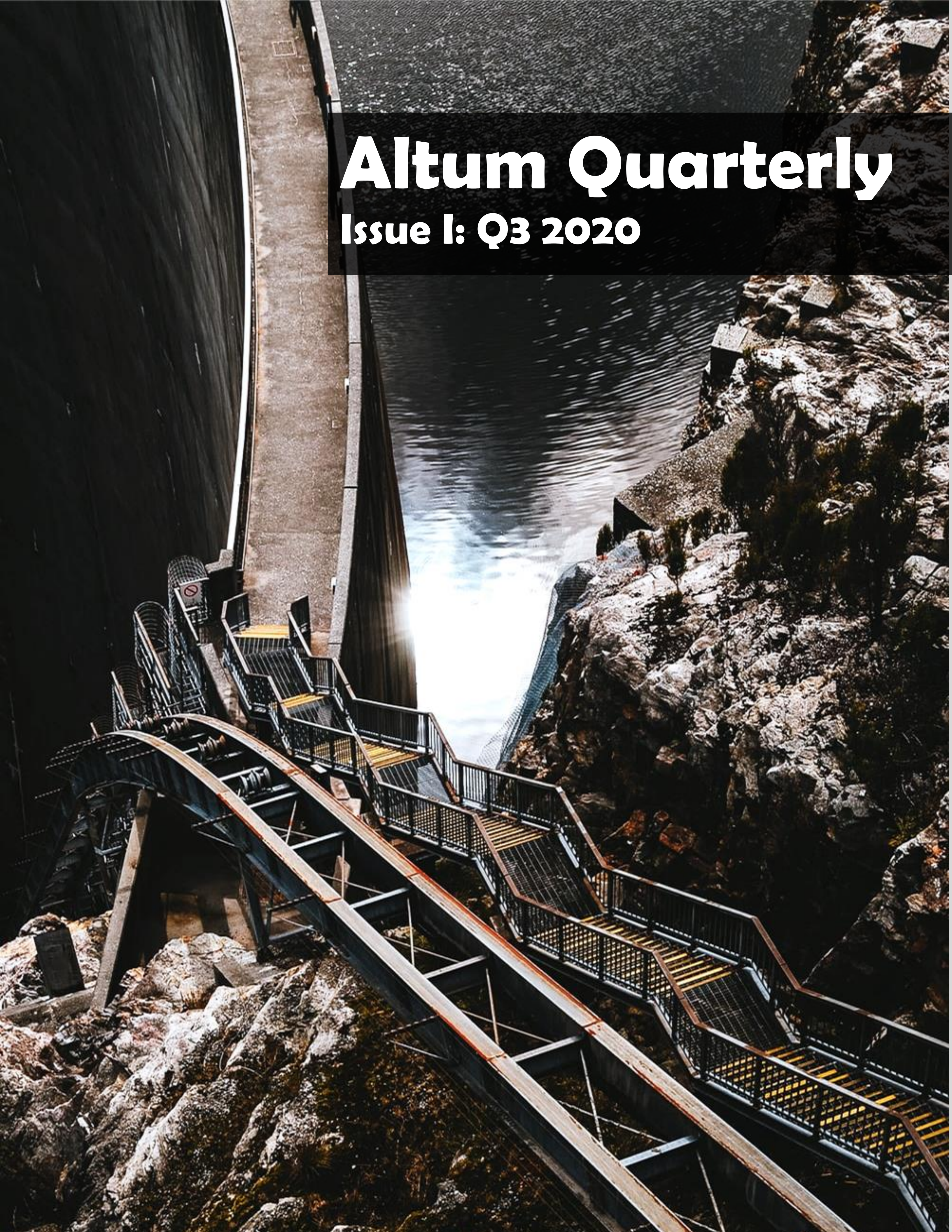
Altum Quarterly

Issue I: Q3 2020



Section One:

RETAIL BUSINESS

After months of quarantine and phased recovery (depending on where you are in the country), it is clear that standard operating procedures in retail have changed forever and will continue to change as health and economic implications of the novel coronavirus evolve. Key-changes in retail landscape are the following:

What has changed!

- Changes in discretionary income – some have more savings, others devastated
- Sales shift to E-commerce and Omni-channel platforms, e-commerce is now "commerce"
- Fulfilling orders are more expensive due to safety protocols + higher labor costs as supply chains are stretched beyond "normal" limits

How to cope with current state and how to prepare for the next-normal

- Confronting the reality and combat the "Ostrich Effect," reading the new-market and rethinking about "the next-normal consumers," and adapting to the new-normal across all aspects of your business (staffing levels, office vs. remote, sales funnels, etc.).
- Revenue-stream optimization and VCM maximization through right-pricing, especially where market dynamics nearly require raising price to avoid stocking out of inventory.
- Alternative organizational/operating models to adopt the new-normal, engaging HR and leadership across the enterprise to get a literal and figurative temperature check of all staff.
- Accelerating end-to-end digital capabilities: apply AI and deep learning to improve business operations. According to McKinsey & Company, "we have vaulted ten years ahead in consumer and business digital penetration in less than three months." That said, those who "get it" and those who don't will exit this pandemic further apart than they were in 2019.
- Image, or as engineers love to say, "simulate", the future. Get ahead of your competitors, plan-ahead, and do capital investments if needed. This is not the time to avoid investments that may have outsized payoffs in the near future.
- M&A and partnerships: like-for-like acquisitions, vertical or channel expansion. Target companies are likely to be less expensive and roll-up strategies will favor scale players with cash, or deep financial backing (private equity, access to public markets, etc.).

Plan-ahead: collecting forward-looking intelligence, developing scenarios, and identifying the options and actions needed to act tactically and strategically for the next-normal.

Convert these into tactical plans that can be executed, especially in the event that the pendulum swings in the other direction (whatever that means for your business).

Launch your e-commerce platform, if have not done it yet. E-commerce borders are expanded.

These days, everything could be sold online, even bulky, heavy, need-to-be-tested-prior-to-purchase products such as mattress! It's not too late, the "ship has not sailed" and most people who claim to have knowledge of e-commerce are faking it until they make it.

Section Two:

VALUE/SUPPLY CHAIN

COVID-19 pandemic face supply chain executives with several complicating factors: demand spikes in some sectors, and historic declines in others; variations in manufacturing capacity among geographical regions, with uncertain timeframes for a return to normal operations; and capacity and cost changes across every logistics mode.

What to do next?

Create end-to-end transparency: Start collecting data; list supply deficits, demand spikes/drops, and functionality of all legs of your supply chain during the pandemic. *Data is gold!* Work with teams across your organization to extract and refine "messy" data – nearly every organization has all of the data it needs, but few are able to extract it and bring it to the forefront of leaders across the organization such that sound decisions can be made.

Master your supply chain, its dynamics, and bottleneck(s): Refine your data, connect dots between critical components and figure out the cascading impacts (or as economists call, the rippled impacts) between your supply chain elements. In short, understand the dynamics of your supply chain … this not only helps you to better operate under the Extremes, but also enhances your operational readiness under the next *business-as-usual*, aka *new-normal*. Remember, nothing behaves in a linear manner, so don't fall prey to the false comforts of overly simple frameworks.

"Model" your supply chain: Come up with some rules: If ***X*** happens, then ***Y*** will happen. Based on rules, figure out the operational nature of your supply chain. If your supply chain is functional under extremes, call it a resilient system and be proud of it. Very few companies have resilient supply chain infrastructures. Figure out the obvious and non-obvious relationships across your supply chain, especially between the internal and external nodes, and factor in the human elements that may cause it to under or over perform your model assumptions.

Your model is not God-given: Do not over-analyze your data, never fully-rely on your model, and only use it to figure out the big picture. As George Box, a British statistician, once said: "all models are wrong, some are useful."

The best uses for your model will be showing you exactly where things break down so you can focus in those areas that are the most opaque. Grab multi-functional teams to solve these situations as they will be the ones that require a business-wide lens to solve.

Extremes are black swans: … & never ever repeat under the same fashion. Do not prepare for another pandemic with the same criteria. It will not happen again, as it never did before. Yet, be prepared for ***disruptive events***, plan-ahead, calibrate your platform to risk exposure, and make sure you will not be caught flat-footed.

Do not be the person with the best umbrella in the middle of an earthquake.

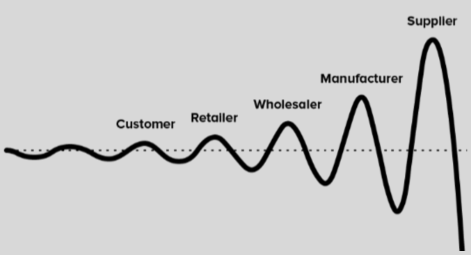
Preparing vs over-preparing: Except for (re)insurance industry, no business model is set or should be set to be fully resilient in the face of extreme events: that is extremely costly, inefficient, and non-optimal. Your supply chain should be optimal in time of business-as-usual, with some preparedness properties for extreme-events. All of this planning and effort is not free, in fact, doing this planning now is utilizing your most expensive resource in the sense of opportunity cost.

Do the right work, not all the work, as you will soon find yourself outgunned by those who truly did the 80/20 exercise required.

Section Three:

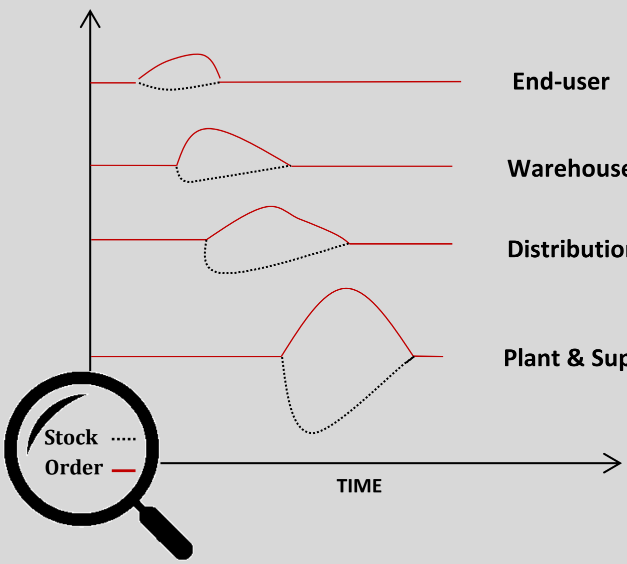
STAY CLOSE TO YOUR INVENTORY KPIs BY UNDERSTANDING THE BULLWHIP EFFECT

Bullwhip Effect is a well-known phenomenon in supply chain leading companies to have either an excess or lack of inventory through misguided forecast. In the following we briefly explain this phenomenon.



When you're holding a whip, a small flick of the wrist creates ever-increasing amplitude down the length of the whip.

The bullwhip effect refers to increasing swings in inventory in response to shifts in consumer demand as one moves further up the supply chain. Because customer demand is rarely perfectly stable (even in time of business-as-usual), businesses must forecast demand to properly position inventory and other resources. Forecasts are based on statistics, and they are rarely perfectly accurate. Because forecast errors are given, companies often carry an inventory buffer called "safety stock".



Moving up the supply chain from end-consumer (down-stream supply chain) to raw materials supplier (up-stream supply chain), each supply chain agent has greater observed variation in demand and thus greater need for safety stock. In periods of rising demand, down-stream participants increase orders (what we currently observe in many industries including e-comms).

In periods of falling demand, orders fall or stop, thereby not reducing inventory (perhaps, we later see this in Q4 2020).

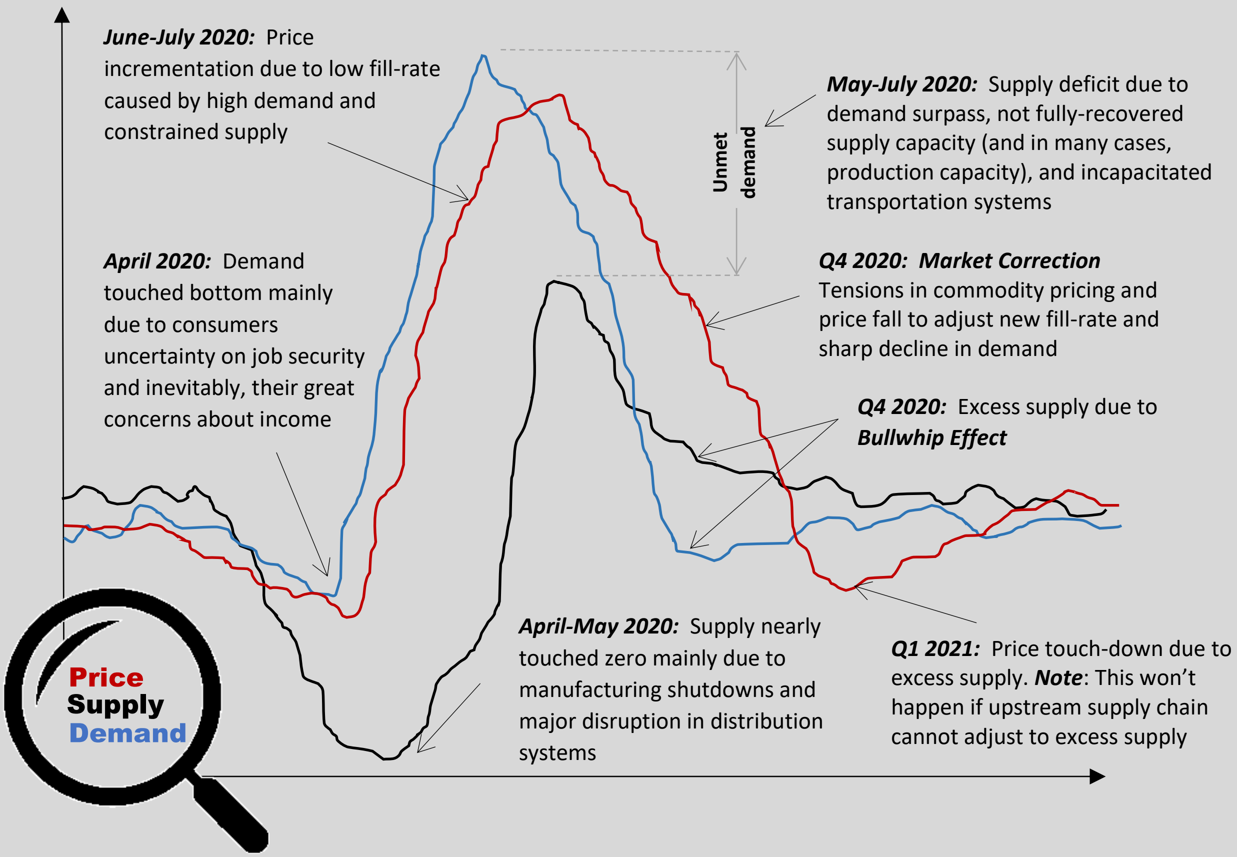
Countermeasures:

Recommended strategies to limit the bullwhip effects are the following.

- Vendor-managed inventory (VMI)
- Just in time replenishment (JIT)
- Demand-driven MRP
- Strategic partnership
- Information sharing
- Eliminate pathological incentives
- Order smoothing

Section Four:

THE DYNAMIC BETWEEN WILLINGNESS TO PAY, & CONSUMER BEHAVIOR



Past Normal

Adjusted for inflation, the economy's overall size will be smaller post-COVID. However, ***assets will be re-allocated*** across different industries; meaning some sectors will gain larger market caps, and some will shrink in size.

Next Normal