

Supply Chain Issues



Mark Sciarrotta
Operating Committee
November 2021

Major supply chain issues

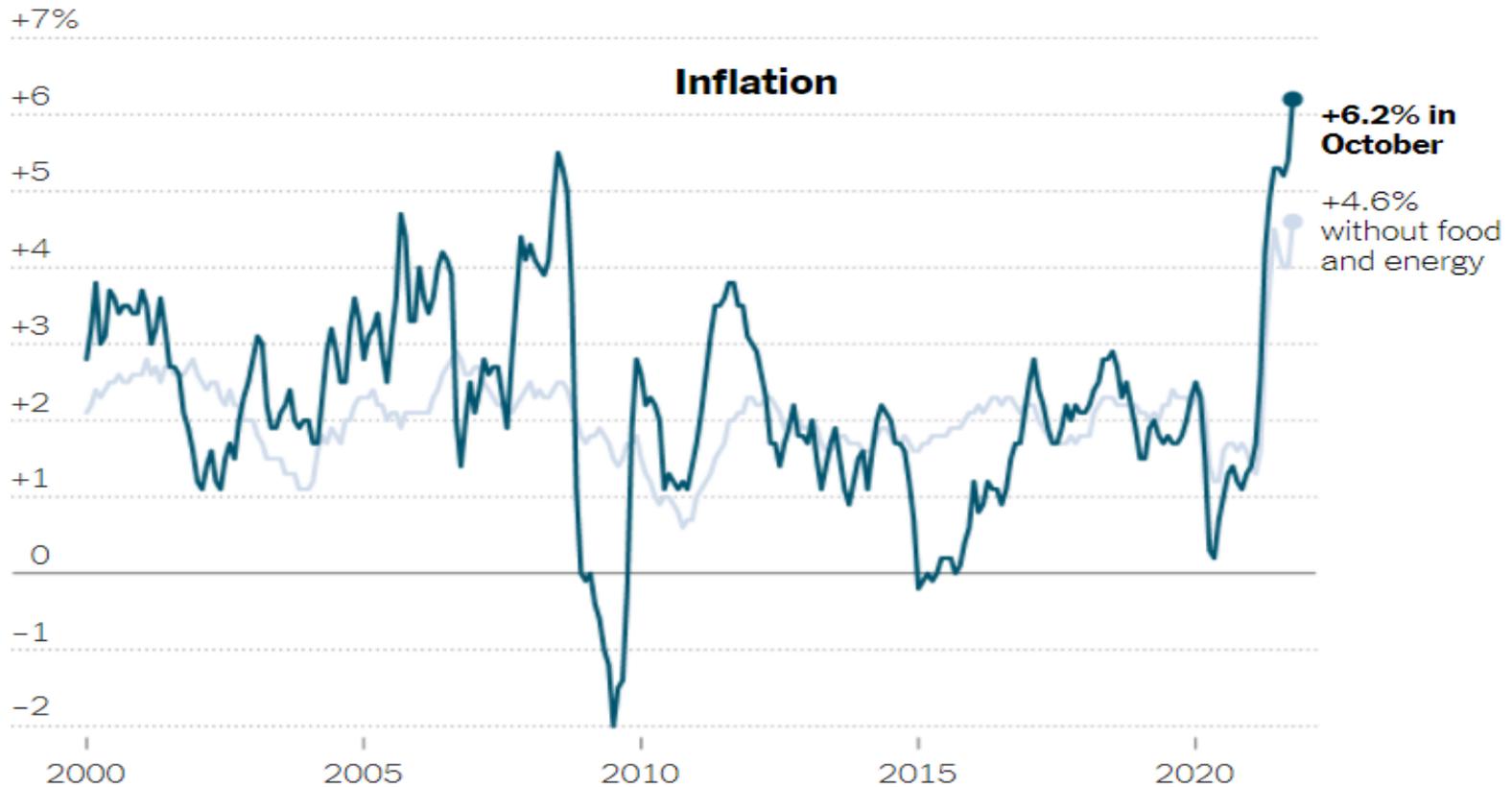
- Inflation
- Pandemic-related kinks
- Climate change

Takeaways:

- Prices trending up
- Lead times going out
- Relationship with suppliers ever important
- No direct labor issues (yet)

Inflation

Published Nov. 10, 2021 Updated Nov. 14, 2021



Year-over-year change in the Consumer Price Index • By The New York Times

Inflation (cont'd)

Commodity prices trend higher

High Steel Prices Have Manufacturers Scrounging for Supplies

- Manufacturers are facing the highest steel and aluminum prices in years, another hurdle for U.S. companies already struggling to make enough cars, cans and other products.

Natural-Gas Prices fall from Peak as warm Autumn Buoy Stockpiles

- Shed 19% since hitting 13yr high, reversing some run-up of higher heating bills and higher manufacturing costs

Metal Prices Surge After Gas Crunch Crimps Output

- Prices surged to multiyear highs after smelters, facing soaring energy bills and pressure to cut their carbon emissions, curtailed production.

Source: WSJ October 10 and 14, 2022

Supply chain issues--examples

Transportation:

Biggest Kink in America's Supply Chain: Not Enough Truckers (NYT Nov. 9, 2021)

- *Long hours and uncomfortable working conditions are leading to a shortage of truck drivers, which has compounded shipping delays in the United States.*
- *Ports of Los Angeles and Long Beach going to 24 hrs, but still lack truckers to move commodities and products*

Source NYT Nov. 9, 2021

Climate change:

- *VELCO seed mix possibly doubling in price*
- *Extremely low inventory due to drought in Oregon's Willamette Valley where the majority of specific types of seeds are grown*
- *Lead times doubled*
- *Working with vendor on other options*

Supply chain issues (cont'd)

VELCO is seeing longer lead/response times

- fiber optic cable***
- culverts, access materials***
- steel poles***
- control building components***
- seed***

Strategies include

- NATF/EEI collaboration (nascent)***
- Moving up order dates***
- Communicating price increases with regulators and owners***
- Use of packagers that have strong supplier ties***
- Advance ordering***
- Monitoring commodities***

VELCO commodities watchlist

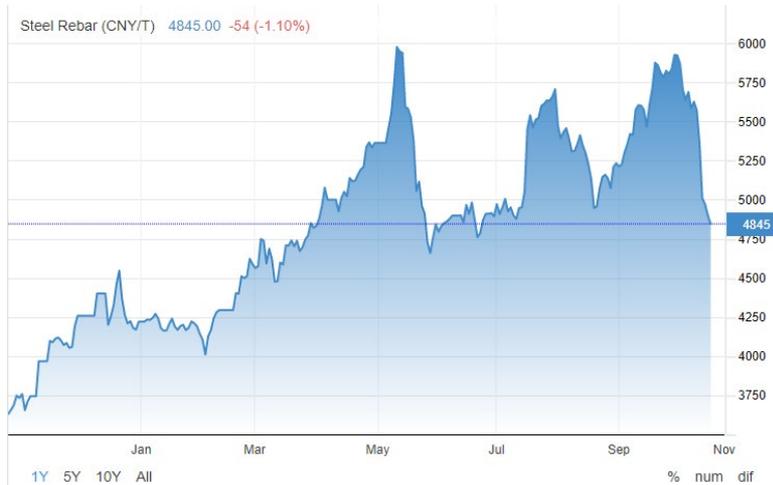
Pandemic-related and other supply chain kinks may impact project cost and time estimates

- Steel
- Lumber
- Copper
- Aluminum
- Gasoline
- Diesel
- Propane
- Heating Oil #2
- Natural Gas

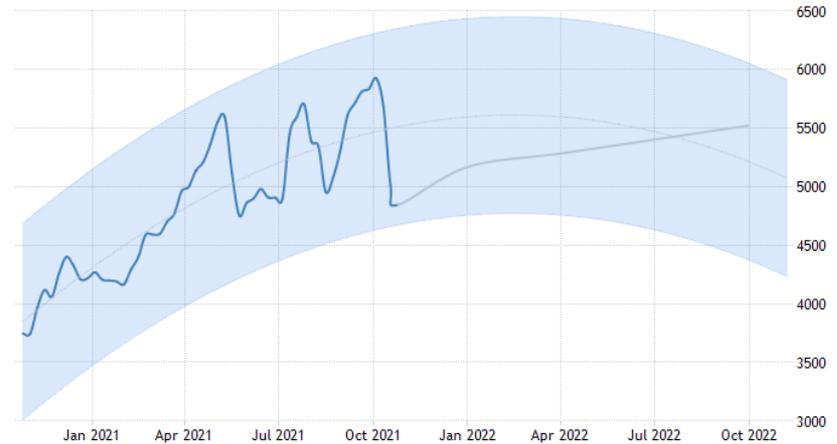
Appendix- commodities

Steel – slight decline from Sept - Oct

Actuals



Forecast



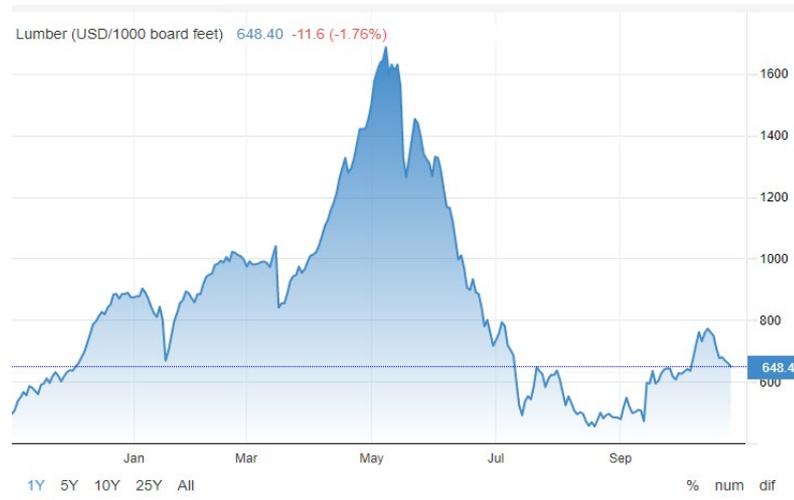
Notes:

- Slight decline from Sept - Oct
- May 2021 all time high
- Price expected to decline late Q2 through end of 2021

Source: Trading Economics

Lumber- demand falling due to seasonal effect, however costs remain high

Actuals



Forecast



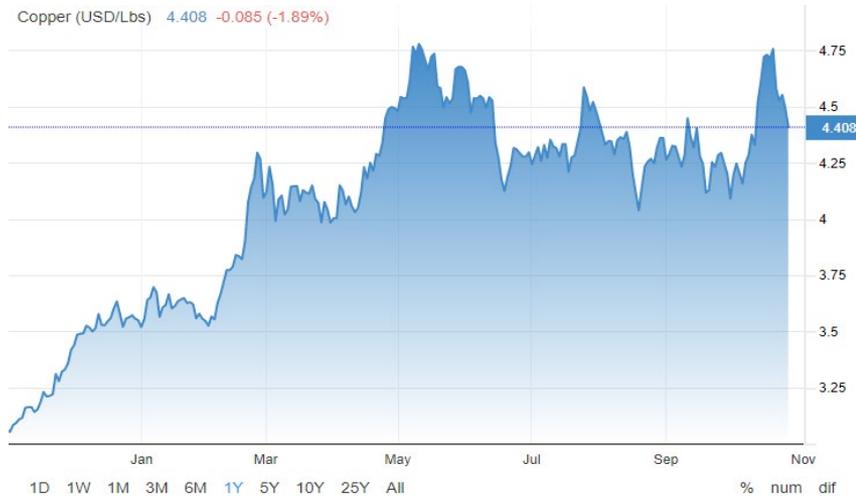
Notes:

- Demand is falling due to seasonal effect, however costs remain well above pre-pandemic five year average
- Hurricane Ida has raised logistical demands (infrastructure damage & trucking)
- Tariff driven spikes and drops
- Builders and contractors advise start project Q4 2021 or Q1 2022

Source: Trading Economics

Copper- steady upward trend

Actuals



Forecast



Notes:

- Prices reached highest level in nearly a decade in May 2021
- Prices expected to slowly increase in 2021 and Q1 2022

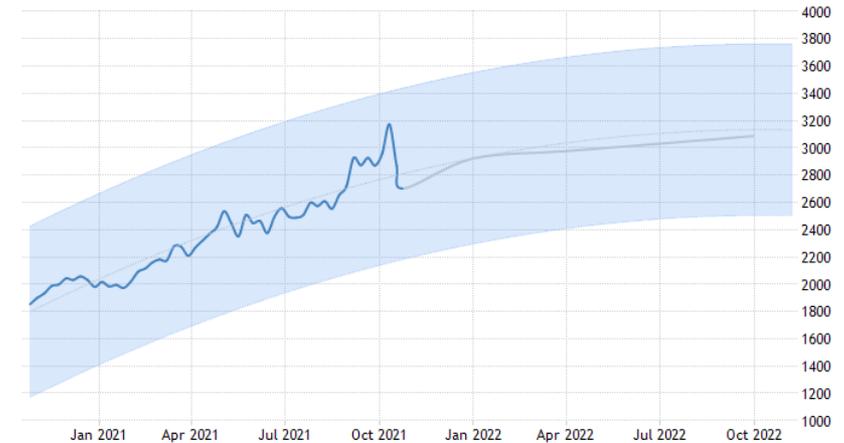
Source: Trading Economics

Aluminum – steady upward trend

Actuals



Forecast



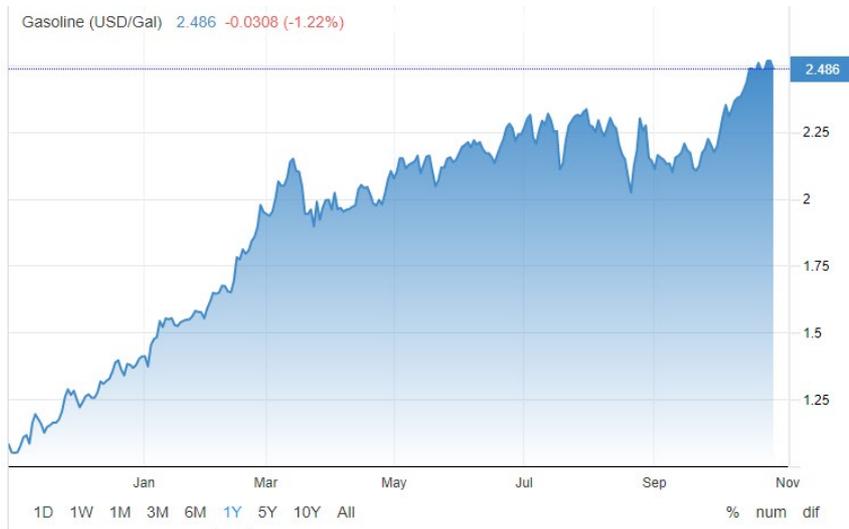
Notes:

- Increased demand, coupled with rising freight costs, has boosted the aluminum price outlook.
- Record prices in US and Europe
- Decline in prices in late 2022

Source: Trading Economics

Gasoline- Steady upward trend

Actuals



Forecast



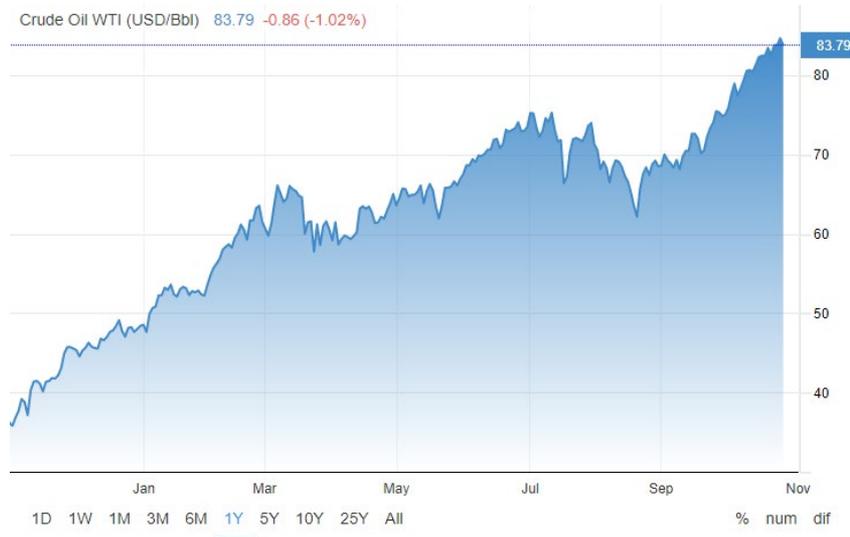
Notes:

- Mid-October, highest since September 2014
- Delta variant spread could hamper demand recovery
- Inventories unexpectedly increased

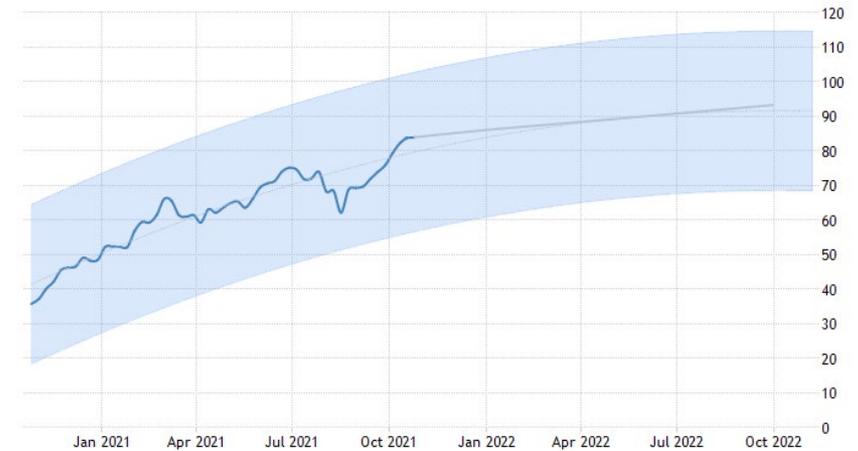
Source: Trading Economics; VT Agency of Transportation

Diesel– post pandemic increases

Actuals



Forecast



Notes:

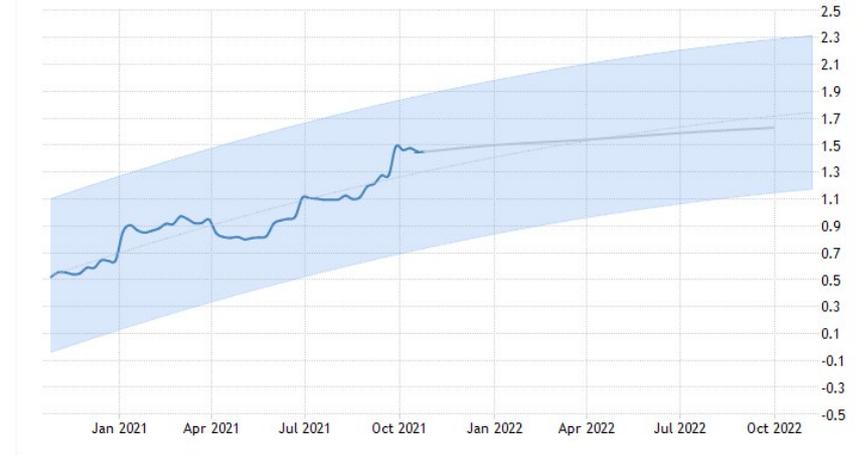
- Delta variant spread could hamper demand recovery
- Inventories unexpectedly increased

Propane – trending upward

Actuals



Forecast



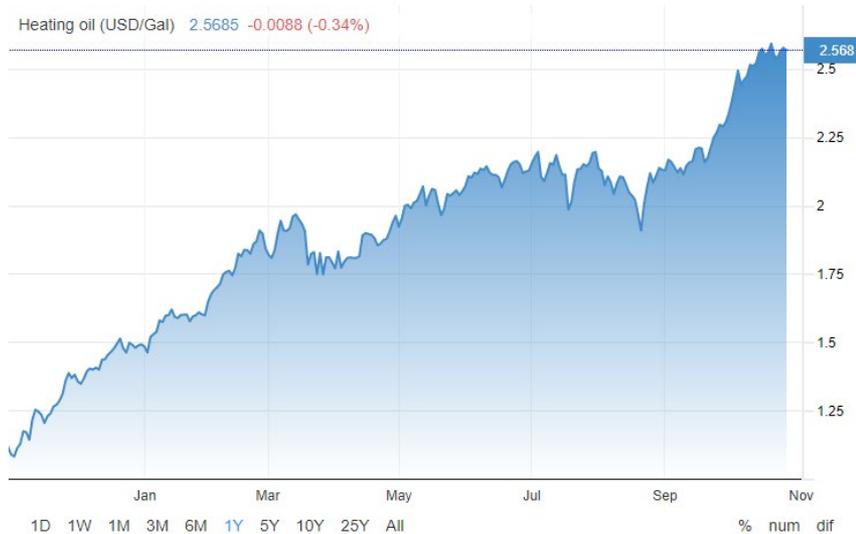
Notes:

- Prices increasing **2021** Q3 –Q4

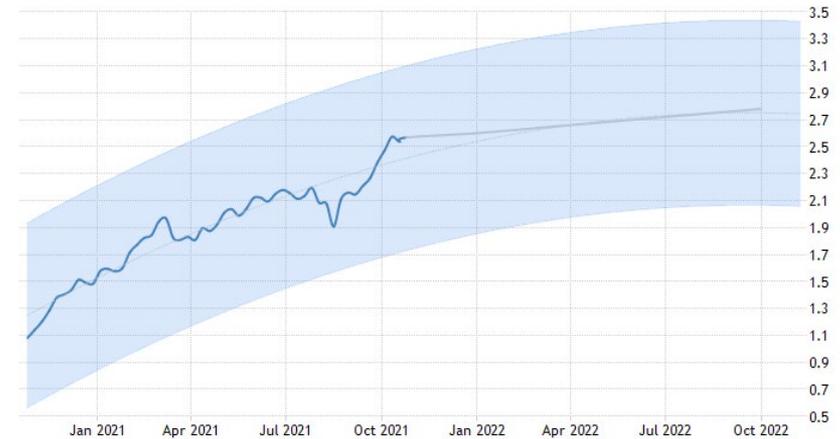
Source: Trading Economics

Heating Oil #2 – trending upward

Actuals



Forecast



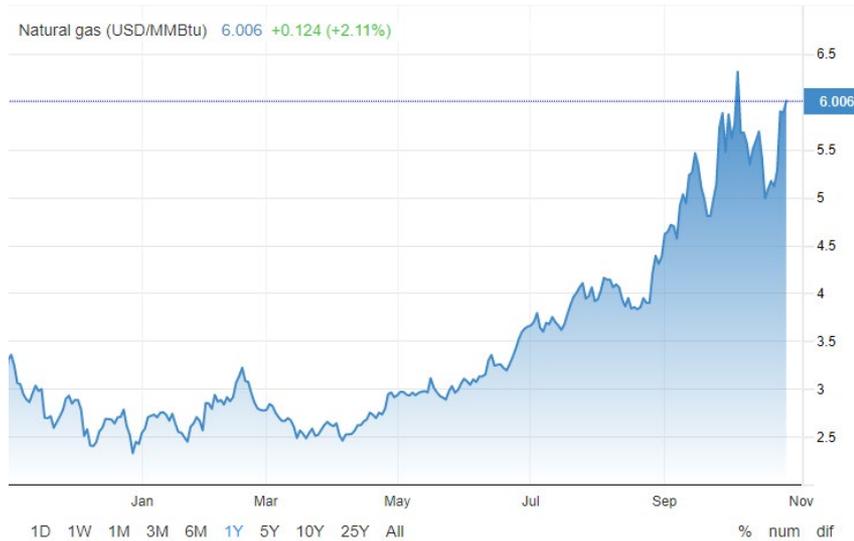
Notes:

- Average barrel 2020 - \$42, 2021 - \$64, 2022 - \$63.00
- Avg \$2.77/gal in VT

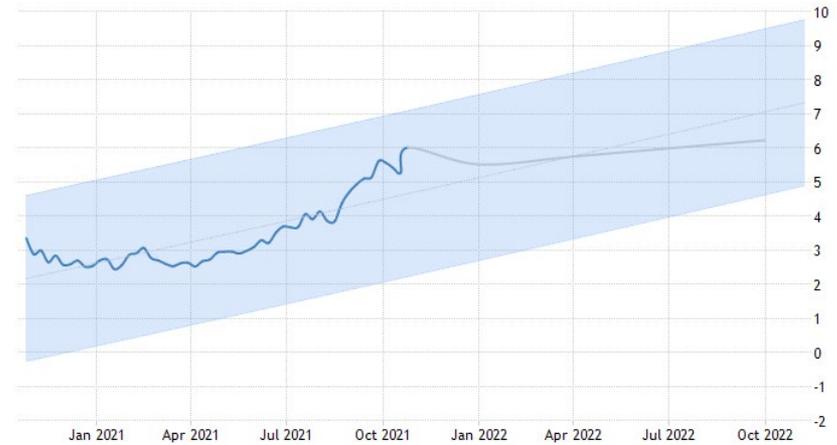
Source: Trading Economics; EIA Vermont

Natural Gas - trending upward

Actuals



Forecast



Notes:

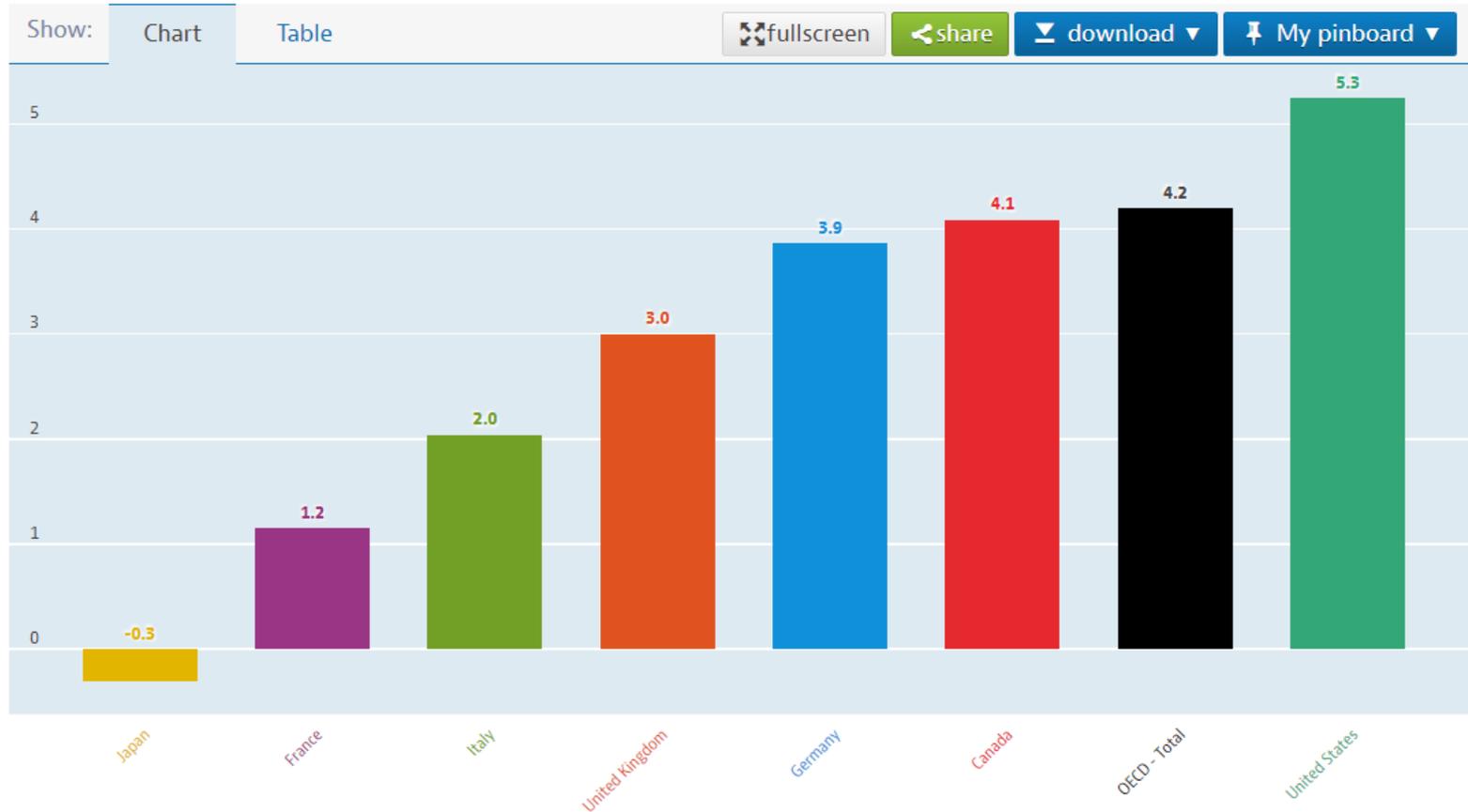
- 2021 – 2022 prices are expected to increase due to exports and domestic consumption

Source: Trading Economics; Energy Information Administration (EIA)

Consumer Price Index (CPI) (9/17/21)

Inflation (CPI) Total, Annual growth rate (%), Aug 2021 or latest available

Source: Prices: Consumer prices

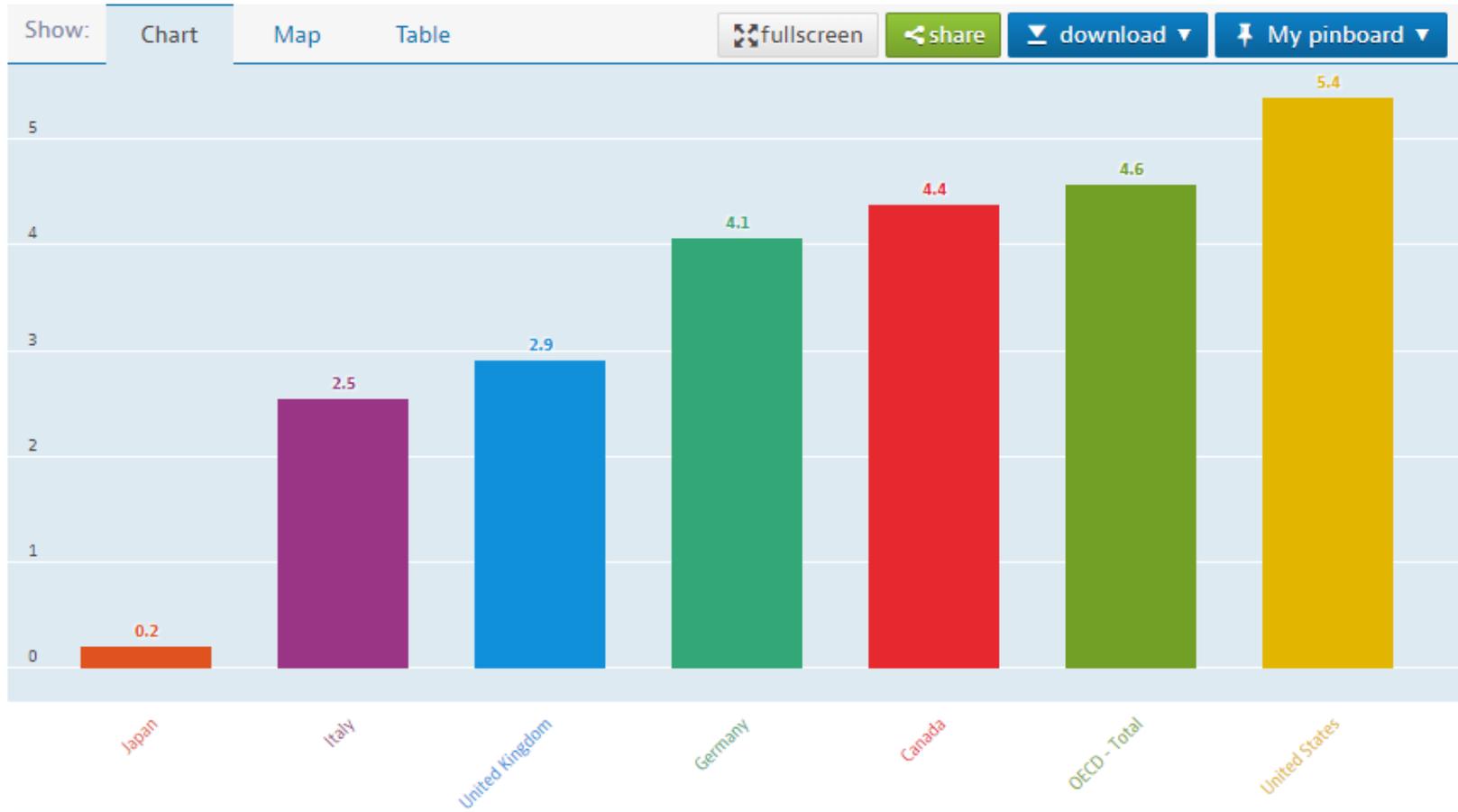


Source: <https://data.oecd.org/price/inflation-cpi.htm>

CPI this time last year

Inflation (CPI) Total, Annual growth rate (%), Sep 2021

Source: Prices: Consumer prices



Source: <https://data.oecd.org/price/inflation-cpi.htm>