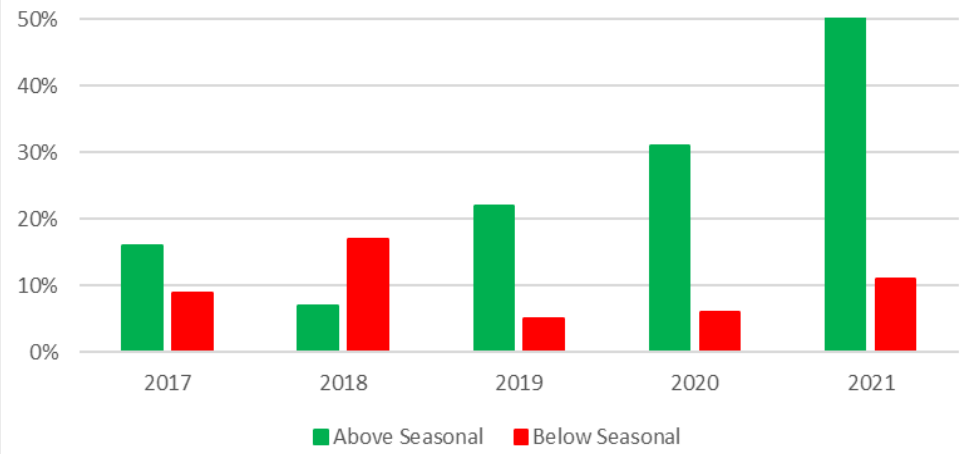
### C3Q Seasonality Expectations



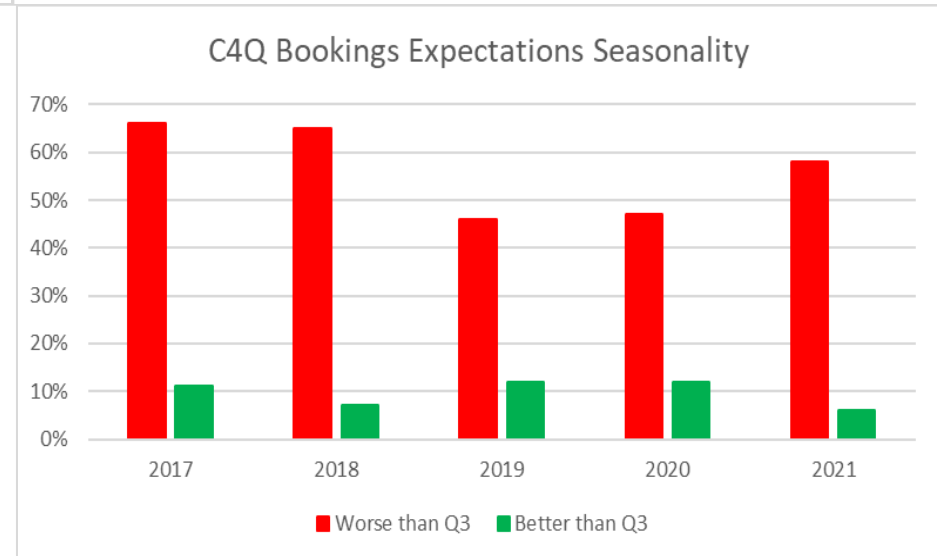
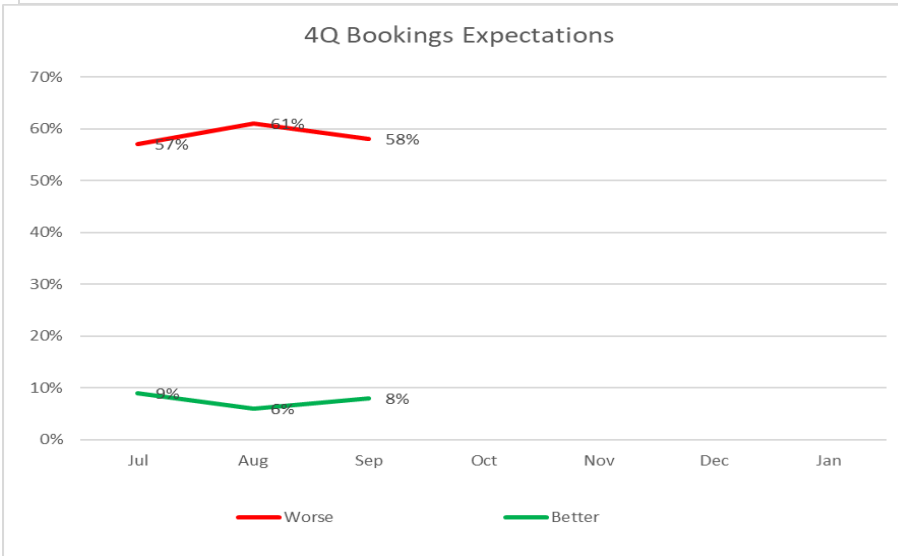
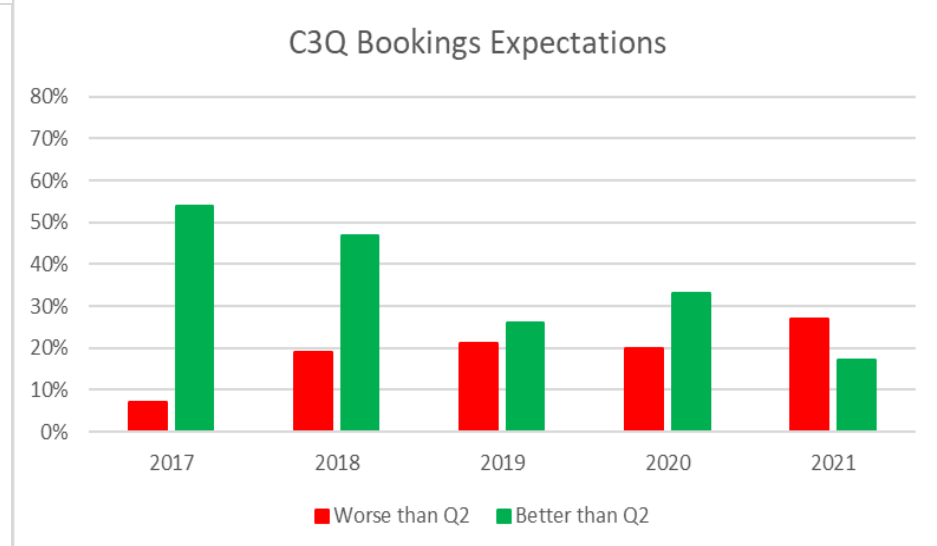
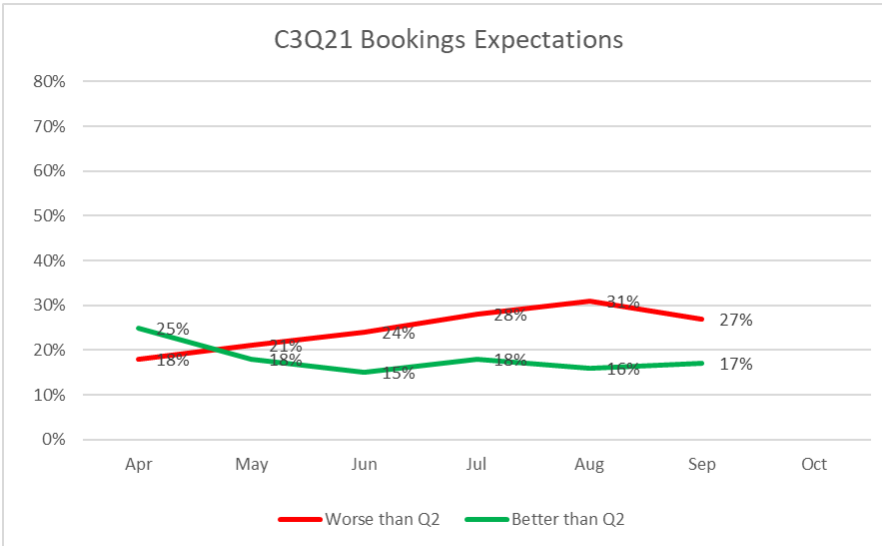
### 4Q Seasonality Expectations



### C4Q Seasonality Expectations

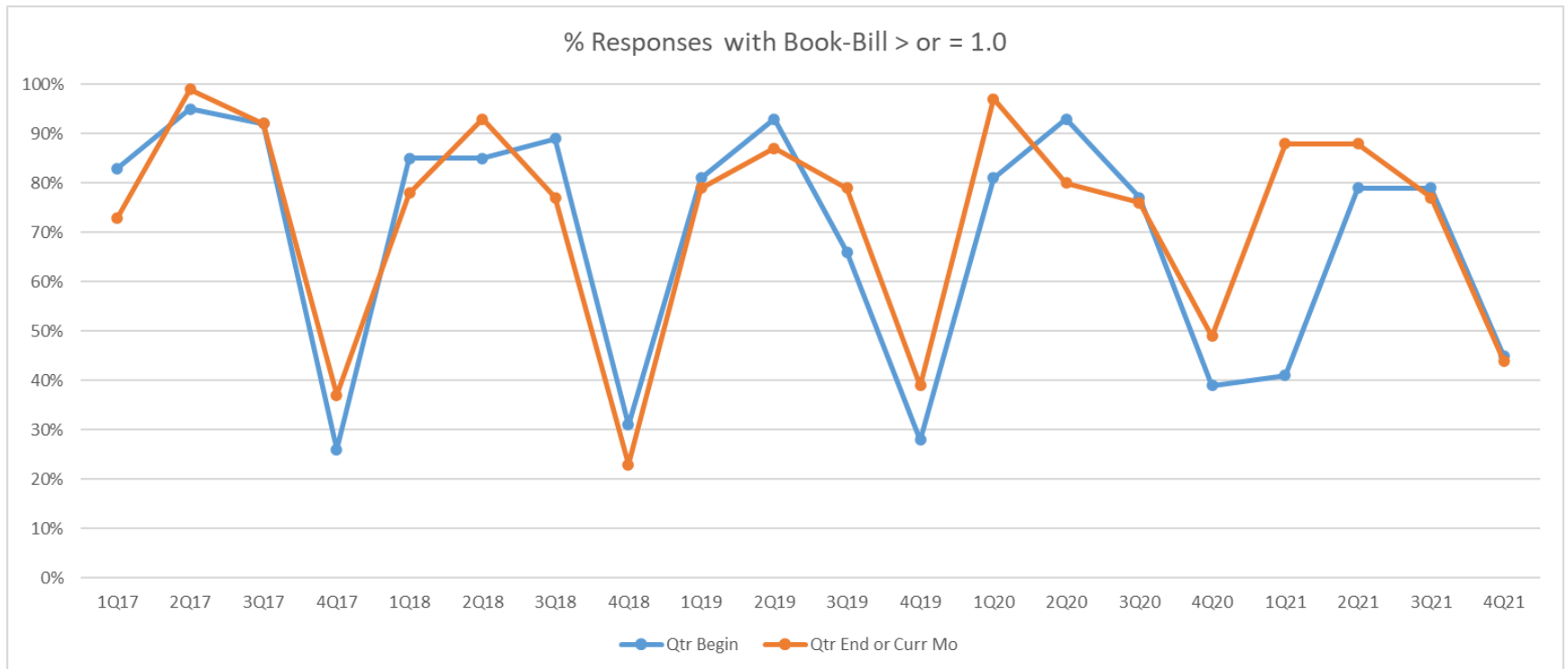


# Q/Q Bookings Growth Expectations



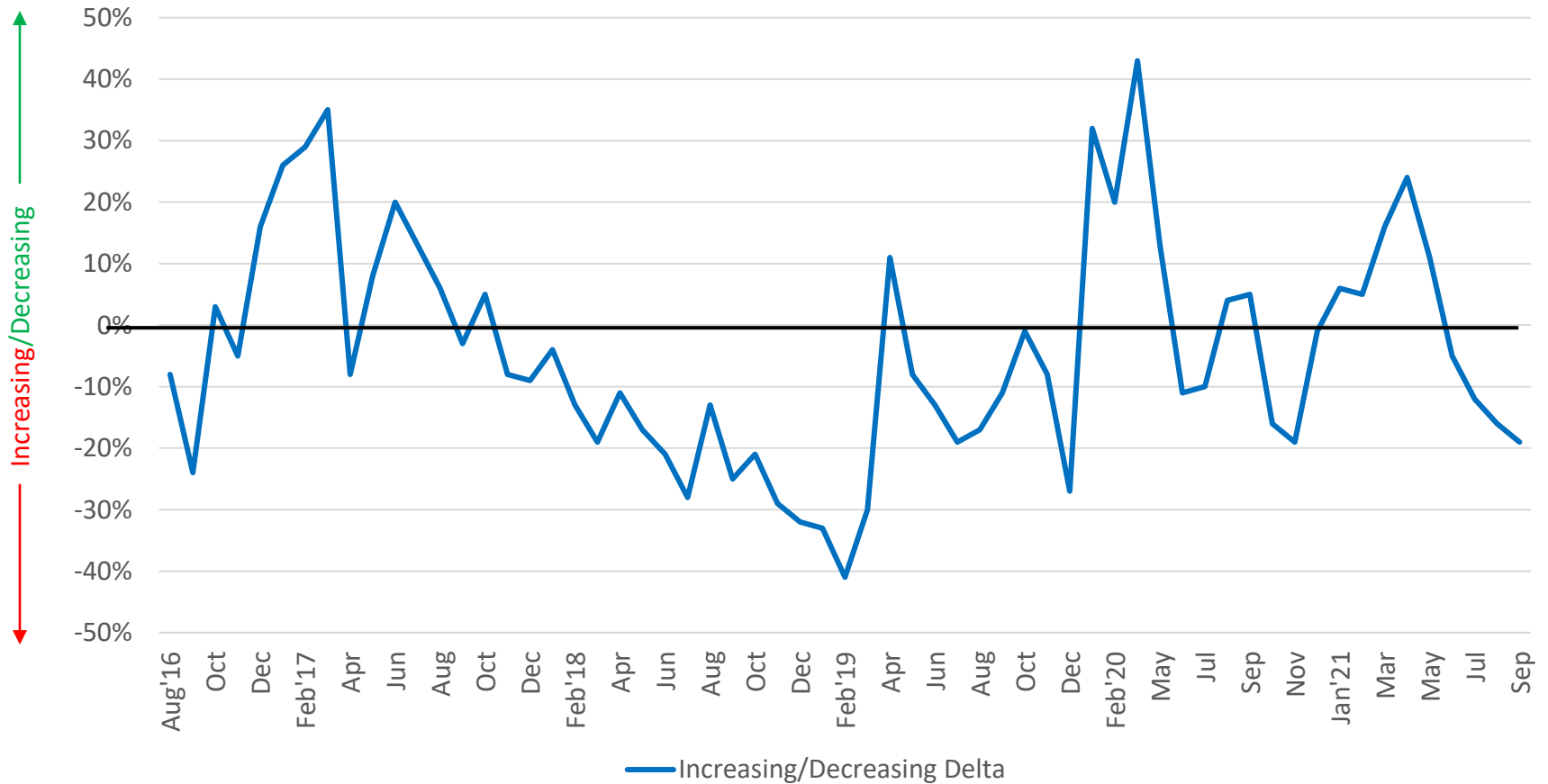
# Book to Bill History & Trends

(Calendar quarters)



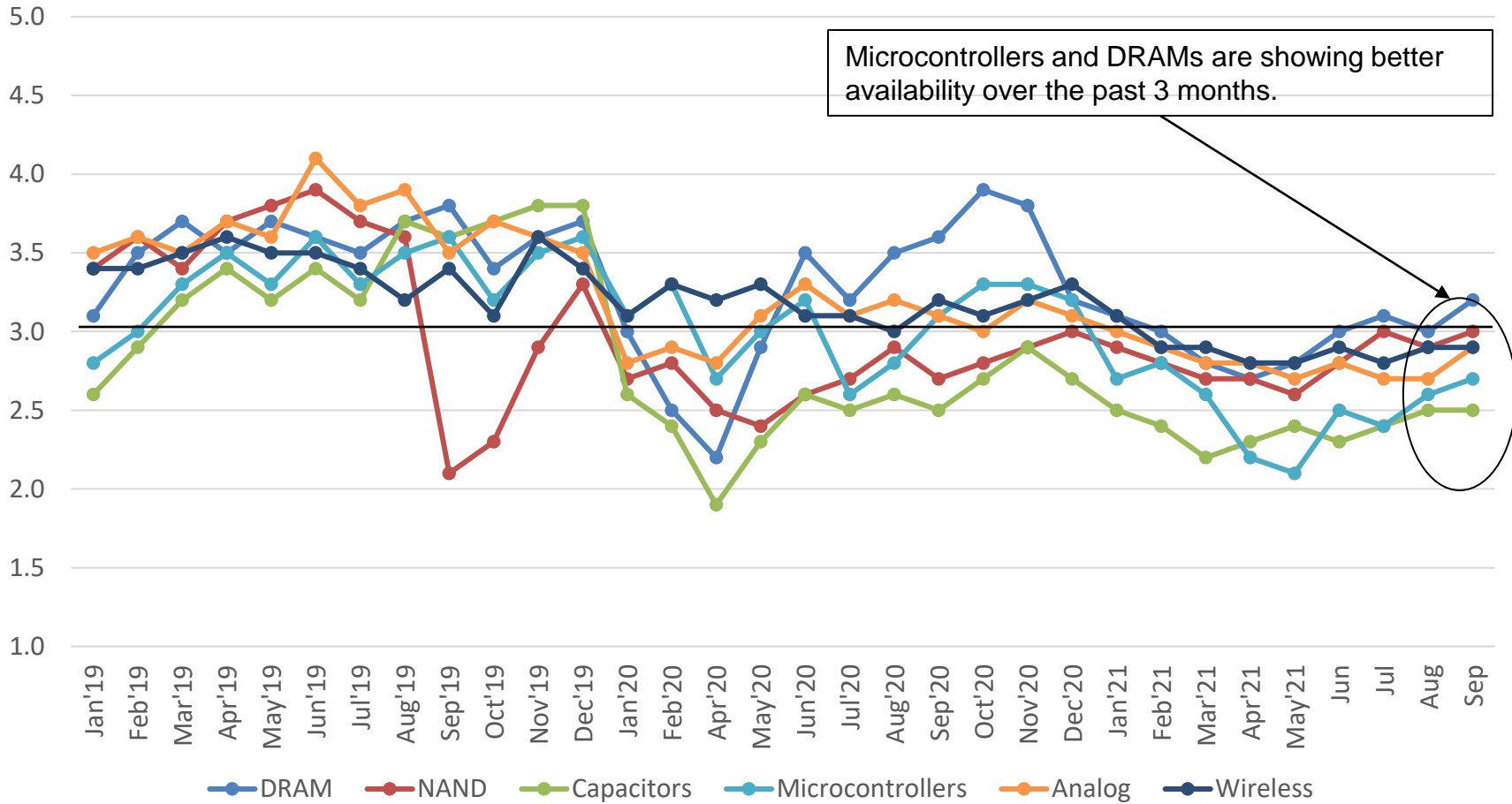
# Backlog Order Cancellations vs. 30 Days Ago

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



# Inventory Status

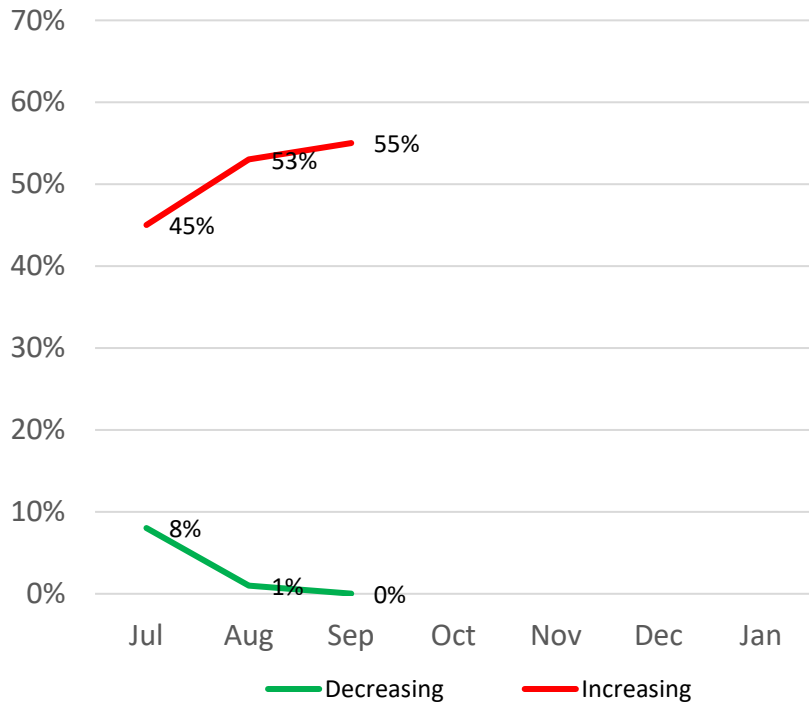
(Using a scale of 1 to 5 with 1 being extremely low inventory, 3 being the normal amount, and 5 being extremely high; how do you view inventory levels for the following products?)



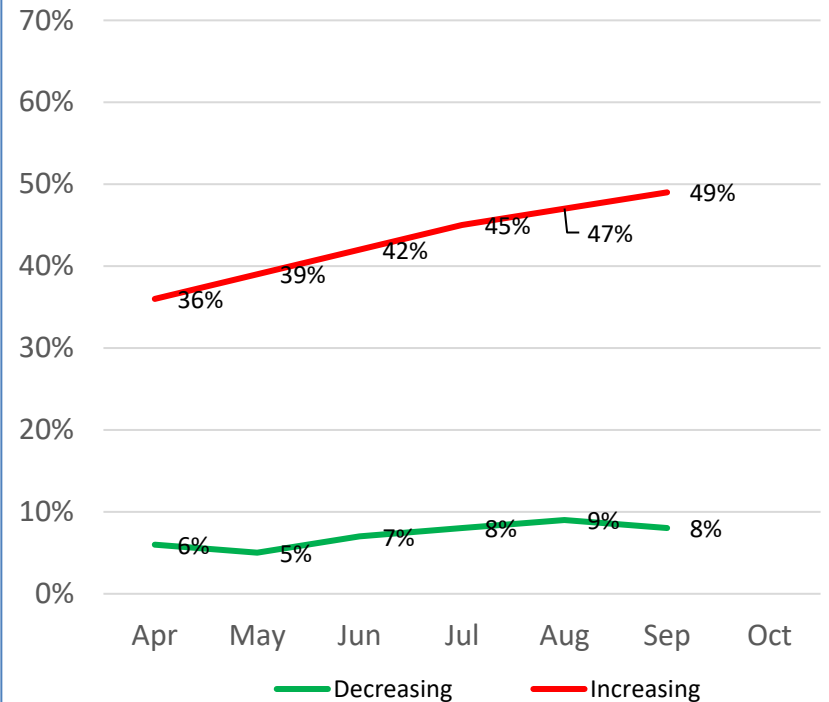


# Q/Q Inventory Growth

## C4Q21 Inventories vs. C3Q21

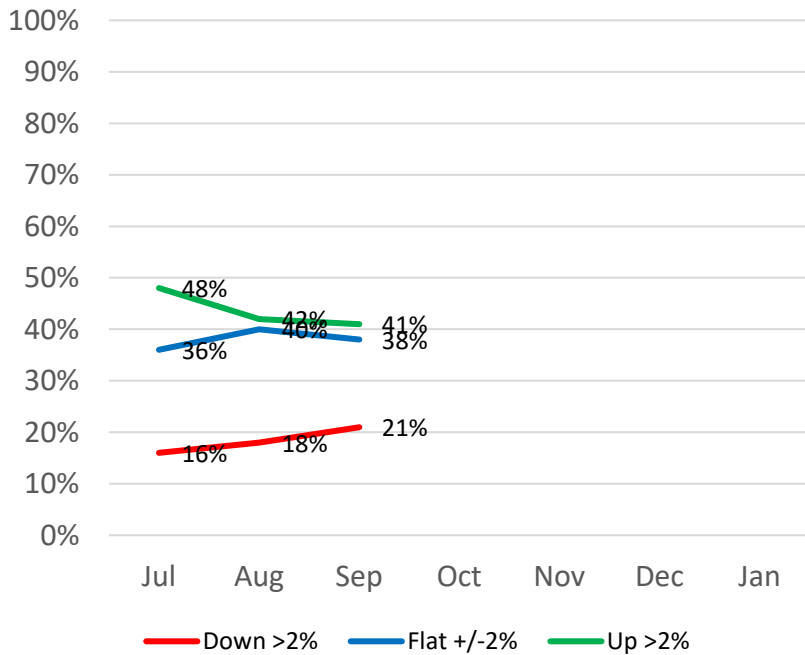


## C3Q21 Inventories vs. C2Q21

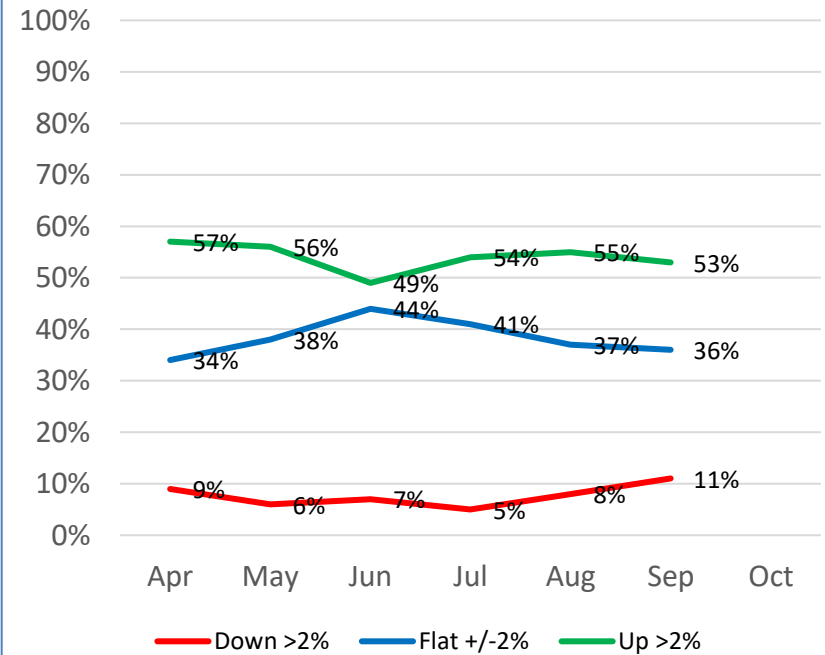


# Q/Q Pricing Trends

## C4Q21 Pricing vs. C3Q21



## C3Q21 Pricing vs. C2Q21



# Vertical Outlook

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

