April 1, 2020

COVID Insights Across All of Cleveland Research

Important disclosures can be found in Appendix

COVID REAL-TIME FEEDBACK – WHAT WE ARE HEARING ACROSS ALL SECTORS COVERED BY CLEVELAND RESEARCH (CLEVELAND RESEARCH)

The following is a compilation of research insights across 58 sectors / end markets of the economy that are covered by Cleveland Research. These insights are from within the last 5-10 days. We have separated the insights by those **sectors currently seeing positive impacts,** those that **do not appear to have been impacted meaningfully as of yet**, and **sectors facing headwinds from the outbreak**. This update follows our firm-wide update from two weeks ago. 19% of sectors are considered positive (vs. 22% prior), 19% are mixed (vs. 27% prior), and 62% are negative (vs. 51% prior).

Sectors Seeing Positive Impacts

- **Enterprise IT** - Work continues to suggest upside on orders for setting up and securing remote work capabilities
- **Cloud (IaaS / PaaS) -** Demand appears to have picked up over the last 10 days as some projects are being pulled forward to react to COVID-19
- **eCommerce (Amazon) -** Amazon benefiting from accelerated growth in essentials; eCommerce mix shift could be long-term benefit
- **Dollar Stores -** Seeing near-term stock-up benefits and seen as well positioned over medium term
- **Club Stores -** Stock-up trips appeared to slow last week; club channel still seeing biggest benefit March-to-date
- **Conventional Grocery -** Sales growth moderating recently after very strong performance in mid-March, still strong in absolute terms
- **Mass Merchants -** Sales growth appeared to slow last week, year-over-year sales still appear up significantly
- **Managed Care -** COVID could be near term MLR Tailwind as drop off In Elective/Preventative volume appears to be offsetting increased COVID costs
- **Managed Care Services / Digital Health / Senior Living -** Shift to online/virtual experiences expected to be sticky
- **Pharmacy Benefit Managers -** PBM mail order growth outpaced overall Script growth In March
- **Medical/Surgical (Personal Protection Equipment) –** Research indicates PPE supply should show improvement over next several weeks

Sectors Seeing "Mixed" And/Or Not Seeing An Impact

- **IT Components (Memory & Hard Drives) –** Demand strong near-term for memory and hard drives, see risk in 2H as DRAM / NAND pricing is expected to moderate and 2H Hard Drive production and demand could moderate
- **Software As A Service (SaaS) –** Mixed impact across vendors; ServiceNow & Atlassian look to be faring the best thus far
- **Contact Lenses -** Significant online shift appears to be offsetting office closures
- **Pharmaceutical Drug -** Script growth has likely peaked & slowed over the past week
- **Homecenters (Lowe's / Home Depot) -** 1Q-to-date results appeared to be running ahead of expectations, with comp trends improving through March
- **Building Product Suppliers -** Demand in seasonal categories, DIY paint, and appliances looks strong to this point, benefitting from an early spring, more time at home to tackle DIY projects, and stock-up demand
- **C-Store Foodservice -** View c-stores as one of the better positioned segments within foodservice during COVID-19
- **Seed Industry -** Mostly business as usual but concerns about profitability, competition, and weather growing
- **Crop Protection -** Mostly business as usual with some extra competitive pricing
- **Airfreight -** Airfreight prices appear to be increasing 3x-4x vs pre-COVID rates primarily due to reduced capacity (passenger flights), while demand forecasts contract for 2Q/3Q.
- **Less Than Truckload Logistics -** While LTL volumes have likely continued to trend lower Y/Y, our work indicates carriers continue to pursue steady rate increases in contract (+2-4% Y/Y)

Sectors Seeing Negative Impacts / Facing Headwinds

- **Animal Health** - Vet visits continue to deteriorate which is slowing equipment purchases & advancing shift to online
- **Life Science Tools –** Consumables appeared to finished ahead of plan in 1Q, but 2Q outlooks have come down sharply over the last 2 weeks

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- **Retail Pharmacy** - Margin pressure has picked up for pharmacies, offsetting benefit of higher volumes in March
- **Generic Drug** - Generic supply shortages expected to increase significantly this summer
- **Orthopedics** – Feedback has turned increasingly worried on the pace of activity through 2Q+ as many hospital systems have put in place longer than expected holds on elective procedures (some as high as 3 months)
- **Dental** - Patient traffic/consumable sales are expected down 80-90% over the next 30-60 days while offices are restricted to emergency-only status
- **Enterprise Software (SAP)** - 1Q demand appears below expectations, starting to see deals defer until likely Sep / Oct timeframe
- **Consumer Electronics (Best Buy)** - 1Q comps likely pressured due to store closings, anticipate significant margin pressure
- **Department Stores** - Seeing Kohl's & Nordstrom request for payment terms extensions and broad forward order cuts
- **Specialty Retail** - Sales/margin pressure expected to persist into 2H for Ulta & Dick's Sporting Goods
- **Homebuilders** - We have seen some increase in cancellations & softer traffic showing up in new home communities
- **Auto Parts Retail** - Our work indicates auto retailers are particularly exposed to effects from social isolation and shutdown measures, as lower miles driven and loss of discretionary income more than offset a decrease in gas prices
- **Quick Service Restaurants** - Overall, believe that quick-serve is positioned to hold up better vs. dine-in/casual dining restaurants given stronger off-premise businesses
- **Foodservice Distribution** - Meaningful sales falloff over the last several weeks as coronavirus has impacted demand across local, chain, and non-commercial customers
- **Online Travel Agents (OTA's)** - Bookings tracking down 80%+ yr/yr; marketing spend on pause
- **Cruise Lines** - New bookings tough to come by but agents seeing decent portion of canceled cruisers elect for the future cruise credit vs. a full refund
- **Handbags/Luxury** - Store closures expected to persist through April; forward orders cut in light of elevated inventory
- **Lodging** - April RevPAR likely down 80% with many hotels closing; new deal interest largely on hold
- **Protein** - Beef packers, eggs see record margin expansion; near-term concerns loom with foodservice slowdown & retail panic frenzy slowing
- **Residential HVAC** - Feedback suggests demand has slowed to y/y declines over the last two weeks
- **Lighting** - Seeing double-digit y/y declines in daily sales due to weakening stock & flow and discretionary demand
- **Oil/Gas** - Continued oil price deterioration appears to be weighing meaningfully on industry activity & capex budgets
- **Construction Materials** - Starting to see a negative inflection in private demand, with public DOT work expected to remain steady
- **Automotive Suppliers** - US/Europe volumes slowing to a crawl, China improving (but slowly)
- **Construction Equipment** - Demand has softened over the past week on non-essential construction project delays/shutdowns leading to dealers cutting the outlook by 10% on average
- **Agricultural Equipment** - Activity appears to be largely stable to slightly softer in the U.S over the past week with the 2020 outlook looking about 5 points weaker vs flat previously
- **Heavy Duty Truck** - Further deterioration in the last week with suppliers now anticipating an additional 20% decline in sales vs prior outlook while dealers are anticipating an additional 30-40% drop vs prior outlook
- **Industrial Distribution** - Softer demand trends in recent days due to customer facility closings and initial fallout from oil and gas markets resulting in a 5 point reduction to sales outlook to down 5% on average
- **Trucking Logistics** - Research indicates an incremental softening in truckload volumes over the past week from COVID peak (1-2 weeks ago) as general freight weakness offsets non-food and beverage demand
- **Railroads** - We are beginning to see broad-based rail volume demand begin to be impacted due to COVID, with industrial customers lowering 2Q/3Q volume estimates
- **Ocean Freight** - Demand outlooks for 2Q and 3Q are declining due to broad based cancellation/delay of purchased orders due to COVID-19 end-market declines
- **IT Networking** - Projects characterized as hardware intensive, experimental, overly expensive, or net new vendor POCs are increasingly deferred or cancelled
- **Mobile / Apple** - Softer than expected foot traffic recovery in China + weak sell-through in NA and EU
- **Land Mobile Radio/Motorola** - Enterprise demand falling & public sector demand stalling in most recent week
- **IT Operations Management** - Work suggesting projects for net new deployments, use cases and customers are pushing out / canceling; partners reducing growth outlook and investments as a result
- **Digital Advertising** - Advertising spend cuts broadening in late-Mar, rate of decline likely accelerates In 2Q – CTV likely a bright spot.

Sectors Seeing Positive Impacts

<u>Enterprise IT:</u> Channel work continues to suggest upside on orders for setting up and securing remote work capabilities – view ZScaler, Okta, CrowdStrike, & Zoom as pure play names who are benefitting

- <u>Notebook computers</u> appear to be showing near-term acceleration, with potential for headwinds once remote workers configured
- <u>Endpoint security</u> seen benefitting from an increase in endpoints from WFH initiatives; hearing opportunity to continue transitioning former Symantec customers
- <u>Firewall</u> appliances appear to be seeing near-term tailwinds associated with increased North-South traffic into environment; longer term hearing of less traffic opportunity and slower rate of refresh, with potential for faster transition to cloud
- <u>Cloud native security</u> appears to be benefitting vendors addresses endpoint, access, and scalable approaches to infrastructure – cloud security expected to see longer term secular tailwinds with increased customer demand for scalability and remote access
- <u>Unified communications</u> demand showing dramatic acceleration in new customers and uptake – hearing collaboration tools such as Zoom, Teams ,& WebEx seeing growth rates increase by factors from previous levels (2-5x)

<u>Cloud – positive impact (Microsoft, Amazon, Google, IBM).</u> Demand appears to have picked up over the last 10 days as some projects are being pulled forward to react to COVID-19. Both Amazon and Microsoft increasing subsidies to fund migrations and assist customers in heavily impacted industries. Longer-term, expect cloud adoption to accelerate vs. prior pace as customers look to de-risk their business for any future pandemics / lockdowns.

- Cloud demand appears to be above partner expectations in 1Q from combination of pull-forward of projects, increased end customer consumption, and pockets of net new opportunities
- Some customers appear to be to be accelerating their cloud spend in light of COVID-19 to address demand (financial services, healthcare, grocery / food distributors, and public sector); while more heavily impacted industries (T&H, retail) are either reducing scope of projects or putting new projects on hold to focus on business continuity
- Azure customers have noted instances of over-capacity in Europe due to heavy consumption
- Increased subsidies from Microsoft and AWS to address potential spending shortfall; AWS increasing migration funding to 15% (prior 10%), while Microsoft is increasing upfront subsidies for migrations and funding OpEx for customers in heavily impacted industries
- Continue to expect slight impact on FY20 growth (~300-500bps) as sales cycles elongate and broader IT spending slows due to macro conditions

<u>eCommerce (Amazon)</u> – Amazon Benefiting from Accelerated Growth in Essentials; eCommerce Mix Shift Could be Long-Term Benefit: Our research indicates sales growth in essentials categories (food/consumables) has remained very strong online and on Amazon specifically over the past couple weeks. The share shift from brick & mortar to eCommerce also appears to be accelerating over the past 1-2 weeks as consumers stay at home more. The channel believes this could be sticky, and Amazon seems poised to benefit the most given its dominant market share in eCommerce. AWS also seems to be seeing some near-term sales benefits and should see medium/long-term benefits from the COVID-19 situation driving increased spending and share shift to cloud.

- Demand in certain essential categories have been significantly above expectations and prior year levels over the past ~30 days. In some instances demand trends are above Prime Day or Cyber 5 levels.
- It appears several large vendors have doubled-down on advertising spend with Amazon recently.
- Our work indicates demand for Amazon Fresh services have also been significantly ahead of expectations throughout March, with many noting sales could likely be even stronger if there weren't issues around out-of-stocks and labor constraints.
- The mix between .com and in store sales has shifted severely in recent weeks, in some cases .com sales have more than doubled Y/Y. There seems to be some optimism that similar trends will sustain over the coming weeks and will translate into a longer term impact for consumers who have permanently shifted.

Dollar Stores – Seeing Near-Term Stock-Up Benefits and Seen as Well Positioned Over Medium Term: Dollar Stores seem to be experiencing similar stock-up benefits compared to Mass Merchants and Conventional Grocery March-to-date (less than Club Stores), with some moderation in the last week. Dollar Stores seemed to start experiencing the stock-up benefit a bit later than other channels, but appeared to come on strong in mid-March before seeing moderation more recently (driven by people staying home, increased out of stocks, lower income consumer running out of money). Dollar stores appear positioned to win in a softer economic/consumer spending environment over the medium term (should see trade down).

- Demand trends in consumables categories appeared extremely strong across the dollar channel, with the peak of stock-up and panic buying likely occurring mid-March.
- General merchandise categories appear to have slowed beginning in early March.
- It appears sales in several key categories have moderated from the strongest levels mid-month, with feedback indicating the recent slowing is likely due to out-of-stock issues, value channel consumers having less income to spend at the end of the month, and more consumers heeding "shelter in place" orders across the country.
- The near-term outlook for many in the dollar channel suggests April is likely to trend closer to the final week in March (softer vs. peak sales trends but still strong on an absolute basis).
- There is some optimism that dollar channel retailers are likely to benefit from increased traffic if the economy weakens in the back half of the year.

Club Stores – Stock-Up Trips Appeared to Slow Last Week; Club Channel Still Seeing Biggest Benefit March-to-Date: Club Stores appeared to experience the second-best absolute growth rate last week among brick & mortar food/consumables retailers (behind dollar stores), but the growth rate looks to have slowed a decent amount compared to the prior couple weeks. Club stores seemed to see the earliest and biggest benefit from stock-ups among the various channels and still look to have experienced the strongest growth rate March-to-date by a longshot. The channel believes club stores are likely seeing increased member signups, which could drive a longer-term benefit.

- Sales trends in several food/consumable categories at Costco appear to have moderated over the past week, with feedback pointing to out-of-stocks, moderating of stock-up trips, and softer traffic in clubs (Costco limiting number of shoppers allowed in clubs).
- While sales trends over the past ~week have slowed vs. the trend earlier in the month, sales growth in many categories remains above pre-CODID-19 levels.
- It appears vendor managed inventory has sustained stronger in-stock levels vs. depot-fulfilled inventory.
- Many expect April sales trends to moderate vs. the month of March, with expectations for slower traffic and product availability issues to continue (still strong in absolute terms).

Conventional Grocery – Sales Growth Moderating Recently After Very Strong Performance in Mid-March, Still Strong in Absolute Terms: Conventional Grocers seemed to experience the third-best absolute growth rate last week among brick & mortar food/consumables retailers, but have slowed the most compared to the prior weeks, although we would note the conventional grocery channel appeared to experience the strongest growth rate of any channel the prior week. Conventional Grocers seemed to see the stock-up benefits slightly later than Club and Mass, but appeared to come on very strong in mid-March.

- Sales trends appeared to moderate across multiple key categories over the past several days, with most attributing the slowing to out-of-stock issues, consumers running short on money towards the end of the month, and softer overall traffic across retail as more people attempt to stay home.
- Large conventional grocery chains seemed to experience a spike in sales in mid-March, with many linking elevated stock-up trips to "shelter in place" instructions from different regions/local governments.
- Like many other sectors, vendors most impacted by stock-up activities have focused on manufacturing top-performing SKUs and limiting the variety included in their typical conventional grocery portfolio in order to streamline operations and get products to shelve as quickly as possible.
- The near-term outlook for many leans more cautious than March, with a moderation in sales trends compared to the unprecedented levels of demand in March, but still stronger compared to pre-COVID-19 levels.

Mass Merchants – Sales Growth Appeared to Slow Last Week, Although Year-Over-Year Sales Still Appear Up Significantly: Mass Merchants appeared to see the lowest absolute growth rate last week among brick & mortar food/consumables retailers, and have slowed the second-most behind Conventional Grocers when comparing growth over the past ~week to prior trends. The Mass channel seemed to experience stock-up benefits early, similar to Club, but appeared to peak at a lower level of growth compared to the club channel. General merchandise sales in the Mass channel seem to be worsening significantly over the past couple weeks, but not enough to offset the strength in food/consumables.

- Several mass merchants appeared to benefit from stock-up activity in late February/early March in several large regions in the US.
- There appears to be a significant divergence in sales growth between food/consumables categories and most general merchandise categories. Our work indicates there are pockets of discretionary categories that have performed very well recently.
- The outlook for the next ~30 days for many includes expectations for sales growth to continue to level off but remain strong compared to prior year levels. There does not appear to be as much conviction in raising/lowering 2H sales forecasts at this time.

Managed Care - **COVID Could Be A Near Term MLR Tailwind As Drop Off In Elective/Preventative Volume Appears To Be Offsetting Increased COVID Costs.** Early indications point to COVID being a 1-3% hit to medical costs should the virus become widespread, but our research suggests that the fall off in non-emergent care utilization could more than offset the increased costs associated with COVID. While there is increased concern over commercial membership pressures due to layoffs and furloughs across many businesses, we believe these pressures could be somewhat mitigated by steps that health plans are taking to open up eligibility requirements, special enrollment periods, as well as stimulus funding for small business health care premiums.

- Hearing that elective procedures have dropped off substantially over the past two weeks which is likely more than offsetting increased COVID volumes.
- Net result of COVID could end up driving 2020 medical cost trend lower on a national basis depending on severity of outbreak.
- Medicare Advantage plans may have higher exposure to serious COVID cases, but capitation and risk sharing could help offset some of that risk.

Digital Health – **Shift to online/virtual experiences expected to be sticky.** We continue to hear of increases in online engagement, enrollments and virtual health visits as individuals look to avoid in-person interactions, and an increasing expectation that these interactions are more likely to occur online in the future.

- Research points to some health systems moving a majority of routine appointments to telehealth/virtual health over the past two weeks.
- Hearing of a significant increase in interest in online enrollment tools and capabilities from insurance agents and brokers.

Senior Living - **Costs likely increasing, while outlook appears mixed**. Given the change in visitor rules and concern over spread of COVID, we have heard that operating costs for Senior Living communities have increased across PPE, supplies, and labor. At the same time, we have heard some examples of slowing inquiries from potential residents due to economic uncertainty, but demographics still remain a tailwind for potential growth rates.

- Change in visitor rules as well as COVID prevention measures have resulted in increased costs and new processes.
- Stay at home orders and social distancing has likely delayed timelines of resident move ins and information gathering from prospective residents.

Pharmacy Benefit Managers - PBM Mail Order Growth Outpaced Overall Script Growth In March. Research indicates mail-order growth at PBMs/Payers (CI, HUM, UNH) has outpaced overall industry growth over the last 3 weeks and we are hearing of increased activity to ensure that the volume is retained post-COVID.

Medical/Surgical (Personal Protection Equipment) - **Med-Surg Research Indicates PPE Supply Should Show Improvement Over Next Several Weeks**: As it is widely reported, PPE/mask supply remains very tight in several areas of the country. Based on our research, we believe supply should start showing improvement over the next several weeks with a significant improvement expected in 30-60 days. Feedback we have received indicates China recently opened up and is allowing exports after filling their own stock piles. What is challenging to assess is whether the increase in supply will be able to meet the accelerating demand from COVID-19.

Sectors Seeing "Mixed" And/Or Not Seeing An Impact

IT Components – Memory: Mixed overall with demand strong near-term, risk in 2H. DRAM and NAND pricing trends for 2Q moving higher, with moderation expect in 2H. Research suggests 2H demand moderation could start in late-2Q due to supply shifts from mobile to server, weak consumer demand for mobile/PC, and potential inventory build in Cloud and PC/server OEMs.

- Server DRAM pricing looking up high-teens q/q. Supplier confidence appears to be varying, with some suppliers expecting ASP strength through 1H and others seeing softer demand towards the end of 2Q due to shift of mobile bits to Server.
- eSSD pricing looking up low/mid-teens % q/q in 2Q. Fulfillment on eSSD improving in 1Q vs 4Q19. Supply somewhat looser than prior. Some signs that WD may be exiting the SAS SSD market, potentially loosening Intel supply for eSSD over time.
- Client SSD demand looking better than seasonal as OEMs rebuild inventory and see near-term uptick in commercial PC refresh. Channel SSD demand looks to have slowed in late-March, with 2Q outlooks weaker.

IT Components – Hard Drives: Mixed overall. Near-term upside demand, with risk to 2Q production and moderating 2H demand. HDD vendors look to be seeing logistics challenges in the Philippines and Thailand, likely leading to increased vendor costs. Production issues in the Philippines are expected to hurt fulfillment rates and supply chain sources express uncertainty on how quickly HDD vendors can make up for 2-4 weeks of downtime. The production impact from lock-downs in Thailand is unclear at this point. Due to higher logistics costs and reduced output, WD and Seagate are expected to increase pricing in 2Q.

- Toshiba Philippines production appears to have halted for 1 week in Mid-March and currently running at 20-30% workforce. WD Head facility in Philippines also facing issues – we hear workforce resumption near 50%. Uncertainty whether disruption can be made up for in 2Q.
- Recent Thailand closure causing uncertainty on Seagate and WD production and assembly. Buyers appear to be pulling forward orders/deliveries to increase buffer stocks. This, paired with disruption in Philippines/Malaysia could cause a shortage in the near-term.
- HDD vendors likely to push for price increases in 2Q as they are facing much higher logistics costs and reduced output at a time demand is improving. We see potential for vendors to successfully pass along price increases during 2Q following limited success on similar efforts at Seagate during 1Q.
- Research suggests upside to HDD demand across form factors in 2Q as Cloud, Server, and PC buyers react to order pull-forward from end-customers and look for upside ahead of potential supply constraints. Industry participants expect end-demand growth and component orders to slow in 2H.

SaaS – mixed impact (ServiceNow, Atlassian, Salesforce, Adobe, Workday, Anaplan). Expectations across SaaS vendors have moderated over the past two weeks, however, we are seeing impact varied across vendors. ServiceNow and Atlassian seem to be faring the best thus far.

- ServiceNow and Atlassian feedback has been most optimistic with 1Q tracking ahead of plan as their offerings appear best suited for COVID-19 environment given ability to support remote IT and HR departments, service desk capabilities, and collaboration among teams
- Salesforce and Adobe more mixed as we have seen project delays / cancellations intensify over last 10 days; digital transformation projects seen being put on back burner for now, but there are pockets that likely will benefit from COVID-19 such as ecommerce (also benefitting Shopify), digital marketing, customer service, field service.
- Workday and Anaplan appear seeing the most negative impact as demand appears to have fallen over the last two weeks as HR and EPM upgrades are seen deferring near-term in favor of business continuity / cost savings projects
- Long-term, all vendors are expected to see a resurgence in demand due to greater expected acceleration towards cloud-based solutions as a result of COVID-19

<u>Contact Lenses</u>– Significant Online Shift Appears To Be Offsetting Office Closures. Our research indicates that contact lens demand has held up relatively well over the last two weeks as both patients and doctors shifted to online/telephone channels. In the near term, new fit growth is expected to slow dramatically given office closures, and market share is likely to be relatively stable as current lenses are more likely to be renewed.

- Many OD's are extending prescriptions and filling orders for 3 month supplies, but new fit growth (15% of market) likely to drop materially
- Shift to online sales appears to be offsetting physical office closures in the near term, but there is concern over how long that might last.
- Hearing that supply chains are not a concern for most major manufacturers

<u>Pharmaceutical Drug - Script Growth Has Likely Peaked & Slowed Over The Past Week.</u> Our research indicates that demand for scripts and front end categories has slowed significantly over the past 7 days. Specifically on scripts, we believe due to PBMs relaxing refill requirements and encouraging 90 day scripts, scripts had likely grown in the 15-20% range yr/yr through the first 3 weeks of March. Over the last week, we believe scripts have likely declined -3 to -5% yr/yr.

<u>Homecenters:</u> 1Q-to-date results appeared to be running ahead of expectations, with comp trends improving through March. Homecenter paint departments look to have seen the biggest boost in POS (up 10%+ to date in 1Q) with strength also seen in key building materials, seasonal, and small ticket categories as well.

- Traffic in the paint department at the homecenters looks to have been up 10%+ over the past week (through 3/20). DIY paint and sundries look to be driving the category, up 30%+ in the same time frame and well above expectations. Our work shows neither homecenter is planning for a slowdown in the departments, with strong orders rolling in through the end of March.
- As expected, cleaning products have seen a notable spike in demand in recent weeks due to consumers stocking up. Homecenters are struggling to maintain in-stock levels in cleaning categories and suppliers look to be eating into safety stock inventories.
- We are hearing heavy inventory levels at Home Depot RDCs is putting pressure on day to day operations. So far, this has meant no change in orders into these RDCs (through 3/27), but the heavier inventory levels are leading to above-average lead times for product being shipped to store locations. Home Depot looks to be having a problem keeping RDCs fully staffed as employees are starting to call in sick or not show up out of fear of the virus. Order quantities/demand for next week could be reduced to manage the heavier inventory (may recover after that) as HD focuses incrementally on moving "essential" products.

<u>Building Product Suppliers</u>: Demand in seasonal categories, DIY paint, and appliances looks strong to this point, benefitting from an early spring, more time at home to tackle DIY projects, and stock-up demand. Some forward-looking indicators like new home community traffic and quotes/leads in commercial and residential end markets suggest demand could ease looking into 2Q. Demand in Europe looks to have been quite soft through March.

- Over the last week, paint demand has had days up 6-7% across markets with shipments running above, up 8%+. The run rate for orders in the West Coast has trended above the rest of the country, up double digits over the past week. Home Depot does not appear to be slowing down any orders going into the paint department.
- Sales into the builder end market are expected to slow dramatically as traffic declines worsen and builders switch to an online-only selling model (notably lower conversion rate). April sales into the homebuilder end market are expected to be down 40%+, a notable step down from March. There is some speculation builder end markets could bottom in May, with recovery beginning in June.
- Sales into discretionary categories such as decorative lighting and fashion fixtures look to be seeing a greater negative impact from the virus, with consumer demand dropping off after roughly the second week of March (down 20%+ since).
- Appliance sales appeared strong through March, finishing the month up 15%+ in the independent channel (gaining share near-term). We have seen Lowe's starting to shut down in-home delivery services over the last 14 days in parts of the US, including FL which represents a large elderly population who require assistance for appliance installation.
- Mohawk looks to have revised numbers lower for their residential business (carpet, wood, laminate). The drag has been primarily carpet and wood-related (less-so laminate). Our work indicates MHK has cut their volume forecast by 15% for balance of March, and is now forecasting residential volumes down 30% in April and down 25% in May.

- DIY home improvement in Germany looks up 10%+ through March. Without pubs or restaurants, people are home and working on their homes. The rest of Europe has seen major slowdowns as each country has closed. March looks to finish down 40%+ across Europe home improvement, with that trend likely continuing in 2Q.
- Sales in seasonal categories have held in at retail through the end of March – up 15%+ (year/year) even through last weekend (3/21-3/22). Home Depot, Lowe's, and Walmart have all maintained above average order rates through the end of May. Current inventory levels at Home Depot look to be able to carry them through April.

<u>C-Stores:</u> We view c-store foodservice as one of the better positioned segments within foodservice during COVID-19. This is due to consumers already being on-site for gas and in some cases coming in to stock-up on grocery items. Also, c-stores are recognized as essential businesses (vs. restaurants which are increasingly being closed for dine-in or closing all together). It appears front-end retail sales at c-stores are benefiting from incremental stock-up trips in food/consumables, similar to the other retail channels we cover (mass, club, dollar, drug).

- Prior to the outbreak, our industry research had indicated that convenience foodservice same-store sales in Jan/Feb looked strong primarily due to more favorable weather to start the year. In the last 1-2 weeks, operators noted seeing a fall-off in F&B sales/traffic as well as gallons. The prepared food and beverage business looks to be seeing double-digit declines on a year-over-year basis as more people are working from home and not commuting/traveling given shelter-in place orders and social distancing.
- Within our industry work, some c-store chains noted seeing an increase in retail sales the last 1-2 weeks given consumer stock-up trips (varies given the chain's grocery selection). For those who seeing a surge in demand here, key categories look to include: beer, cigarettes, essential grocery items, packaged drinks, and snacks. This seems to have moderated a bit over the last ~week.
- We are hearing that some chains with an established delivery business look to be seeing increased delivery sales during this time. We are also hearing some examples of chains looking to offer home delivery via third-party aggregators for the first time on their food, beverage, and retail categories to help offset in-store traffic declines.

<u>Seed Industry – Mostly Business as Usual But Concerns About Profitability, Competition, and Weather Growing</u>: The biggest changes to the industry thus far have come from a heightened sense of urgency to deliver seed to the farm and concerns that weather challenges or declining corn futures from ethanol plant shutdowns could shift some acreage from more profitable corn seed to less profitable soybean seed. Our research suggests the Enlist platform is likely to achieve at least 20% market share this spring and is reaching levels as high as 40% in some markets, but soybean pricing across the industry is expected to be down 7% this year due to aggressive pricing actions taken by Stine to promote Enlist. We are still hearing that no major y/y changes in corn seed pricing or market share shifts are likely.

- It does not appear that Bayer made any meaningful attempt to maintain market share this year and instead choose to hold their pricing Xtend soybeans to avoid the price war that has plagued Enlist E3 soybean. Enlist E3 soybeans have seen strong sales volumes and many of our conversations indicate that 20% market share this year is achievable.
- The most noticeable impact from Covid-19 has been a greater sense of urgency to get seed delivered to the farm and our research suggest that 70-75% of seed orders have been delivered to the farmer with corn orders trending above soybeans. Should transportation become an issue there are ~10% of late-season seed sales that have yet to be made and could be at risk but the industry appears relatively unconcerned.
- The financial health of the row-crop farmer is becoming an area of greater contention. Our contacts expressed concern for the farmers who decided not to sell their grains in anticipation of higher prices and are now sitting with grain in their bins at basis levels that have deteriorated as a result of lost ethanol demand. Our conversations point to financed sales being historical higher than normal while cash sales to have trended below expectations.
- As we progress into the planting season we expect to see more acres shifting from corn to soybean. Our research suggest that many farmers are still concerned about a wet planting season, weak commodity corn prices, lenders providing less credit to the farmer, and tighter budgets this year all of which favor planting soybeans.
- As a result of disruptions to corn seed production last year it appears certain corn varieties are in short supply. Early maturity corn varieties appear to be the most impacted from the disruptions and that the major manufacturers are relying on their South American winter corn seed production to meet US orders.

<u>Crop Protection Industry: Mostly Business as Usual with Some Extra Competitive Pricing</u>: We now expect crop protection pricing to come in flat for the year (vs. our prior expectation of LSD%) as generics have been able to take advantage of lower AI prices out of China in order to price more aggressively. Most of the industry has built up inventory levels by now and there is little concern for product shortages as a result of the virus. US pre-emergence herbicide volumes expected to increase if weather normalizes, US insecticide has greater potential this year since mild winter may have killed fewer pests and Brazilian farmers benefiting from weaker Real. The greatest concern is over raw material availability in 2H20 and F21 if COVID-19 disrupts the production of active ingredients in China (where over 50% of Ag Chem AIs are produced) or India which just instituted a 3 week shutdown as well as weaker US farmer economics next year.

- Inventory levels at the retail and distribution level appear to be adequate as most of the industry began building inventory levels prior to the coronavirus outbreak. Active ingredient prices out of China have weakened particularly for the following products: glyphosate, bifenthrin, pyridine, metalochlor, and imidacloprid.
- Our conversations point to generics becoming a larger threat to branded crop protection products this year. This is largely a result of branded manufacturers becoming stricter on their loyalty programs, generic manufacturers taking advantage of lower prices out of China, and farmers becoming more willing to use generics in order to have 5-7% on input costs.
- Branded products have been unable to increase products at the LSD% rate that they had hoped for due to the reasons mentioned above. Pricing for branded products is now expected to be flat for the year.
- Brazil looks to be seeing heavier adoption of branded crop protection products as farmers benefited from strong soybean prices for their first crop and have been able to lock it strong corn prices for their safrinha crop. Our conversation indicate that Brazilian farmers have traded up in seed genetics and have a greater willingness to invest in higher quality crop protection products for the safrinha corn crop.

Airfreight: Airfreight prices appear to be increasing 3x-4x vs pre-COVID rates primarily due to reduced capacity (passenger flights), while demand forecasts contract for 2Q/3Q.

- Our research indicates the cancellation of passenger flights continues to constrain available capacity, increasing spot rates from carriers heading into main US airports in the $6-$7/kg range.
- We are hearing large forwarders (such as EI, DHL, DSV) are declaring force majeur on their airfreight contracts allowing them to void their customer contract rates and get price increases. Rates have likely increased 75%+ on major trade lanes, some moving with as high as a 200% premium.
- Our research shows airfreight expectations for 2Q volumes out of China to be ~50% lower Y/Y while 3Q expectations remain uncertain. As most freight is currently moving on the spot market, only urgent production materials are capable of bearing the spiking rates.
- Airfreight demand appears to be worse versus last week as retailers and non-tech shippers shift back to Ocean; tech shippers are the strongest users of airfreight.

Less-Than-Truckload: While LTL volumes have likely continued to trend lower Y/Y, our work indicates carriers continue to pursue steady rate increases in contract (+2-4% Y/Y) as cadence of selective discounting remains steady versus pre-COVID levels.

- LTL carriers are lowering 2020 tonnage expectations from +2-3% to down 0-2% Y/Y as a result of COVID-19. We are hearing 1Q volumes have declined 3-6%.
- Our research indicates Old Dominion Freight Liner and other LTL carriers remain price disciplined and securing 2-4% rate increases (vs +4-6% in 2019); we continue to hear a steady cadence of isolated discounting from certain LTL carriers (similar to prior 6-9 months) selectively lowering price (0-2%) to grow market share.

Sectors Seeing Negative Impacts / Facing Headwinds

Animal Health – Vet Visits Continue to Deteriorate Which Is Slowing Equipment Purchases As well As Advancing the Shift to Online: Our research indicates vet hospital visits continue to slow to down 25-35% this past week. Our research indicates the decline in visits is leading to a corresponding decline in pharmaceutical volumes as well as less equipment purchases (such as diagnostics). We are seeing a sizeable portion of the volumes shift online to Chewy, Covetrus and others. Overall, vets are anticipating 2Q to be very soft but are expecting to bounce back quicker than most areas of healthcare.

- Vet hospital visits are declining quicker than a week ago. We are seeing much worse decline in income/traffic/revenue and much worse staffing issues due to employees not wanting to come in.

- We are hearing home delivery sales are up 200%+ in the quarter. We believe Chewy is the main beneficiary.
- The virus is making it very difficult for Zoetis to launch their new blocker buster product (Simparica Trio) due to reps not being allowed to visit clinics.
- We have also seen many vets stop purchasing large equipment to preserve cash. We believe the bottom 5-10% of clinics are at risk for closing which will accelerate the pace of consolidation.

Life Science Tools - Consumables appeared to have finished above plan in 1Q due in part to some products experiencing as much as 30% growth in the month of March, many reporting it was the month on record. The stronger than expected growth was driven by some benefit from COVID testing being augmented by large pharma companies and academic institutions stocking up as some accounts likely purchases as much as 3x their typical purchase in the last 2 weeks of March.

- While it appears consumables demand likely came in ahead of plan for 1Q, with exceptional growth in March augmenting stable demand in January/February outlook for 2Q has come down sharply in the last 2 weeks as it appears many manufacturers likely benefited from pull-forward across many products used in routine lab testing. At this point expectations are for the benefits from continued COVID testing to be more than offset by many labs that stocked up in March now being either shutdown or operating on a skeleton crew responsible for maintaining only core functions.
- Analytical instrument businesses likely experienced a steep slowdown in the last 2 weeks of March. It appears some large corporate accounts have begun canceling opportunities or differing purchases in an effort to preserve capital in case funds are needed elsewhere should the current environment continue past April. While most expect capital instrument projects to go through once everything is back to normal, we suspect some of these project will be lost into 2021.
- Capital instrument sales were likely impacted in March as a result of Universities labs closed across the US and Europe as orders were unable to ship in many cases as previously planned. Additionally, some Oil and Gas customers have begun reaching out to post-pone orders to later in the year despite previously planning to take shipment in 1Q/2Q. This impact is likely to be felt into 2Q and is now expected to create downside to recently adjusted 2H20 forecasts.

Retail Pharmacy - Margin Pressure Has Picked Up For Pharmacies, Offsetting The Benefit Of Higher Volumes In March. Retail pharmacies indicate gross and operating margins have been under pressure despite the higher volumes over the past 3 weeks driven by script mix (90 day vs. 30 day), reimbursement pressure, and less favorable cost of goods as they were chasing product outside of what was preferred on their wholesaler generic program.

- **Generic Supply Shortages Expected To Increase Significantly This Summer.** There is growing concern over generic supply shortages hitting the U.S. market in the August timeframe given the KSM disruptions in China and now significant issues in India.
- **Drug Store Front End Sales Appear To Have Peaked A Week Ago**: Our research indicates that FE sales through the first 3 weeks were up 50%+ yr/yr, but have since slowed with key categories down yr/yr outside of a few key areas. The areas seeing the most significant declines are OTC (cough/cold, allergy), consumables and personal care. One pocket of continued strength are items that are being consumed such as vitamins and some widely reported items that are stocking out such as hand sanitizers, household cleaners and zinc.

Generic Drug: Generic Supply Shortages Expected To Increase Significantly This Summer. There is growing concern over generic supply shortages hitting the U.S. market in the August timeframe given the KSM disruptions in China and now significant issues in India. While generic pharma production was excused from the 21 day shut-down, generic manufacturers indicate they are reducing the number of shifts they run at their plants due to high absenteeism. In addition, we are hearing that there is a significant shortage of containers and workers at the ports to get product that was already made to be shipped out.

Orthopedic Industry – negative impact. Over the past week, channel commentary from the industry has turned increasingly worried on the pace of activity through 2Q+ as many hospital systems have put in place longer than expected holds on elective procedures (some as high as 3 months). Overall, we're now anticipating both US and European elective procedures to be down 63% in 2Q which compares to down 47% a couple weeks ago. We're also beginning to hear expectations that trauma-related cases will be negatively impacted by the lockdown/stay-at-home orders across the US and Europe. Overall, we expect the declining outlook for orthopedic volumes to place even further pressure on hospital Capex budgets into 2H+ given the high margin nature of many of these procedures.

- The yr/yr decline for orthopedic and spine cases at hospitals where elective surgeries have been cancelled is likely going to be in the 90-95% range for the duration of the cancellations since most orthopedic cases are non-emergent. The impact could linger longer than expected as well given many large health systems are cancelling elective procedures for as long as 3 months.
- Hospitals and manufacturers are now looking for the negative impact to expand beyond elective cases – trauma volumes in particular are now expected to see significant declines in 2Q due to fewer accidents and falls.
- Hospital capital budgets haven't necessarily been changed at this point but absolutely everything is on hold. 100% of everyone's focus is COVID so hospitals aren't even discussing any capital projects. If hospitals were buying something else capital-related, it is probably delayed right now – everyone is just focused on getting testing up and increasing capacity to handle the expected influx of patients. Electives drive a lot of revenues and profit dollars for most health systems and what most systems do when they're running below budget is hold and regulate capital expenses. Systems will hold those capital resources to make their budget.

<u>**Dental Industry – negative impact**</u>. **Research suggests dental patient traffic/consumable sales are expected down 80-90% over the next 30-60 days while offices are restricted to emergency-only status and some large DSOs and large consumable manufacturers now expect to lose 3 full months of patient visits and sales.** Specialty, higher ticket areas/products are expected to be most impacted. Dental equipment is expected to be under significant pressure and outlooks are coming down substantially given the office closures, stock market declines and potential issues with equipment financing. While it is too early to tell the intermediate and longer-term impact on the industry, there is growing concern that reopening of dental offices could be delayed as personal protective products are allocated to medical and that the impact of lost revenues / cash flows for individual dentists and smaller DSOs could accelerate consolidation.

- Many consumables manufacturers now expect to lose at least three complete months of sales. Sales dropped off sharply in mid-March and are expected to decline further to down around 90% in April.
- Large DSOs are also preparing to be essentially closed down for 3 months. Patient traffic and cancellations both worsened since mid-March and the closures and emergency-only status of many offices is expected to remain through at least the end of April – and likely longer.
- High tech equipment vendors are expecting significant challenges going forward – 2Q sales are expected to be effectively zero for as long as offices are closed and then the recovery is expected to be slow in 2H given the financial strain on many offices (including both DSOs as well as private practices). Overall, equipment manufacturers aren't expecting a return to yr/yr growth in 1Q21 at the earliest.

<u>**Enterprise Software (SAP) – negative impact.**</u> **1Q demand appears below expectations, starting to see deals defer until fall timeframe.** FY20 outlooks negatively revised as preexisting ERP and HR upgrades get put on hold and net new opportunities dry up.

- SAP appears to likely finish 1Q below plan, 2Q pipeline coming down as ERP upgrades slow while customer prioritize other IT projects to enable remote work and save costs
- Overall, partners moderating 2020 outlooks with expectations for flat to down 5% Y/Y in headcount for SAP practices vs. prior positive single digit growth as ERP and HR projects are seen as being deemphasized in uncertain macro
- Cloud – SAP likely to extend Embrace partnership to Amazon in 1H20 and potentially Google in 2H20, will help open up new resell channels and also support cloud migrations / BYOL models
- Expect SuccessFactors growth (largest component of SAP's cloud business) to slow to potentially flat in FY20 vs. prior 15-20% growth; Ariba and Hybris likely see increase in demand to support cost savings and ecom initativs
- Timing of ECC upgrade deadline to 2027 viewed as unfortunate as customers are now seen as having a reason to defer previously planned projects

<u>**Consumer Electronics (Best Buy)**</u> **– 1Q Comps Likely Pressured due to Store Closings, Anticipate Significant Margin Pressure:** Best Buy appeared to be seeing growth ahead of company expectations through February and into early March, followed by an improvement in mid-March due to strength in stay-at-home categories. All Best Buy stores closed starting 3/22 and our research points to sales declines in the 50-65% range early last week following the closures. We estimate Best Buy 1Q comps could be down ~20% in a base case due to store closures, partially offset by

the mid-March sales improvement and some assumed eCommerce recapture. We believe it will take time for comps to recover after stores re-open based on some pull forward of demand into mid-March, softer consumer discretionary spending, and share shift to online.

- Several categories appeared to experience a significant slowing in sales trends this past week as Best Buy stores are closed as of 3/22 (curbside and ship to home options available at most locations).
- Our work suggests Best Buy will likely offset a small portion of lost sales/in store traffic with stronger digital sales trends in coming weeks.
- We are hearing there is potential for Best Buy to gain share from Amazon in CE categories as Amazon has turned off orders in several non-essential categories recently.
- The outlook for Best Buy remains especially unclear due to variability in timing of store closings and consumer willingness to spend on discretionary categories if the economy weakens in 2H20.

Department Stores – Seeing recent Kohl's & Nordstrom requests for payment terms extensions and broad forward order cuts. Our research has indicated a further acceleration in retailers asking vendors for payment terms extensions and forward order cancellations as store closures continue to extend in April. Channel feedback over the past few days has pointed to recent payment extension requests from Kohl's and Nordstrom. Nordstrom also appears to be planning to ramp up promotional/markdown aggressiveness to clear the current inventory overhang. Lastly, channel feedback suggests that the Lord & Taylor chain (~$1.4 billion in sales) is planning to permanently close stores and liquidate inventory near-term.

- Nordstrom also appears to be planning to ramp up promotional/markdown aggressiveness to clear the current inventory overhang. The company seems to be seeing some success converting customers online when there is a price offer (asking vendors for collaboration on creative offers/ promotions to move the product on-hand)
- We are hearing further concern on the 2H outlook based on forward order cancellations and feedback on a slow rebound in apparel sales in China so far (looking at 30-40% declines in 2H sales on average)
- We are hearing that retailer fall order books could be getting cut by 70-80% with most vendors anticipating 30-40% cuts
- Kohl's seems to now be extending payment terms to 100 days dating for all payables arising from purchase orders *prior* to March 16 (compared to extended 60 day term for orders *after* March 16 prior)
- Nordstrom is cancelling orders through May and likely including June. Sounds like Nordstrom plans to continue with Anniversary Sale in July. Nordstrom said they are extending payment terms (reducing the ACH float and increasing payments to 2/x week)

Specialty Retail – Sales/margin pressure expected to persist into 2H for Ulta & DSG: Similar to our dept. store coverage, Ulta and DSG experienced a significant fall-off in comp store sales trends mid-March. Comps decelerated further to finish March due to temporary store closures which we expect to extend through at least mid-April. Our research suggests headwinds to comps/margin likely extend through 2020 and into 2021 for Ulta and DSG. We are seeing 2H forward order cancellations and forecast reductions. DSG also appears to be extending payment terms (90 days for national brands and 120 for private brands).

- Feedback suggests Ulta store sales/traffic slowed meaningfully ahead of store closures on 3/19 (likely down ~60% March week 3). Digital (10% of total sales in 1Q) appeared to accelerate prior to store closures and likely trended up ~60% in March weeks 2/3 vs. over 30% growth last quarter
- Ulta appeared to see a pronounced acceleration in haircare categories ahead of store closures likely due to stock-up and DIY salon replacement (pro haircare, hair color, nail)
- Ulta doesn't appear to be getting meaningfully more aggressive on promotional activity or adjusting 21 Days of Beauty execution. Feedback suggests Ulta is managing promotions so as to not overwhelm its ability to fulfill online orders from DC's.
- Channel works suggests Dick's comps trending down ~30% in March and feedback suggests further pressure in April due to challenging apparel, footwear and spring team sports demand
- DSG appears to be ramping up price/promotional activity 1Q-to-date with more digital flash sales and brands pulling back MAP restrictions
- Our work suggests DSG is beginning to cancel and/or reduce forward orders for 2H across most categories (~35% reduction on average) and taking a more conservative stance on the 4Q/holiday outlook

<u>Homebuilders (DR Horton, Lennar, PulteGroup)</u>: We have seen some increase in cancellations and softer traffic showing up in new home communities. Closing activity, reflecting orders over the last 30 days looked largely in-line, however our work suggests suppliers/peers expect lower volumes of new orders as well as closings in April with latest foot traffic trends being down 60%+ broadly. Our work has shown builders incrementally investing in online strategies (virtual tours, online closing capabilities) as they are starting to wrestle with declining foot traffic and consumer activity in response to social distancing measures.

- Lower-priced homes are starting to see cancellations tick higher by 6-8 points this week (3/22) versus last week. Homebuilders look to be shifting focus toward product availability in an effort to close homes by the end of 2Q. Shipments into homebuilders are seeing a boost because of this effort, up 10%+ in March versus January up 5% and that momentum looks to continue into April. May and June shipments into builders could be down 20%+ as order and build activity slows down due to virus disruption, unemployment, and more consumer uncertainty.
- Traffic numbers week-to-date (3/25) have been worse than last week. Entry-level communities are also now seeing sharp declines. Traffic appears down 75-80% on average across geographies, with some builders setting in for a longer-term change in operations. Nearly all major builders are redesigning sales to be done virtually and contracts to be signed online.

<u>Auto Parts Retail</u>: Our work indicates auto retailers are particularly exposed to effects from social isolation and shutdown measures, as lower miles driven (less commutes, travel, etc.) and loss of discretionary income more than offset a decrease in gas prices. Suppliers are forecasting sales in March/April to be down 10%+ vs flat year/year pre-virus as retailers look to draw down inventory in response to the decrease demand. The expectation of an above average spring selling season supporting 2020 growth similar to 2019 now looks to be off the table for auto part retailers.

- The auto retail environment typically performs well under times of economic stress, however a decline in miles driven coupled with a mild winter look to be headwinds for the industry over the next 3-6 months.
- Sales in appearance chemicals look to have finished down 4% last week after starting the month strong (up 15%+) due to warmer weather. This looks to be the beginning of consumers pulling back on discretionary spending within auto retail.
- The current environment looks to be particularly challenging for garages in highly infected areas (NY, CA), with most shops stating to lay off mechanics for a few weeks to save cash.
- Car count at garages looks to be down substantially as more appointments have been canceled. For now, commercial shops are expressing a lot of apprehension about the future, worried about meeting payroll over the next few months. We expect a minimum of 60 to 90 days disruption, and comps down 3-5%+ while social distancing and virus concerns continue.
- POS in auto parts retail looked to have taken a meaningful step down the week of 3/22, as positive sales in the beginning of the March quickly turned negative across a number of DIY and DIFM categories. This appeared driven by a sharp slowdown in weekly traffic. Negative sales started showing up in our work around mid-March, continuing and yet to bottom out through the end of March.

<u>Quick-Serve Restaurants</u> - Overall, we believe that quick-serve is positioned to hold up better vs. dine-in/casual dining restaurants given stronger off-premise businesses. Our research suggests the quick-serve space has not been impacted as much as casual diners or independent restaurants at this point. We believe that a down 30-50% comp scenario is reasonable for quick-serve concepts (helped by strong off-premise/drive-thru sales). As you would expect, it appears that breakfast has been hardest hit during the week (no commuter traffic) and on weekends (less people out) with comps likely down ~50%. McDonald's has more exposure to breakfast (~30% of business) vs. its peers.

- Wendy's comps are now down about 30% including breakfast sales. Last week the comp number was closer to 20%, so it has gotten worse. Without breakfast sales it appears the brand would be down closer to 40%. Traffic declines are being offset by steep average ticket increases.
- Our research suggests we are seeing a dramatic fall off in the McDonald's business. Last week the brand appeared down 30% with breakfast looking to be down closer to ~50% since no one is out in the morning.

<u>Foodservice Distribution</u> - Distributors look to have experienced meaningful sales falloff over the last several weeks as coronavirus has impacted demand across local, chain, and non-commercial customers.

- Foodservice distributors likely seeing 50% or greater drop in total case growth over the last week with declines likely continuing/increasing in April before potentially bottoming out in the -50-60% range (magnitude of declines varies by segment).
- At this point, it appears that most distributors are reacting to the changing environment and following a similar playbook to reduce costs and develop a retail grocery option.
- We would expect to see clearer strategies emerge over the coming month and sales declines likely begin to settle and distributors look to position themselves for a world after coronavirus.

Online Travel Agencies – Bookings tracking down 80%+ yr/yr; marketing spend on pause.
Feedback suggests travel demand continues to disappear globally. Over the last 7-10 days, we are hearing yr/yr bookings declines down 80%+ in the US and Europe. Cancellations continue to outpace new bookings but appears to have moderated over the past week. Our research indicates ~80% of hotels in Europe and the US have entirely suspended online marketing (Google search and metasearch), with expectations for this to remain the case for at least ~4 weeks on average.

- Travel demand and marketing spend in Europe and the US are largely on pause
- Metasearch (Google Hotels, Trivago, Tripadvisor) spend down 80-90% yr/yr last week in both US and Europe, compared to 1H March down 20-30% and HSD growth in Jan/Feb.
- Hearing CPC to maintain top position has fallen 60% in mid-March compared to the year-to-date trend
- Online bookings over the past week appear down ~90%. US and Europe worsening, slight improvement in China
- Cancelations are outpacing new bookings by 2-3x. The pace of cancelations has likely moderated
- Industry participants expect OTAs (Expedia, Booking.com) to gain 3-4pts of market share (compared to Marriott.com, Hilton.com, etc.) in 2020

Cruise – New bookings tough to come by but agents seeing decent portion of canceled cruisers elect for the future cruise credit vs. a full refund. Commentary from travel agents continues to point to essentially a pause in new booking activity and minimal near-term promo from the cruise lines. Travel agents are report a healthy % of clients opting for the future cruise credit offering as opposed to a full refund, though most have yet to apply it to a future booking given the uncertainty on when the cruise lines might return to operations. Pricing commentary remains mixed, with the 2H of 2020 sounding more heavily discounted while 2021 picture is still developing, and the cruise lines still opting to pull any lever to stimulate business before cutting price.

- Bookings still on pause with almost no new business coming in, and not seeing much push from the cruise lines for 2H20 marketing as cruise lines aim to save on spend
- Silver lining is that future cruise credit offerings are a good deal, and most who have canceled have opted for the cruise credit vs. the cash refund
- More likely to see a gradual return from the cruise lines, a handful of ships at time vs. all at once and accompanied huge and broad based price cuts. Cruise lines know that the return on filling every bed in the near-term does not outweigh the long term cost of slashing price.
- Bargain hunters and experienced cruisers will be the first to come back and take advantage of any favorable pricing in the near-term, likely will take a while for new-to-cruise and less experienced travelers to regain an appetite for cruising.

Handbags/Luxury – Store closures expected to persist throughout April; forward orders cut in light of elevated inventory. Feedback suggest handbag brands continue to reduce order volumes in the event that store closures could extend into May. April topline could be down 80%+. It sounds as though Coach, Kate Spade, and Michael Kors order volumes have been drastically reduced up through fall seasonal product, with holiday orders yet to be visited but likely to be reduced as well. eCommerce sounds somewhat mixed by brand, but like more moderate in handbags compared to other categories. Industry feedback suggests elevated promotion levels should continue into fall.

- Volume cuts are broad-based across all brands we are working with, including Coach, Kate Spade and Kors. Generally seeing them go through fall seasonal product at this point, everyone swimming in inventory and no one wants anything new.
- Feeling the pain of the order cuts reverberating through the supply chain, headcounts in the supply chain being reduced. Factory closures in Philippines and Indonesia could spread to Vietnam and Cambodia.

- China market is opening back up slowly but surely. Consumer is still a bit leery, staying home as much as possible, but traffic declines improving to the down 30-50% range in some cases vs. and slowly rebounding from when stores were closed.
- Expecting eCommerce channel to remain modest in handbags/underperform other categories/apparel. More discretionary purchase with lower demand right now.
- Everyone trying to get out of seasonal product at this point, which is more likely to trickle into off-price or sell at heavily discounted prices. Expecting the industry to remain quite promotional through the year to right-size inventories and stimulate demand.

Lodging – April RevPAR likely down 80% with many hotels closing; new deal interest largely on hold. Industry participants expect hotel occupancies to remain at trough levels through the month of April and begin to moderately improve/show less severe declines over the remainder of the year. Reaction to govt. stimulus money is tempered as hoteliers remain unsure on the details on how easily and when they can expect to receive the additional funding.

- People still unclear on how the stimulus money will work out, how to get their hands on it. Many looking for temporary debt deferrals at the moment and freeing up enough cash to re-hire employees and re-open hotels when people are ready to start traveling again.
- For hotels that are still open, running occupancies in the HSD/teens levels, which is driven by healthcare, and some extended stay construction travel. Low occupancies expected to continue through April.
- In terms of1H Groups that cancelled, 20-30% re-booked for either the 2H of 2020 or 2021, with many of those at risk to cancel again if travel bans are extended/companies tighten up on spend.
- Corp transient still a wild card tougher to predict, largely dependent on how hard of a hit corporates are taking; leisure demand will rebound slowly, will be some pent up travel as early as memorial day if things open back up, but longer to get to full strength with many losing their jobs/financial security.

Protein – Beef Packers, Eggs See Record Margin Expansion; Near-Term Concerns Loom With Foodservice Slowdown & Retail Panic Frenzy Slowing: Our research indicates that beef packing margins (+$430/head to a record $560/head), egg prices (+145% since last month) over the past two weeks were the biggest protein winners from the panic shopping spree at retail over the past several weeks with breast meat and pork prices also winners. With the exception of eggs, meat prices have started to retreat quickly with bacon, ham, beef tenderloins and breast meat seeing the largest declines over the past several days and expectations are for middle meat cuts in beef and bacon to see the most downside over the next several weeks and months.

- Weaker pork demand, particularly for bellies, and added uncertainty over the export outlook for China and Mexico (which faces a currency devaluation and a macro deterioration) is expected to continue pressuring the pork cutout value over the coming months. Most of the industry is expecting packing margins to begin deteriorating in the coming weeks.
- We hear that retailers have been purchasing 2-3x what they would normally order, but much of the industry expects retail demand to slow over the next several weeks. Promotional activity at retail has seen a meaningful slowdown as nearly any meat put on the shelves has been purchased leaving little incentive for additional promotions.
- Chicken and pork are expected to fare better than beef from a shift to retail from foodservice. We have heard of more aggressive promotions for middle meats (a cut that is used heavily by foodservice) during the summer month which is typically the peak beef season.
- Breast meat prices have begun to soften after rallying from $0.87 to $1.35/lb a week ago. It doesn't appear that retail demand will be enough to offset the losses to the foodservice channel meaning there will be a substantial amount of chicken in the market over the several weeks until restaurant traffic begins to return.

Residential HVAC – Feedback suggests demand has slowed to y/y declines over the last two weeks: Feedback from a variety of HVAC distributors, OEMs and suppliers suggest that demand has started to deteriorate in mid-March amid coronavirus concerns with daily sales slowing due to as much as double-digit declines. While it is still early, contacts are reducing their outlooks with commentary suggesting a mid-to-high single-digit decline vs 2019 currently appears realistic.

- Commentary over the last two weeks suggests that demand slowed notably in the back-half of March with daily y/y sales trending down as much as double-digits due to coronavirus concerns
- Feedback suggests that demand through the first 2.5 months of 1Q were already trending below expectations due to unfavorable weather.

- While it is still early and there is a lot of uncertainty, contacts are negatively re-adjusting their full-year outlooks with expectations for y/y sales declines.

Lighting Industry – Seeing double-digit y/y declines in daily sales due to weakening stock & flow and discretionary demand: Our research indicates that lighting sales haves fallen significantly over the last two weeks with daily sales down as much as 25%-30% y/y with particular weakness in the stock & flow and discretionary channels. While bidding activity remains strong and ongoing, large projects are still shipping, this is expected to moderate through April and May.

- Feedback suggests that demand for lighting manufacturers has fallen off significantly in the last two weeks of March with daily sales trending down ~20%-30% y/y with particular weakness in stock & flow and discretionary channels.
- Agents continue to ship ongoing projects and while order activity is outperforming shipments input activity is expected to moderate in 2Q.
- Commentary on demand through the first two months of the quarter was below expectations with sales tracking down 1% vs flat in our last update.
- Contacts are currently revising their full year outlooks during this uncertain period, with new full year outlooks finishing down high single digits as demand is expected to remain slow in the future.

Oil & Gas – The continued deterioration in oil prices appears to be weighing meaningfully on industry activity and capex budgets. While the slowdown of the global economy appears to be weighing on demand for oil, the collapse in oil prices is primarily a result of the supply shock caused by the price war between Saudi-Arabia and Russia as both countries have significantly increased production. Feedback suggests that even in the event of a coronavirus recovery, oil & gas is expected to remain weak barring a dramatic increase (>100%) in oil prices.

- Contacts are expecting an uptick in project delays and cancellations due to customers not being able to sustain operations with oil prices below $40
- Contacts expect oil & gas is expected to remain weak even with a coronavirus recovery.

Construction Materials – Starting to see a negative inflection in private demand, with public DOT work expected to remain steady: Our research indicates over the past week there has been a negative inflection in the private market as homebuilders put a pause on new projects and some commercial projects get delayed or cancelled. Public market demand appears steady/strong and feedback indicates most DOTs intend to keep putting out work (possibly at a slower pace) barring any incremental state-by-state restrictions on construction.

- Homebuilders seen shutting down new construction in various areas, limiting subdivision jobs for materials suppliers. Commercial jobs such as municipal buildings, schools, athletic stadiums, and shopping centers have also been delayed until further notice.
- Work suggests DOT activity has remained steady, with many such as Georgia, Virginia, Texas, and others still running at full speed and helping offset the decline in private construction for some.
- Bidding activity seen as slowing, with some noting dealers who put out 30-40 bids a day are now down to single digits per day.
- Research indicates contacts see 2Q private job volumes down 20-25% y/y, on average, with some expecting as much as down 50%.

Automotive Suppliers – US/Europe Volumes Slowing To A Crawl, China Improving (But Slowly): Our research indicates supply chain issues are still present in Asia despite China nearing "normal" (production up to ~80-90%). In North America and Europe, Tier 1 design activity has remained active, but there appears risk to new models/vehicles in development. Production volumes are near a stand-still as Tier 1s appear to be closing plants this week after running at a reduced rate to build some inventory.

- Our work indicated China operations are near "normal", with production back up to 80-90%, though with some supply chain issues related to closed SE Asian factories (Philippines and Malaysia mentioned specifically).
- China new vehicle demand still remains an issue and is likely to weigh on production, though the government has lifted some license plate restrictions to help stimulate consumption.
- Tier 1 suppliers have started to shut down in North America this week, with a few Mexican factories still operating to build inventory in anticipation of OEMs resuming production.

- New models/vehicles that are in preproduction development appear to be at risk, with sourcing activity taking a pause on some models and GM already telling suppliers to stop retooling plants for upcoming launches.

Construction Equipment – Demand has softened over the past week on non-essential construction project delays/shutdowns leading to dealers cutting the outlook by 10% on average and additional plans to cut inventory. Rental activity appears stable but some concern is growing over residential equipment returns.

- Suppliers report order cancellations from national rental houses, although dealers are optimistic rental demand could bounce back 2H20.
- Most dealers are operational in parts and service and seeing demand.
- Dealer orders have not been delayed but customers have started to push orders back by 30-90 days and running projects with a skeleton crew.
- Dealers report concern should 2Q not rebound as order backlogs have been pushed back with limited new orders coming in.

Agricultural Equipment – Activity appears to be largely stable to slightly softer in the U.S over the past week with the 2020 outlook looking about 5 points weaker vs flat previously. Europe sales are tracking down 20-25% with expectations of a 30% decline for the year depending on the length of the shutdown.

- Quoting activity remains strong but dealers anticipate a reduction as customer's air on the side of caution.
- The 500bps reduction in outlook appears to be 80% weather related and only 20% virus related, while some dealers believe ethanol weakness could begin to hit equipment demand in 6-9 months.
- Retail activity continues to be strong outside of softer sales in small tractors and mowers.
- Feedback suggests all nonessential employees are working from home, dealers are offering curbside only and have limited one technician per bay. Vendors are no longer allowed onsite.
- European dealers think higher wheat prices could boost farmer sentiment.

Heavy Duty Truck – Heavy truck markets have further deteriorated in the last week with suppliers now anticipating an additional 20% decline in sales vs prior outlook while dealers are anticipating an additional 30-40% drop vs prior outlook. Fleets appear to be reevaluating their replacement orders this year.

- Quoting activity appears to have gone silent but there appears to be minimal if any cancellations or back up deliveries.
- Fleets are struggling to adhere to current replacement plans as manufacturer's shut down and are considering rushing purchases in the near-term.
- Capex budgets appear to still be intact.

Industrial Distribution – Industrial supply channel has begun to see softer demand trends in recent days due to customer facility closings and initial fallout from oil and gas markets resulting in a 5 point reduction to sales outlook to down 5% on average. Healthcare and defense markets are bright spots.

- Distributors are focusing on driving down inventories in addition to extending terms by ~60days.
- Manufacturers appear to be reducing their 2020 outlook while modeling the coronavirus through the end of 3Q and oil and gas risk through the end of the year.
- Contacts are looking to reduce employee hour's vs layoffs at this time.
- Competitive dynamics appear unchanged while commentary suggest Grainger and Fastenal are best positioned.

Trucking: Our research indicates an incremental softening in truckload volumes over the past week from COVID peak (1-2 weeks ago) as general freight weakness offsets non-food and beverage demand. Forward-looking volume forecasts remain limited, but expectations have been lowered vs 30 days ago. Spot market TL prices appear to be moderating vs 1-2 weeks ago. We expect TL contract rates to be down at least 3-5% Y/Y in 2020 contracts.

- Shippers appear to be seeing minimal rejections on contract rates (first load tender acceptance above 90-95% target), with 2020 contracts seeing rates down 3-5% Y/Y (vs 2019 down 5-15%).

- We have seen moderation in spot market demand (and rates) vs peak 1-2 weeks ago due to unplanned volume and abnormal patterns, with retailers asking carriers to deliver straight to their stores (rather than distribution centers); food and beverage volumes have spiked 50-100% in early March, while suppliers of the restaurant industry are likely down 50-75%. We are seeing freight volumes from retail and industrial markets slow over the past 1-2 weeks.
- Spot market rates appear to be stabilizing W/W but remain higher M/M and Y/Y as demand levels off.
- TL carriers are still seeing instances of surge requests to replenish essential freight vs 30 days ago, but at moderating levels vs 2 weeks ago (when initial government restrictions and social-distancing directives began going into effect).
- Flatbed TL volumes are likely declining 10%+ and we are hearing similar volume expectations through April.

Rail/Intermodal: We are beginning to see broad-based rail volume demand begin to be impacted due to COVID, with industrial customers lowering 2Q/3Q volume estimates. As a result, railcars (empty and loaded) are incrementally placed into storage. **Intermodal demand appears to be negatively impacted, but contract pricing remains unchanged vs 30-60 days ago (down 0-3%).**

- Rail volumes continue to drift downward as most end markets experience COVID-19 related impacts. Coal volumes appear lower due to a mild winter and less manufacturing. Intermodal volumes are likely reduced by up to 10% in 2Q as most retailers remain shutdown. Ethanol has seen heavy demand destruction caused by stay home orders across the country. Meanwhile, grain, lumber, and home improvement markets are less negatively impacted.
- We are hearing a large increase in private railcar storage requests (tankcars/covered hoppers) as raw material demand is slowing for chemicals and industrial products. We are hearing storage requests for loaded and empty railcars.
- Rail pricing appears relatively steady vs 60 days ago, with industry contract rates to increase 2-3% Y/Y. We continue to expect intermodal rates to customers to likely decline 0-3%+, with incremental downside risk.
- Commentary indicates CP and CN are prioritizing all rail cars for essential medical and food products. Non-essential retail shutdowns have likely lowered general market volumes by ~10%+ for the carriers.

Ocean Freight/Warehousing: **Demand outlooks for 2Q and 3Q are declining due to broad based cancellation/delay of purchased orders due to COVID-19 end-market declines.** Ocean rates are likely flat Y/Y in upcoming contracts, with incremental downward pressure on spot market rates due to weak demand trends. Channel commentary indicates logistics/warehousing providers are seeing increased demand for in-transit inventory storage/warehousing due to COVID-19, with limited available capacity creating space constraints.

- Our research indicates ocean demand is down 20-30% Y/Y in 1Q with expectations for poor performance extending into 2Q and 3Q as shippers are cancelling/delaying orders.
- Ocean contract rates are likely flat Y/Y with spot market rates likely moving lower over the next 60-90 days, with ocean carriers trying to limit further price declines through capacity reductions.
- We are hearing luxury brand products are completely shutting down forward orders (down 80%+) for 2Q. Brands in more budget segments are likely still filling replenishment orders, but with much lower demand Y/Y.
- Ocean demand outlooks are falling vs 60 days ago as end-market demand in Europe and US slows, with our work indicating forward orders from retail shippers down 10-20% for 2Q and 3Q.
- Shippers are seeing warehouse space fill up as demand for storage/warehousing is likely up 50%+ Y/Y creating capacity constraints and delays in shipment deliveries.

IT Networking: **Projects characterized as hardware intensive, experimental, overly expensive, or net new vendor POCs are increasingly deferred or cancelled**

- Evaluation of new networking and security vendors appears to be at risk – customers seen deferring these projects
- Large switch and datacenter refresh projects have been called out as more at risk among partners
- Container evaluation strategies appear to be deferring – viewed as more complicated
- Professional services engagements suggesting moderation in April, May, & June; current pipelines suggesting June activity levels are especially weak

- Beginning to hear of fall out in the independent channel as smaller resellers are commencing lay-offs or shutting down

Mobile - Softer Than Expected Foot Traffic Recovery in China + Weak Sell-Through in NA and EU: Our research indicates iPhone sell-through is trending down 20-40% Y/Y at US and European carriers, with demand expected to worsen through April & May. Carriers also suggested they are not seeing an increased in online iPhone sales. Feedback from China service providers also appears below expectations – conversations suggest store traffic and discretionary spend has been soft for the past 2-3 weeks since store have reopened. The pending launch of the iPhone SE2/9 is believed to have pushed from March to May/June, and the 5G iPhone launch is believed to have deferred from September to October. Industry volume assumptions appears to now be targeting a 10% decline in smartphone sales for 2020 (original target +1% coming into the year).

- US & Europe – sell through appears to be trending down 20-40% Y/Y in February-March
    - Service providers & retailers appear to be shutting down majority of stores as states impose travel bans & lock-downs
- China appears to be re-opening some stores – initial traffic below expectations
    - Work suggests some retailers & carriers have begun to re-open stores in China in the hopes there would be some pent up smartphone demand
    - We hear initial traffic has been below expectations and discretionary spend (especially on high end smartphones) in China is weak, as the economy has slowed
- Expect some demand destruction as ~10-15% of mix can shift to online sales
    - Work suggests ~10-15% of mix can shift from Brick & Mortar to online sales while stores are closed down
    - We expect ~40% of sales currently are transacted online, meaning the remainder of sales will either get pushed to later in the year, or not transacted altogether
- Supply chain appears to be adjusting forecasts down 10-15% vs prior levels
    - Over the last month – supply chain appears to have negatively revised smartphone market forecasts from flattish to down 10-15% Y/Y for 2020, as OEM orders have begun to correct

Land Mobile Radio– Enterprise Demand Falling & Public Sector Demand Stalling in Most Recent Week: Our work suggests enterprise demand (30% of end market) has fallen sharply in recent weeks with notable exposure to hospitality, retail, energy, & other heavy industries. Enterprise demand appears to be falling 10-20% Y/Y in the near term, with new projects largely deferred or cancelled (suggesting additional deterioration in forward quarter). Work is also suggesting public sector customers (70% of end market) are increasingly moderating. Public sector feedback suggests emphasis is increasingly allocated to hospitals & healthcare response, resulting in deferral of programs, inability to reach individuals responsible for deployment & service initiatives, and delays in moving projects forward. Discussions have also suggested some public sector customers have suggested the potential for pausing or cancelling existing programs due to funding concerns through the year and uncertainty about the future tax receipts with potential erosion of the business/tax footprint.

- Commercial end markets moderating across most end markets
    - Hospitality, retail, energy, & other heavy industry appear most at risk from shutdowns
    - Also hearing utility customers beginning to pause/defer existing upgrades
- Public sector customers suggesting some weakness in last week
    - State shutdowns being compared to federal shutdowns seen in 2013 & 2018 – projects on pause as difficult to get individuals on the line and nothing new going into motion
    - More public sector interested allocated to healthcare response
    - Some initial concerns with potential erosion in the business footprint suggesting risk to tax receipts in next several years
- New public sector initiatives for command center and surveillance expected to defer at least 6 months
    - Opportunity for new incremental spend in command center and surveillance expected to delay
    - Hearing some concerns on the potential for a re-think on command center architecture from a consolidated monolithic approach (all call center employees under one roof) to a more distributed model

SIEM/Analytics/IT Operations Management – Work suggesting projects for net new deployments, use cases and customers are pushing out / canceling; partners reducing growth outlook and investments as a result.

- Splunk partners in aggregate appear to be reducing growth forcasts to account for lack of net new opportunity in this environment. Partner are not expecting 2020 growth of +0-10% vs. prior levels of +20%.
- Discussions suggests partners are seeing net new opportunities (new customers, projects and new vendor POCs) pushout to later in the year or cancel altogether.
- Our work suggests current Splunk customers continue to grow spend at a similar pace as before in verticals that have seen less COVID-19 impact. However, we have also seen a number of verticals (hospitality, travel, energy) pausing existing programs, cancel new opportunities, or completely defer spend.
- New use cases appear to be an opportunity with COVID-19 – seeing interest around monitoring usage of VPN, endpoints (seeing massive spike since WFH initiative), and IT ticketing.

Digital Advertising: Advertising Spend Cuts Broadening in Late-Mar, Rate Of Decline Likely Accelerates In 2Q – CTV likely a bright spot. Agencies/partners appear hopeful for some recovery during 3Q/4Q but agencies express uncertainty. Pricing noted as declining across the board due to higher usage (supply) and less spend (demand). Our research points to test budgets and branding budgets as the first budgets cut. Research suggests Google and Facebook best positioned to retain spend due to DR presence.

- March spend looking down 10-20% vs. plan but varies dramatically based on vertical exposure. Broadly speaking, agencies and advertising planning for ad spend down 15-30% below plan in 2Q.
  - Verticals seeing strength: eCommerce, Education, Politics, Financials, some CPG
  - Verticals seeing weakness: Shut down brick and mortar (Malls, Gyms, Retail), Travel, Entertainment, Legal
- Hearing many brands paused spend during late March to re-evaluate Marketing strategies and messaging.
- CPMs looking lower across the board – declines ranging from down 10% to down 25% in March. CTV CPMs seeing the least pressure.

Longer-term, Digital and CTV viewed as potentially benefitting from traditional media share gains. TV attempting to offset cancellation of premium sports upfront deals.

- Digital advertising platforms vying for billions of dollars that traditionally have been spent around sporting events. Over the long-term, disruption to TV and OOH advertising this year could lead to a broader shift away from traditional mediums towards digital.
- CTV budgets expected to grow in 2020 despite ad budget moderation. CTV viewed as potential outlet for TV spend. Pipeline of customers evaluating CTV expanding due to 1) easy activation, and 2) ability to manage CTV budgets with flexibility.

APPENDIX

Important Disclosures

Important Disclosures can be found at www.cleveland-research.com/clients/disclosures

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