

Western Canada Supply Chain Challenges – Growing Resiliency

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Before COVID, Supply Chain Issues Were Already Surfacing

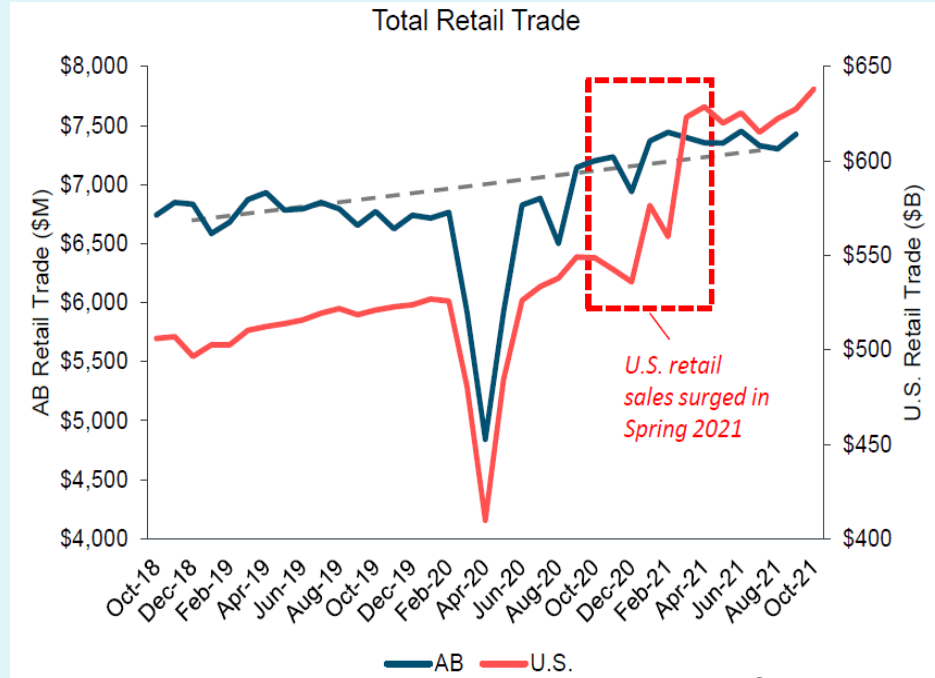
- Prevalence of “just-in-time” inventory reduces the margin of error (Toyota)
- Major players exiting the ocean shipping sector (e.g., Hanjin’s bankruptcy)
- Labour challenges for ports and land shipping modes
- Growing concerns over access to shipping containers

Add COVID and other disruptions

- Labour disruption/participation
- Manufacturing facilities shut down
- Travel curtailed
- Sudden shifts in demand (e.g. restaurants close, grocery demand soars)
- China's COVID-zero response
- Suez Canal blockage

Swings in Demand Further Disrupted Supply Chains

- COVID-19 shifted demand into certain goods (e.g., furniture, home renovations) and away from others (e.g., new vehicles)
- U.S. demand for goods spiked in Spring 2021 and remains elevated; AB's consumption levels back to pre-COVID trend



Supply chain challenges continue

- Cross-border driver vaccination mandate
- Domestic federally regulated vaccinate mandate
- Cold weather impacts
- Omicron – employee absenteeism
 - Tightening supply of goods
- Port of Vancouver Rolling Truck Age Program
- Labour constraints continue to grow

Access and Freight

Alberta market access

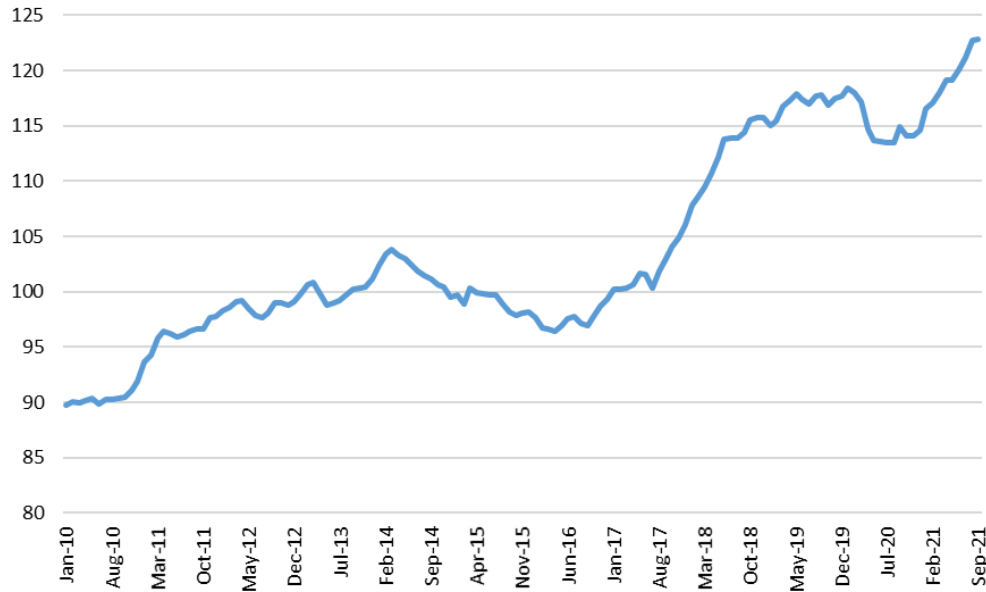
- The majority of Alberta's ocean freight exports and imports pass through the Port of Vancouver (POV)
- Floods in the Fraser Valley cut off the POV from all rail and road routes (in Canada) to Alberta
- Containers, grain and other commodities continue to improve
- The majority of Alberta's truck freight passes through the Coutts/Sweetgrass crossing

Ocean Freight Index – 40 foot container



Source: FBX

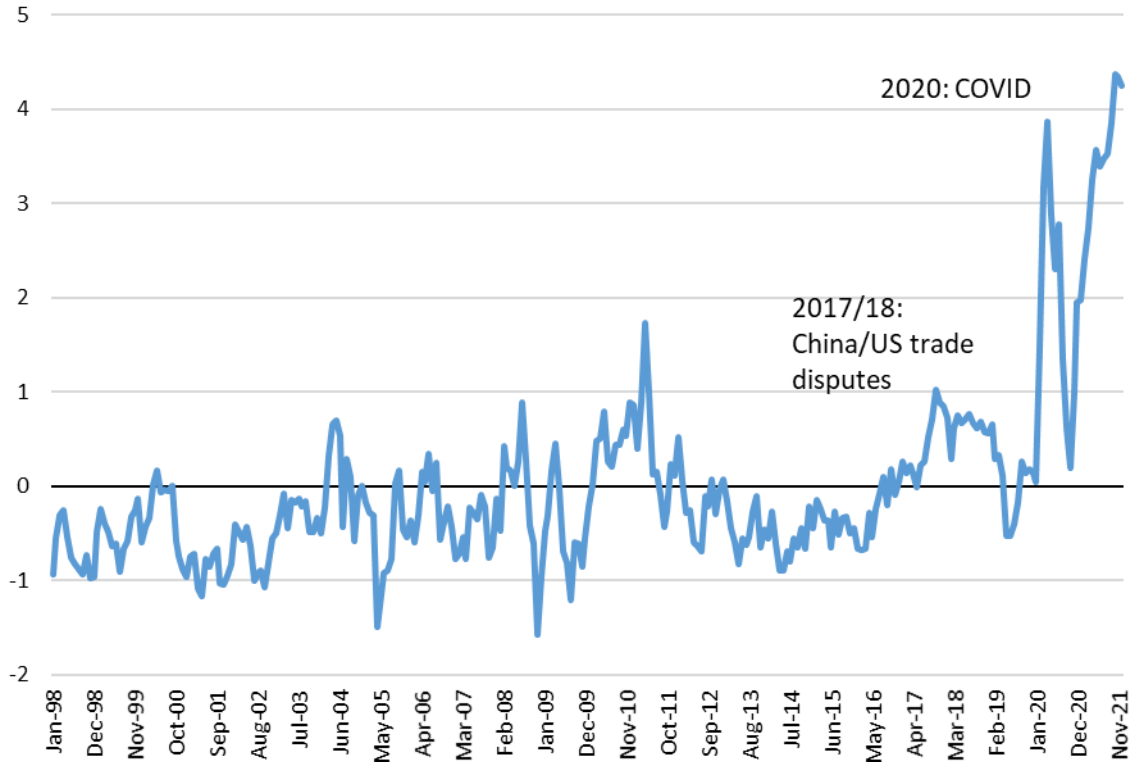
Canada General Truck Freight Price Index



Source: Statistics Canada

- Trucking rates continue to rise

Global Supply Chain Pressure Index



- Measure of global supply chain disruption

Alberta is linked to global supply chains. When they are disrupted we feel it.

Agriculture – Grain

- Over all grain exports will be lower this year due to a reduced crop
- BC Floods and cold weather slow grain movements but there is slack in the system
- Port performance is improving
- Dry bulk ocean freight

Expectations for 2022

- Increased lead time
- Forecasted container demand to exceed ocean capacity
- Longer transport times will add pressure to prices
- Packaging materials, resins, linerboard may be challenging to move
- Global electrical steel

Supply Chain Concerns in 2022

- Transportation
 - Container shortage and vessel shortage through 2022
 - Further disruptions could see this into 2023
 - Cross border truck driver vaccination mandate
- Increased Costs – Inflation; Interest Rates; Inputs
- Labour shortages
- Nearshoring, protectionism
- Cyber security
- Winter is not over

But we are resilient.

Operational Considerations

- Flexibility on shipping options
- Build partnerships with suppliers
- Data analytics
- Look for process improvements
- Employee engagement

Supply Chain Recovery

- Funding initiatives
- Warehousing (inventory)
- Sourcing local – 3D Printing
- Vancouver Fraser Port Authority Roberts Bank Terminal 2 project
- Automation
- Superclusters

Questions?

