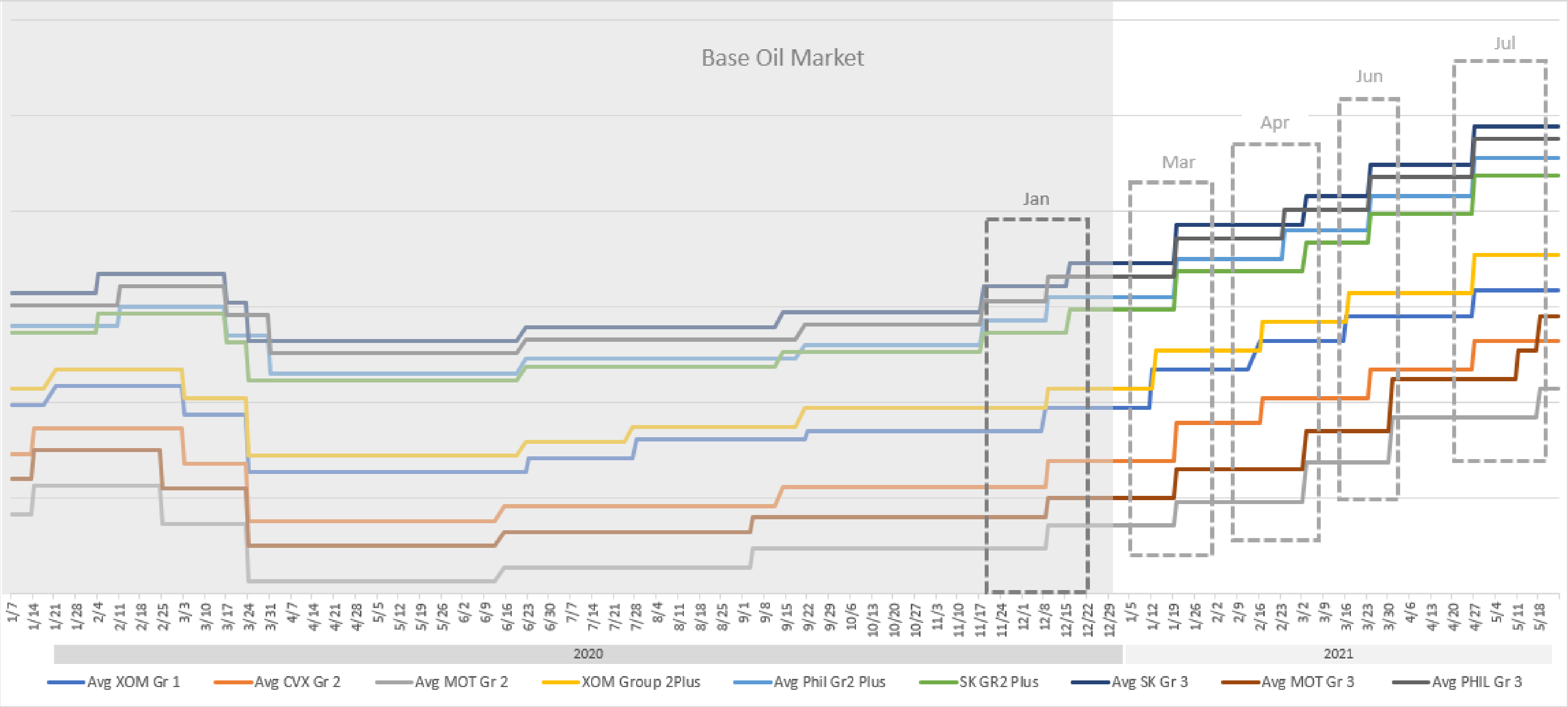
US Market Conditions

July 2021

Base Oil Market Trend

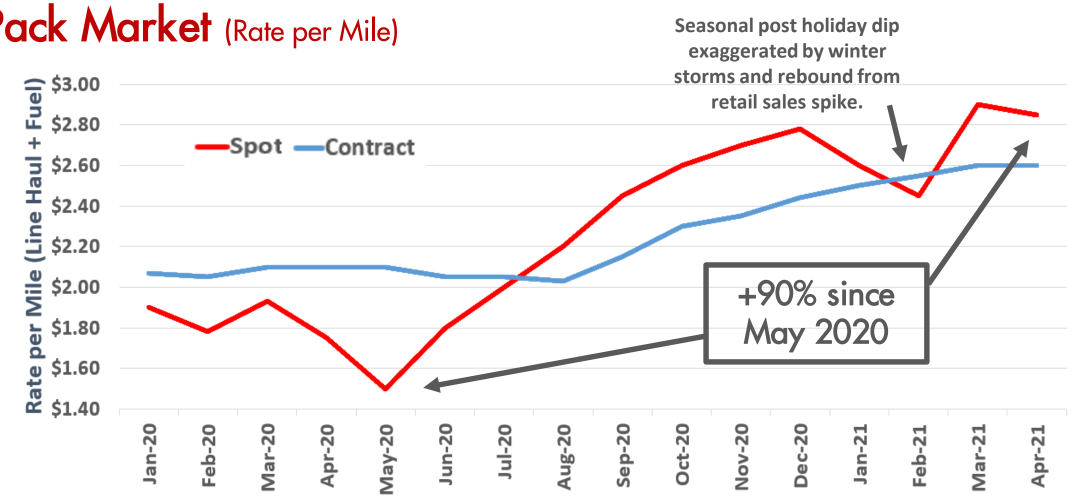


- Group I, Group II and Group III base oil suppliers have announced price increases due to shortages in supply, healthy demand and feedstock dynamics.
- Shortages were aggravated by extreme winter weather that forced refinery shutdown.

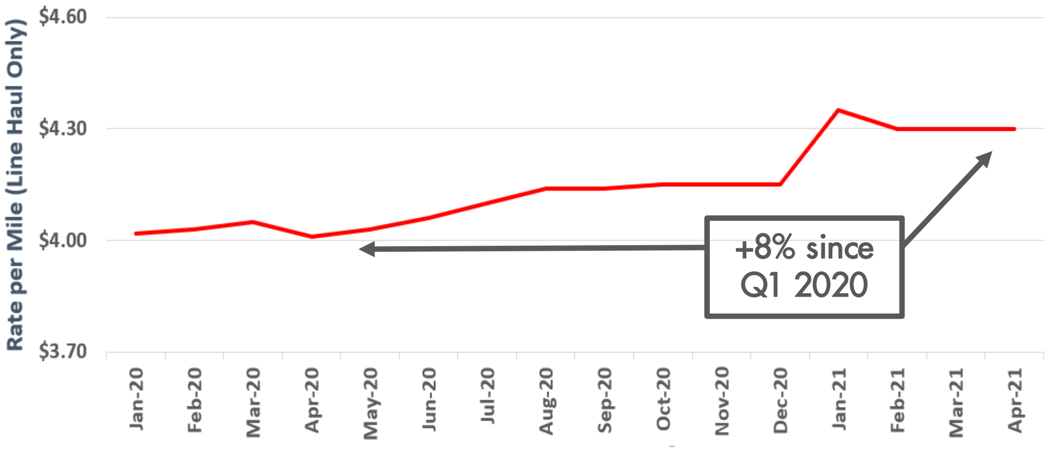
Sources: *Lubes&Grease, *ICIS, ZEMA

Logistics Freight Rate Snapshot

Pack Market (Rate per Mile)



Pack Market (Rate per Mile)



*Bulk Benchmarking does not include Spot vs Contract since its a small market

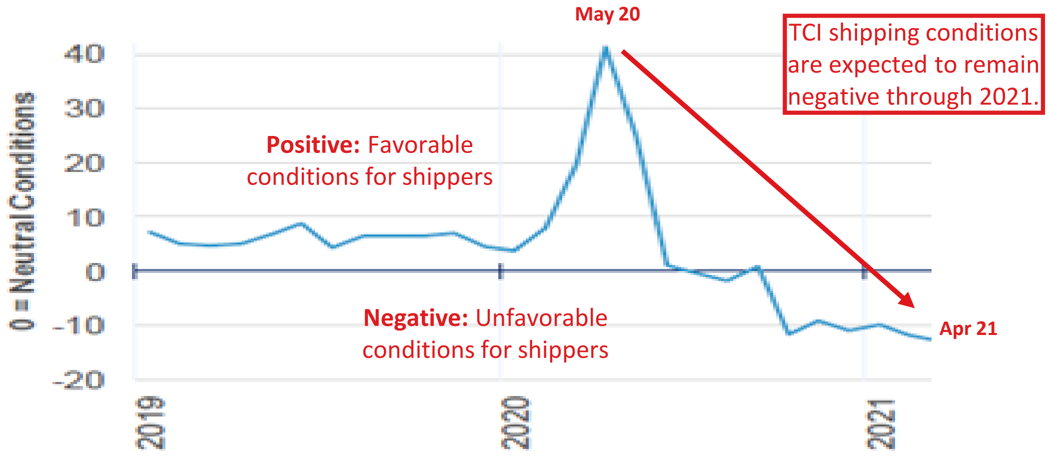
Key Takeaways

- **Outlook:** Market conditions are expected to remain tight through 2021. Intense demand from consumer purchasing and constrained supply chain capacity are driving the current COVID triggered freight cycle with a ripple effect throughout supply chains and across sectors. Freight rates have stabilized since the winter storm impacts in February, but they are showing no signs of easing.
  - **Demand:** Surging consumer sectors (including e-commerce) are driving extreme freight market dynamics. Retail and food service sales increased 28% YoY in March.
  - **Supply:** Manufacturing shortages and record low driver availability are limiting ability to meet demand. The driver pool has been reduced by 200,000 since the start of the pandemic.
  - **Commodity price changes since May 20:**
    Steel +375% Lumber: +250% Iron: +183% Crude: +200%
- **Domestic Inbound/Outbound Freight:** The national average tender rejection rate for pack is sustaining at ~25%. Pre pandemic levels were 10%. High rejection rates are the result of spot rates staying materially higher than contracts rates as drivers migrate to spot loads. This results in Shell paying above contracted rates to secure drivers for some loads.
  - **LTL:** Raw material availability is leading to higher than historical usage of LTL shipments
  - **Bulk:** Not connected to consumer demand volatility, but driver and capacity availability continue to pressure rates.
- **Storage and Handling:** Manufacturing shortages from additives, pallets, and packaging components continue to pressure lead times and increase cost.
- **Import/Export:** Port congestion continues to drive increased logistics costs. Volume is at all time highs. Los Angeles/Long Beach reported 48% YoY volume increases → a 110-year-old record for the most containers handled in a month.
  - Gulf Coast ports (Houston, New Orleans): +37% YoY East Coast ports: +40% YoY
- **Diesel Fuel:** Increased 35% from Dec 2020 to Mar 2021.

Logistics Freight Signposts

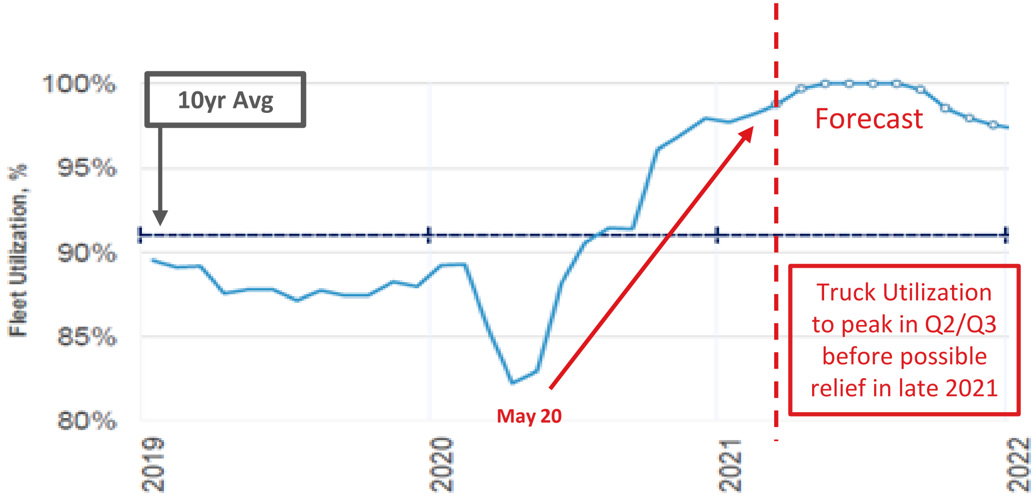
FTR Trucking Conditions Index

TCI is a broad measure of shipper conditions: volumes, rates, fleet capacity, fuel price, and financing.



Active Truck Utilization

Share of trucks actively engaged in hauling freight



Headwinds

Driver Availability & Consumer Demand: The driver shortage is delaying shipments across sectors and further driving up shipping costs and lead times. The sudden drop in truck drivers from the pandemic combined with a sudden surge in demand and rising prices has delivered "a perfect storm" for shippers.

- The industry shed more than 6% of its employees just months after the pandemic.
- The recruiting and licensing of new drivers should recover steadily, but material impacts are not expected until 2022.
- Higher driver wages and recruiting costs are already being seen in the market and are likely to continue upward pressure on rates.

Tailwinds

Rate stability: Although rates are expected to remain significantly elevated, pack spot and contract freight rates are starting to converge. This should result in few tender rejections and lessen the need for rate relief to secure drivers.

New Truck Capacity: New truck orders surged in Q4 and remain elevated, but the average delivery lead time is now 11 months. Fleets need more trucks to handle demand, but supply is limited due to the supply chain disruptions. The impact related to order surges is expected in late 2021 and should help create capacity.

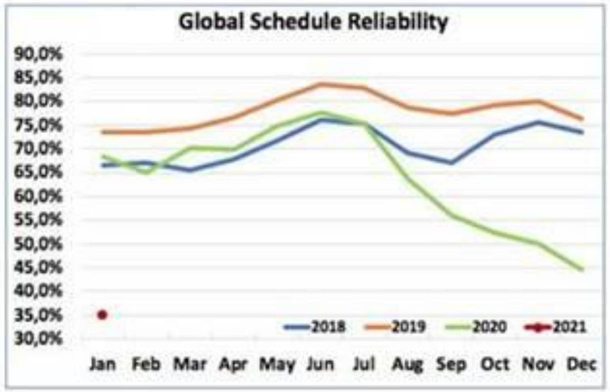
Additives Outlook

Raw Materials impact on additives

- The additive raw material costs for all types of additives are expected to increase due to cost increase in ethylene-based derivatives and base oils.
- Ethylene prices are hovering near six-year highs under pressure from low inventories. The industry has struggled to rebuild inventories due to lingering production issues and strong demand into derivatives and exports.

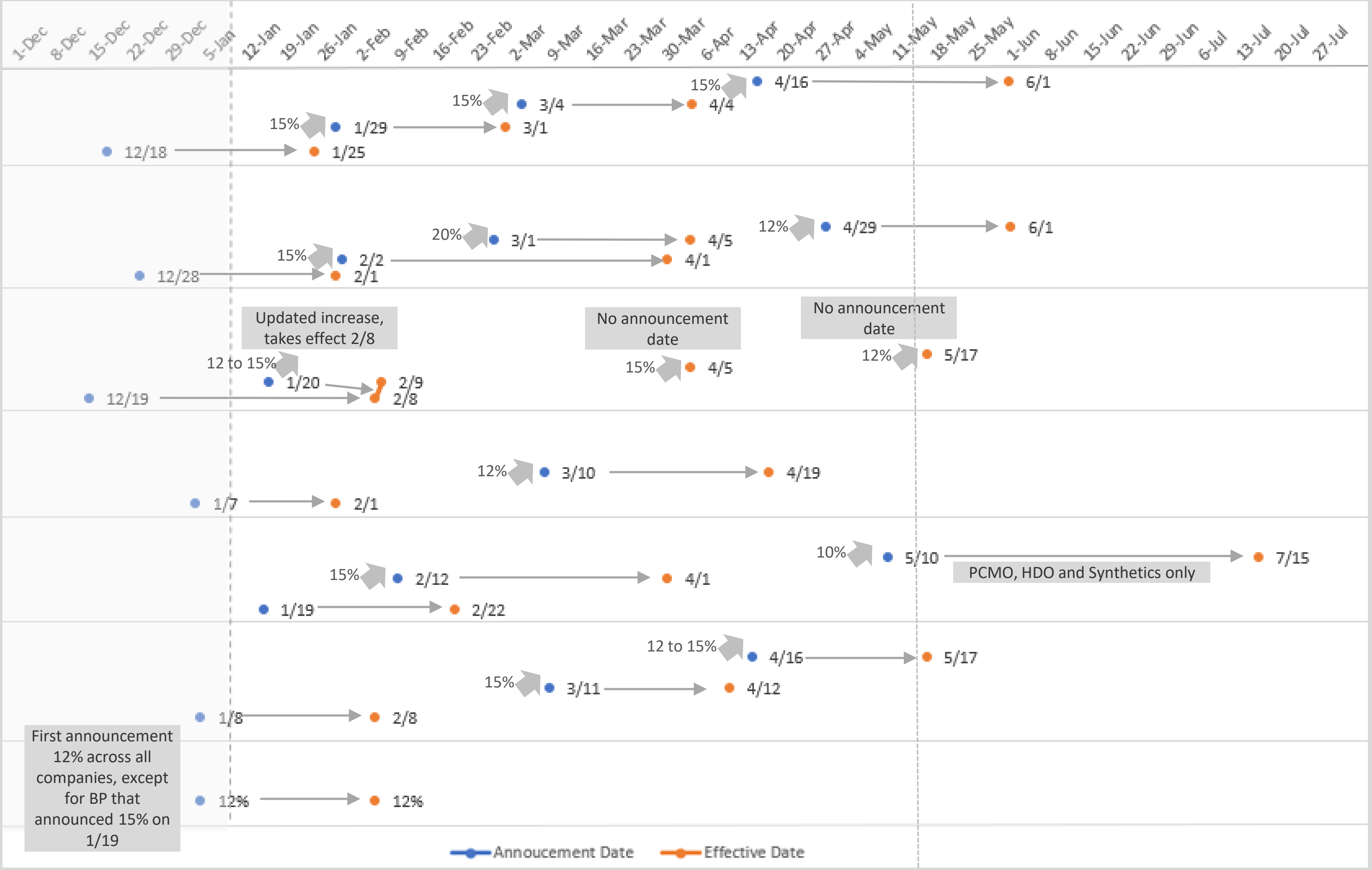
Global Additive Supply Shortages Q1/Q2 2021 – Key Factors

- Demand rebound: Unexpectedly sharp post-COVID recovery (since end 2020)
- Refinery shutdowns and COVID-related reduced BO-slate output (crude slate and config changes due to reduced jet-kero uptake)
- Weather: Unusually harsh-winter in Southern US (Texas Freeze) forced many raw material suppliers to declare Force Majeure with knock on effect for the additive suppliers
- Logistics capacity/imbalance: Sea freight (further disruption expected from the Suez Canal blockage), Airfreight capacity, Steel shortage (drums/packaging)



Lubricant Price Increase Announcements as of May 11, 2021

Company	YTD Price Increase %
Shell	57%
ExxonMobil	59%
Chevron	54%
Valvoline	24%
BP	40%
P66	42%
CITGO	12%



2021 YTD Lubricant Price Increases

Four lubricant price increases in 2021 in response to rising costs in base oil, additives, packaging, freight, and labor.

Base Oil Price Increases

Five base oil price increases since December 2020 and another one expected by the end if this month.

All Other Companies	YTD %
Advance Lubrication Specialties	51%
AOCUS/Amalie	50%
Calument	30%
CAM2 International	45%
Chemlube International	50%
Drydene Perf. Products	64%
Highline Warren	47%
Nu-Tier Brands/Gulf	45%
Old World Industries	64%
Omni Industries	15%
PennStar	15%
Holly Frontier	37%
Pinnacle Oil	12%
Pinnacle Resources	45%
Reliance Fluid Tech	12%
Royal High-Perf. Oils & Greases	27%
Safety-Kleen	75%
Sinclair Lubricants	60%
Total Lubricants	24%
Warren Oil	56%

Sources: JobbersWorld

Price Change Details

Important dates and details to keep in mind

Description	Date
Announce Date	May 28, 2021
Effective Date	July 6, 2021
Amount (%) in Letter	up to 17%
Products	All Lubricants *(Except Filters, Coolants, PCMO & HDEO Case Goods)*

Note: Each sales channel may vary Sales Control by customer or product to address specific needs. Sales channel leadership will provide further information.