

# COMMODITY VOLATILITY

## IMPACTS ON CRE & CONSTRUCTION

UPDATED: SEPTEMBER 2021



**CUSHMAN &  
WAKEFIELD**

# OVERVIEW

Rising commodity prices are stoking [fears of inflation](#) that could negatively impact commercial real estate (CRE).

During the pandemic, price increases were largely absorbed by general contractors who were struggling to win the limited number of projects in the market. Now that the economy is reopening, project opportunities are growing and causing contractors to pass the cost increases directly through to clients impacting both occupiers and investors alike.

Commodities critical to real estate construction have seen substantial increases over the past year:

- ***Diesel fuel: +148%***
- ***Lumber: +101%***
- ***Copper: +77%***
- ***Steel: +30%***

Further compounding construction challenges are longer lead times and delays in obtaining materials.

Pricing and supply chain delays are very fluid right now. **Early construction and [project management](#) expertise is required to navigate these difficult times** so that investors and occupiers have a thorough plan, sufficient time to manage supply chain issues, and market expertise to execute plan adjustments on the fly.



# REASONS FOR COST INCREASES



## SUPPLY CHAIN CHALLENGES

**Capacity utilization dropped significantly in the first two months** of the pandemic due to health concerns, supply chain freezes and/or lack of demand (iron and steel products: -30%; wood product: -14%; metal ore mining: -14%). Capacity utilization did not return to near-pandemic levels until Q2 2021.



## STRONG DEMAND

Durable spending is currently **23% above pre-pandemic** levels.



## EXPECTATIONS FOR FUTURE DEMAND

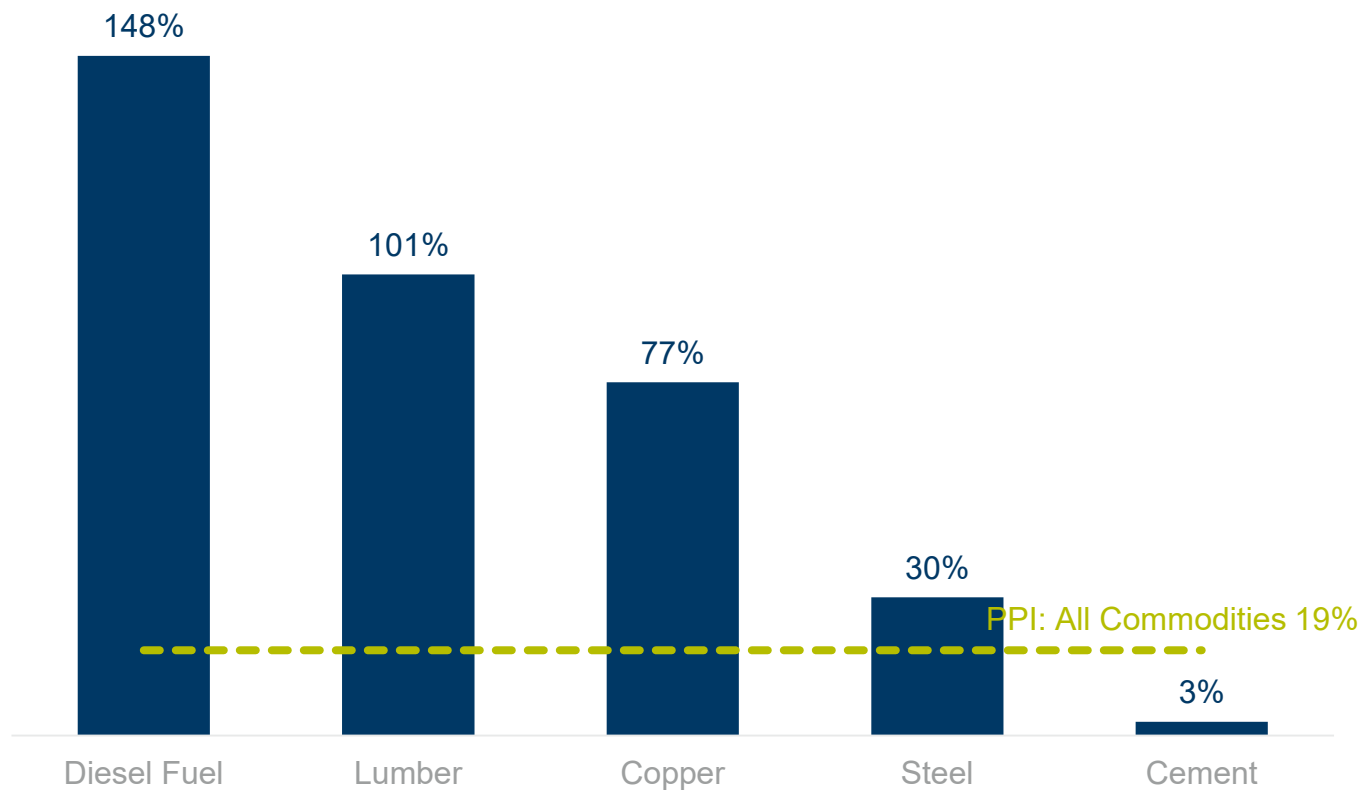
Construction volume is likely to remain strong. The value of construction put in place is forecast to **increase by 12% in 2021 and by over 25% in 2022.**



# COMMODITIES

## WHAT'S GOING ON?

### YEAR-OVER-YEAR (YOY) INCREASE, Q2 2021



Source: U.S. Bureau of Labor Statistics (BLS); Moody's Analytics Forecasted; Cushman & Wakefield Research

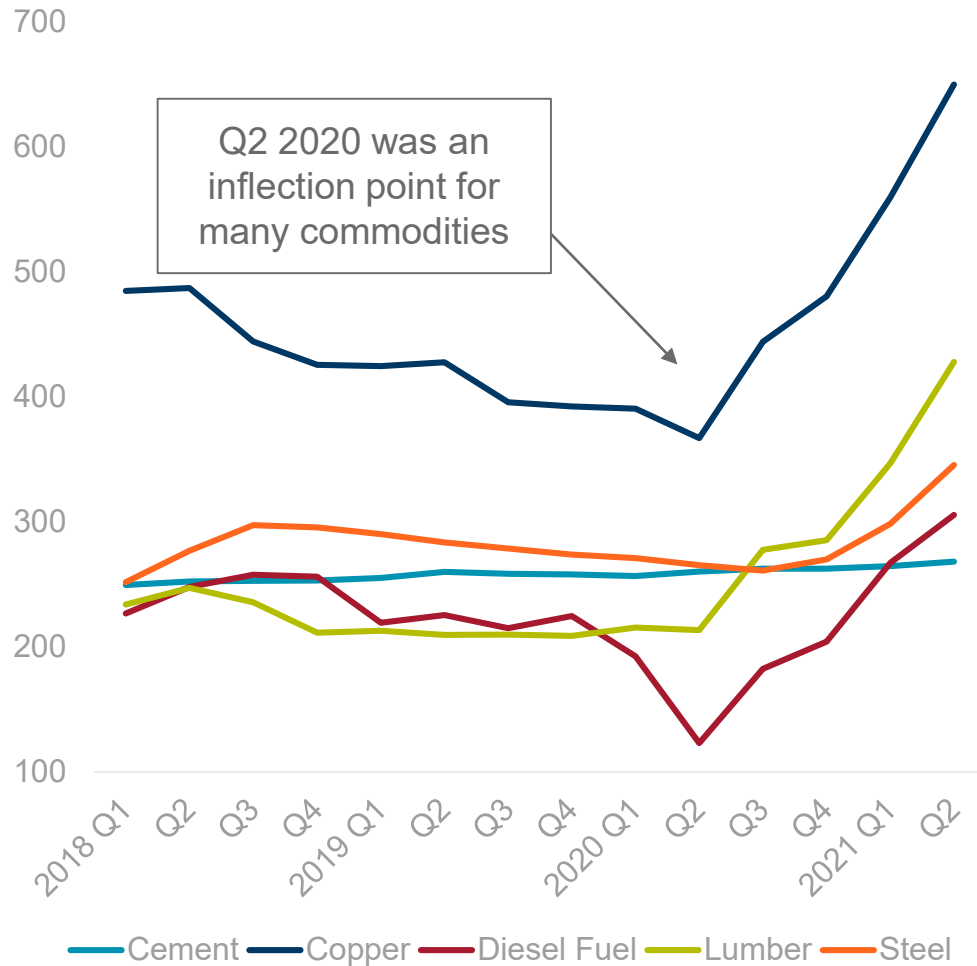
- Commodity prices are skyrocketing as corporate and consumer demand returns and supply struggles to catch up.
  - In Q2 2021, lumber and diesel fuel prices have both doubled YoY (+101% and +148%, respectively). Copper prices are up 77% from a year ago and steel has increased by 30% since Q2 2020.
  - Cement pricing, which is historically not very volatile, has not changed much YoY but is expected to hit growth rates above 4% later this year.
- Consumers are exiting the pandemic with historically high savings and with pent-up demand after a year of limited activity, spurring increased consumer spending.
- Supply is not keeping up as supply chains have been impacted by health concerns, bottlenecks, labor challenges and material shortages.
- Weather events, including drought and deep freeze, wildfires and energy-related hiccups have added to the challenges.

*For more thoughts on inflation's impact on commercial real estate, read the recent Cushman & Wakefield report: [U.S. Inflation: Should We Be Worried?](#)*

# COMMODITIES

WHY THE PRICE INCREASES?

## PRODUCER PRICING INDEX (SINCE Q1 2019)

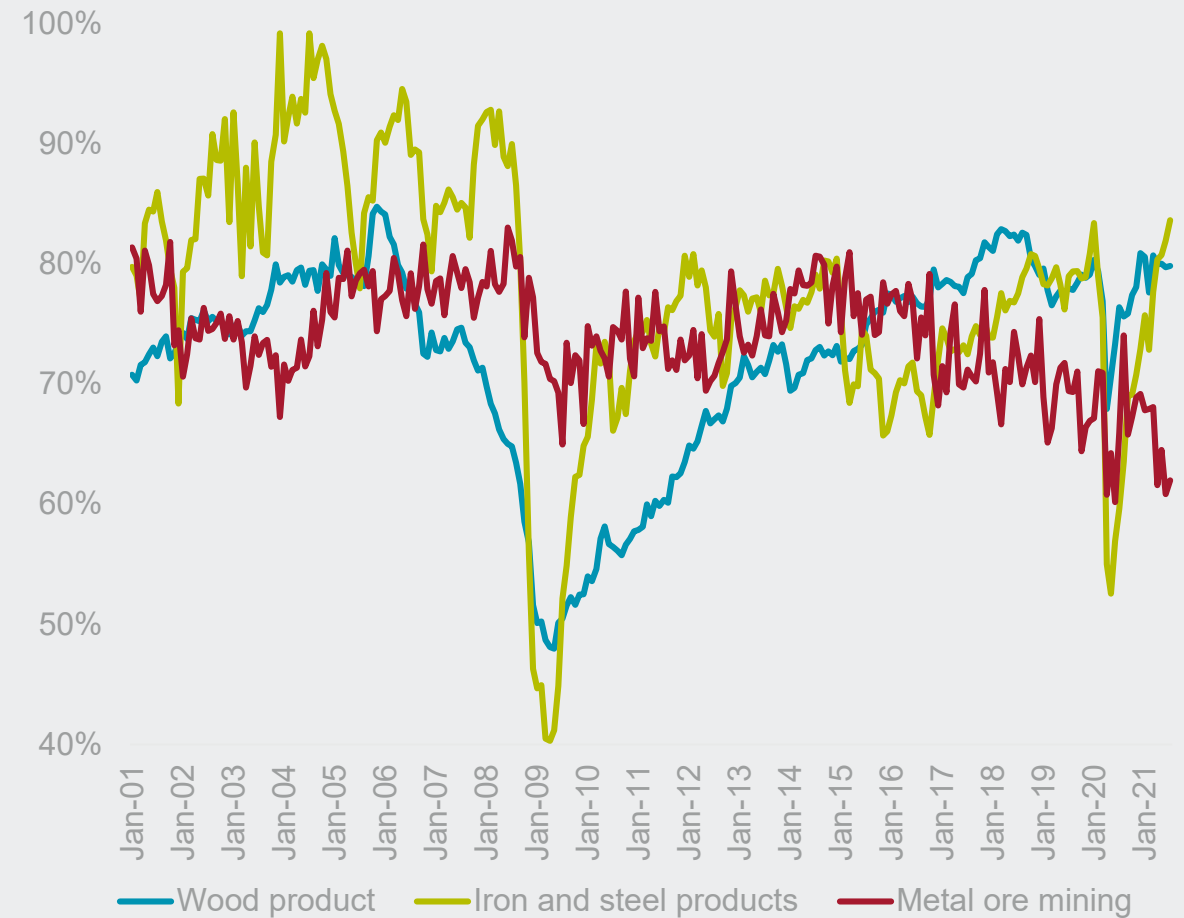


Source: U.S. Bureau of Labor Statistics (BLS); Moody's Analytics Forecasted; Cushman & Wakefield Research

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# SUPPLY & DEMAND IMBALANCED

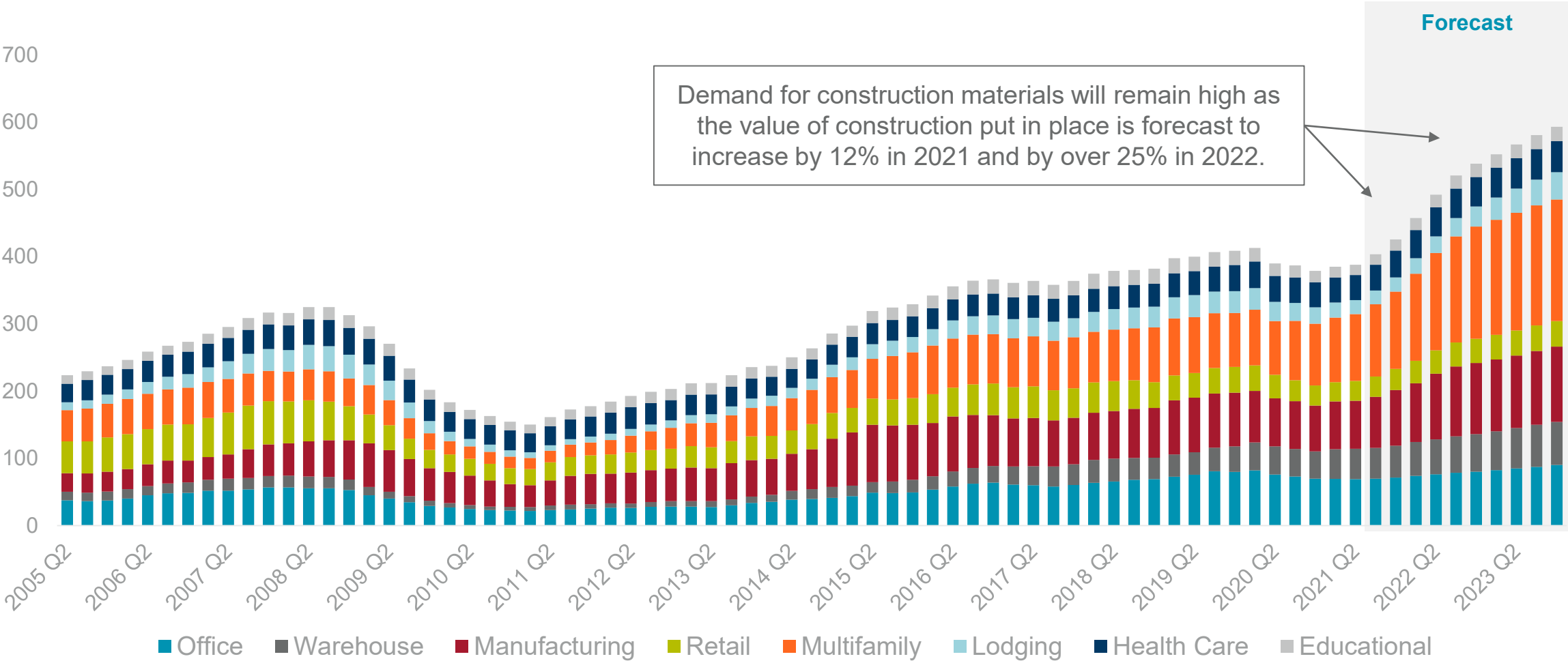
CAPACITY UTILIZATION, SELECT COMMODITIES



Source: U.S. Board of Governors of the Federal Reserve System

# DEMAND ON THE RISE: TOTAL PRIVATE CONSTRUCTION UP 13% YOY IN Q2 2021

VALUE OF CONSTRUCTION PUT IN PLACE: PRIVATE CONSTRUCTION, SELECT CATEGORIES

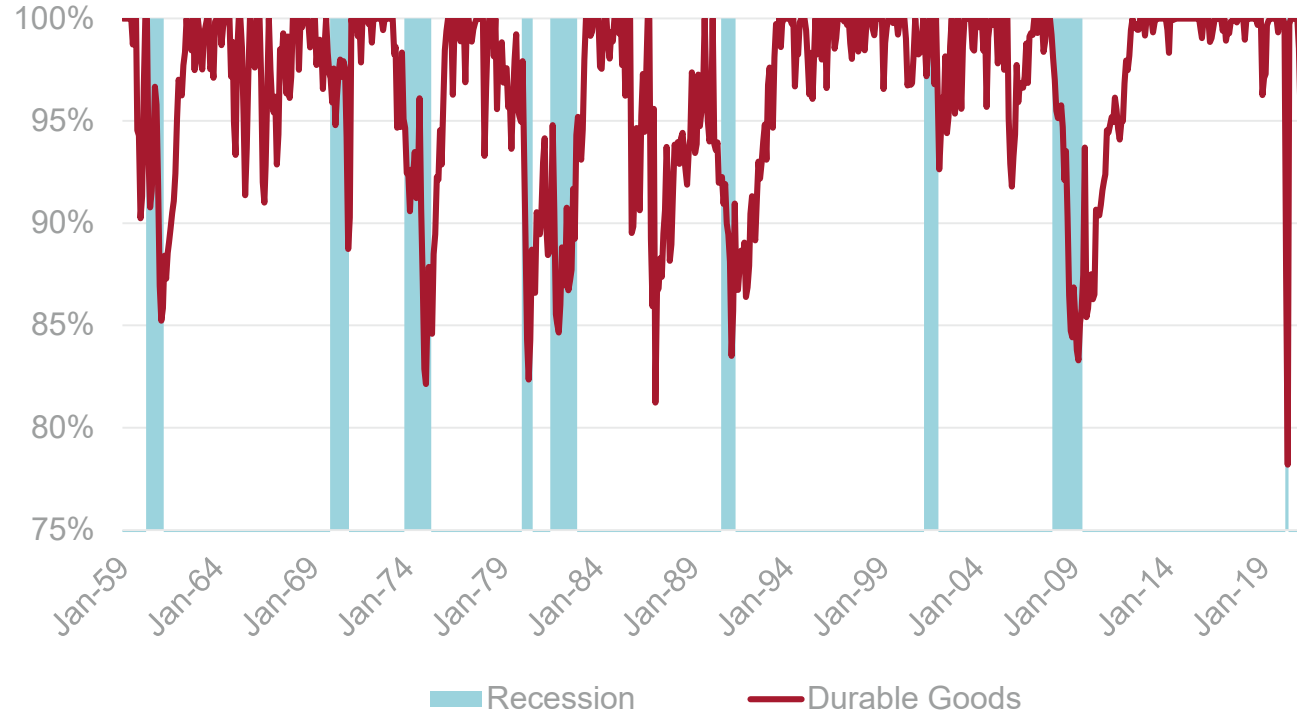


Source: U.S. Census Bureau (BOC); Moody's Analytics Forecasted; Cushman & Wakefield Research

## CONSUMER PATTERNS SHIFTING

UNLIKE TYPICAL RECESSIONS, DURABLE GOODS SPENDING BOUNCED BACK QUICKLY

### REAL SPENDING AS A PERCENTAGE OF THE PRIOR CYCLE'S MAXIMUM



Source: U.S. Bureau of Economic Analysis

**The quick recovery of durables spending—items that tend to be commodity-intensive—has meant strong demand for commodities.**

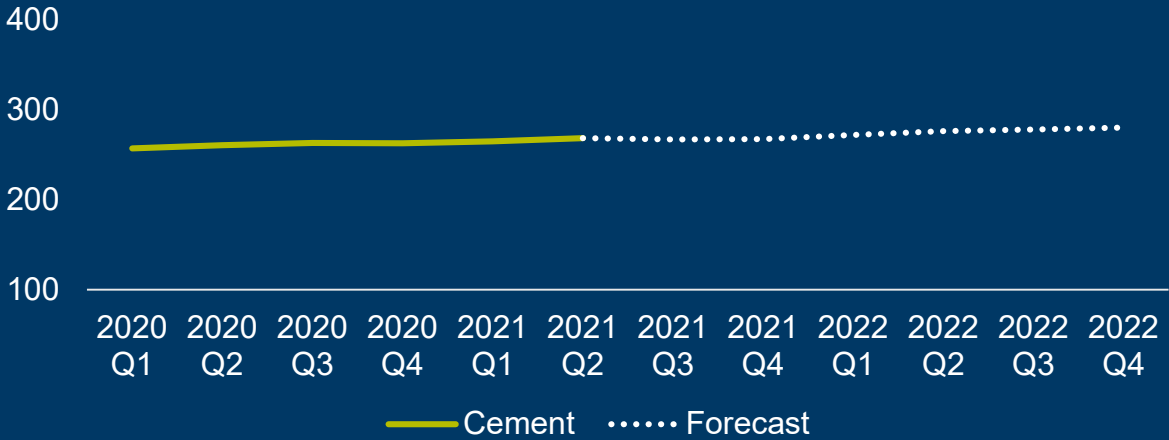
- Typically, durable spending falls off during recessions while services spending holds up. This has not been true during the COVID-19 recession.
- Durable spending is 23% above pre-pandemic levels and services spending (which accounts for approximately 60% of all spending) is still down by 3%.
- Homeownership patterns—and home improvement activity fueled by increased time spent at home during the pandemic—have increased consumers' demand for durable goods.
- As the economy reopens, it is widely expected that consumer spending will start to shift back towards services.

# CEMENT

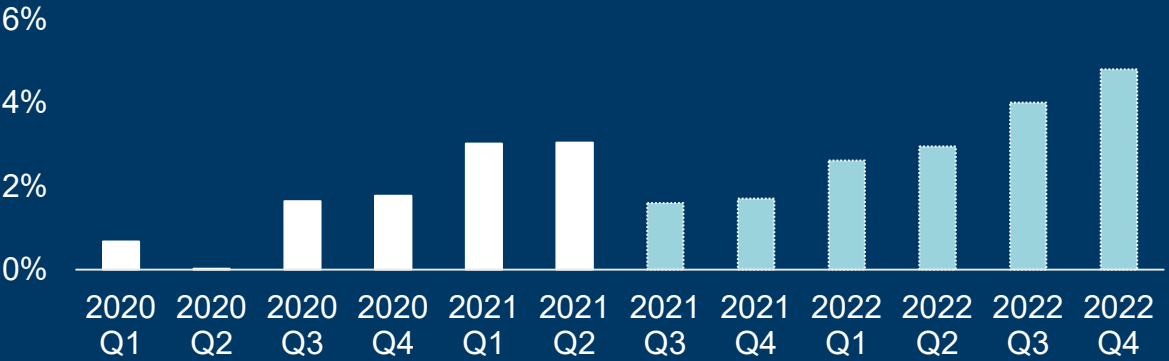
## PRICES FORECAST TO GROW BY 5% IN 2022

- Relative to other commodities, cement pricing is more stable. YoY growth hasn't exceeded 5% since 2017, and it only went above 8% one time in the past decade (i.e., Q1 2015).
- By way of comparison, it is not uncommon for other commodities to have double-digit YoY changes in pricing. Since 2010, # of times commodities have YoY change of +/- 10%:
  - Diesel fuel: 31 times
  - Steel: 19
  - Copper: 29
  - Lumber: 14
- The annualized growth rate during the last expansion (between Q1 2010 and Q1 2020) was 2.6%. The forecast is for 1.7% YoY growth for Q4 2021, followed by 4.8% YoY growth in Q4 2022.

Cement: Pricing Index



Cement: YoY Change



Source: U.S. Bureau of Labor Statistics (BLS); Moody's Analytics Forecasted; Cushman & Wakefield Research

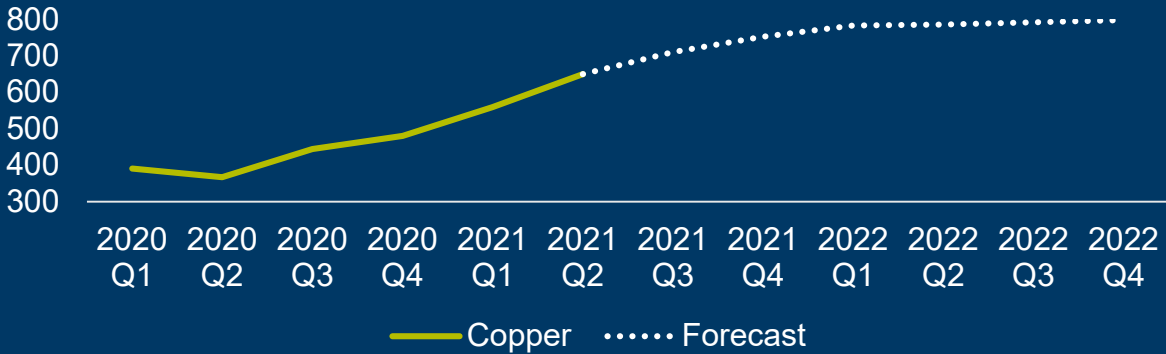
# COPPER

## PRICE GROWTH FORECASTED FOR THE NEXT DECADE

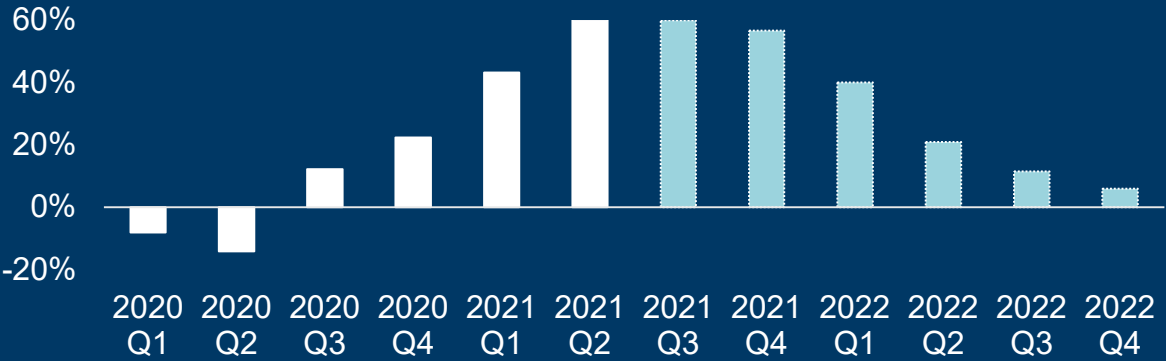
- Coming into the pandemic, the price index of copper was experiencing a steady decline, hitting its trough in Q2 2020 25% below its mid-2018 peak.
- Over the next three quarters, copper prices increased by 43%, and a total of 77% YoY in Q2 2021.
- There is no end in sight for copper price increases, with the index expected to grow another 25% over the next two years. This forecast is up from 22% two months ago.
- Copper has been referred to as the *new oil*\* as it plays an important role in semiconductor wiring, electric vehicle batteries and other green economy technologies, which are likely to be growth sectors and take significant market share over the next decade.

\*David Neuhauser, founder and managing director of U.S. hedge fund Livermore Partners, as quoted by CNBC, “Copper is ‘the new oil’ and low inventories could push it to \$20,000 per ton, analysts say”

Copper: Pricing Index



Copper: YoY Change



Source: U.S. Bureau of Labor Statistics (BLS); Moody's Analytics Forecasted; Cushman & Wakefield Research

# DIESEL FUEL

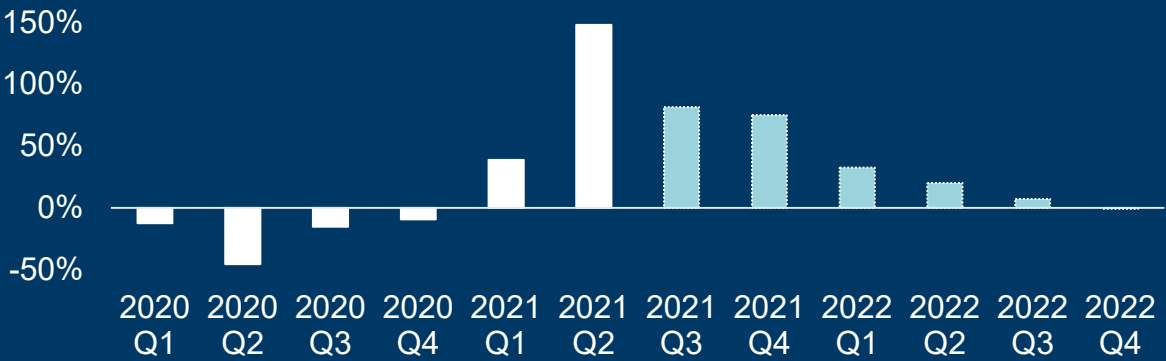
AFTER SHARP DECLINES AT THE BEGINNING OF PANDEMIC, PRICES SKYROCKET

- Diesel fuel pricing more than doubled between Q2 2020 and Q2 2021. It is worth noting this is off a lower-than average base, however, as diesel prices had declined 25% between late 2018 and Q1 2020.
- While prices have accelerated, they are not at all-time highs. The producer price index is forecasted to keep increasing into the middle of next year. And, if prices stay on that trajectory, Q2 2022 would be the third highest quarter on record (behind only Q2 & Q3 2008).
- As the global economy heats up, fuel demand should remain strong. Catching up on supply chain bottlenecks and elevated e-commerce activity will require growth in shipping and transportation.

Diesel Fuel: Pricing Index



Diesel Fuel: YoY Change



Source: U.S. Bureau of Labor Statistics (BLS); Moody's Analytics Forecasted; Cushman & Wakefield Research

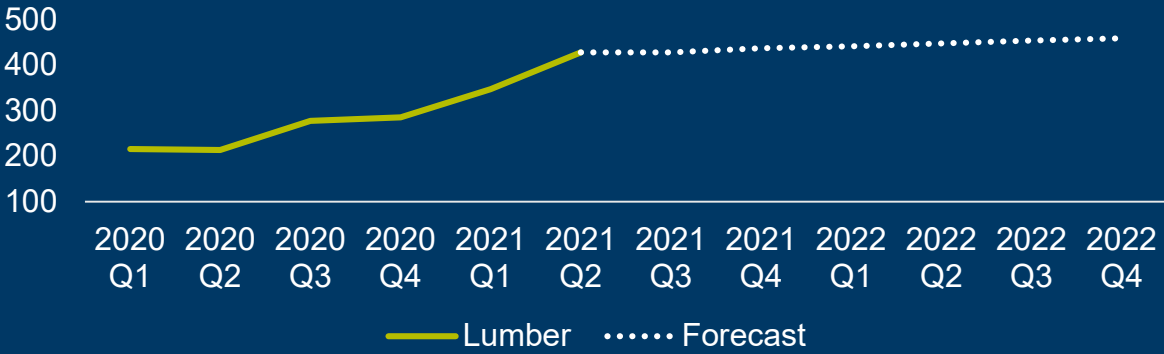
# LUMBER

## PRICING FORECAST TO GROW BY DOUBLE DIGITS YOY THROUGH THE END OF 2021

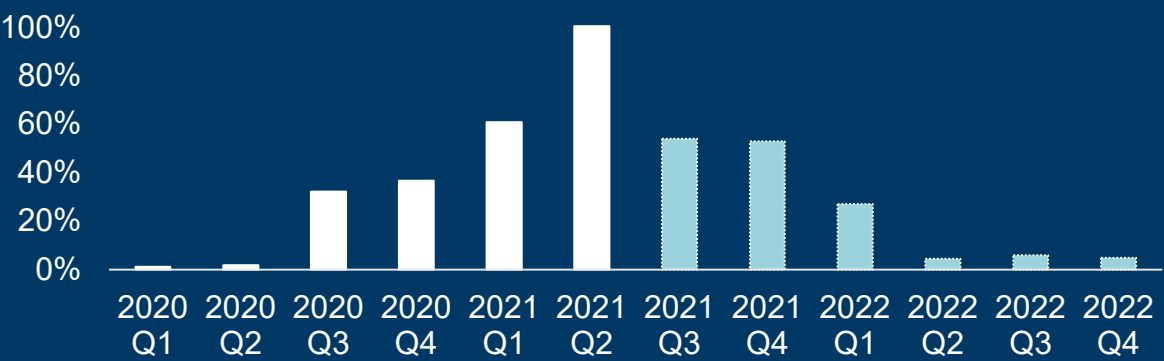
- Demand for lumber has been strong as single-family and multifamily construction starts increased during the pandemic and renovation projects for people spending the bulk of their time at home were popular.
- Mill capacity has not been increasing fast enough to keep up with the (surprising) spike in demand during the pandemic. Lumber producers are now increasing capacity at existing mills.\*
- Lumber supply in the U.S. was impacted by increased tariffs on Canadian lumber in 2017. Many of those tariffs have been rolled back recently, but it will take time to increase supply.
- Growth in lumber producer prices is expected to end 2021 up YoY by 53% but remain relatively flat in 2020 (increasing 5% YoY in 2022). Forecasted growth is then expected to steadily decline until it drops below 2% in the middle of the decade.

\*Bloomberg, "Canadian Lumber Producers to Expand U.S. Mills Amid Home Boom"

Lumber: Pricing Index



Lumber: YoY Change



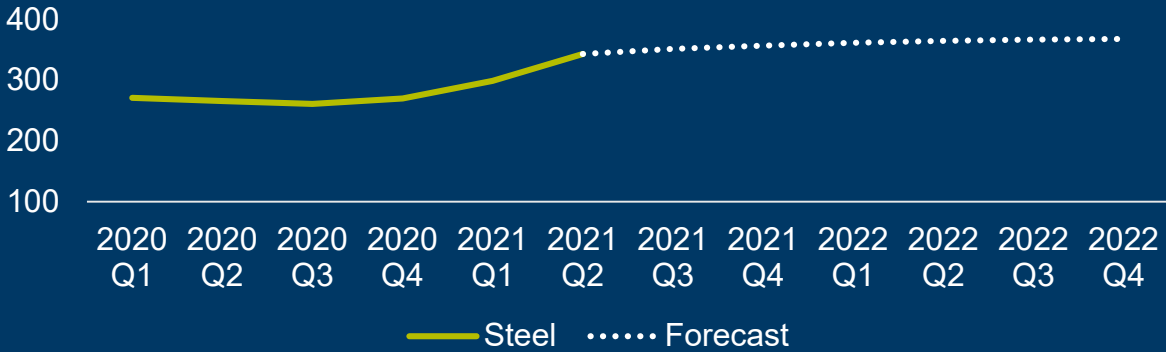
Source: U.S. Bureau of Labor Statistics (BLS); Moody's Analytics Forecasted; Cushman & Wakefield Research

# STEEL

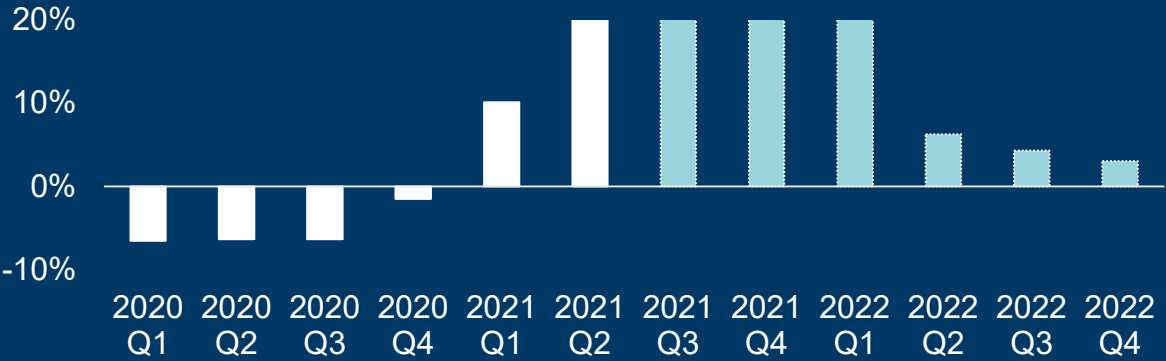
## AFTER TWO YEARS OF DECLINES, PANDEMIC-INDUCED SHORTAGES SPIKED PRICES

- Steel producer pricing has been up-and-down over the past few years. U.S. tariffs led to a double-digit increase in 2018. Then, the producer pricing index declined for eight straight quarters until its trough in Q3 2020.
- The next three quarters registered strong price growth as the index ended Q1 2021 in line with the 2018 peak.
- Mills shutdowns at the beginning of the pandemic and were slow to resume operations, which led to steel shortages, which have driven price gains. These are expected to continue through this year and decelerate in 2022.

Steel: Pricing Index



Steel: YoY Change



Source: U.S. Bureau of Labor Statistics (BLS); Moody's Analytics Forecasted; Cushman & Wakefield Research

# MITIGATING RISK



# HOW TO MITIGATE CONSTRUCTION RISK IN A VOLATILE MARKET

Commodities do not discriminate by property types (office, industrial, retail or multi-family). Risk reduction/mitigation may be slightly different based on the specific property type, yet these considerations should be evaluated for all project types:

## ENGAGE A PROJECT MANAGER EARLY

Given the volatility of the commodities markets, **engage early with a professional project management firm** as soon as possible that will provide the following value-added services:

- Provide **specific advice based on market conditions** for the anticipated type of construction.
- Deliver **valuable industry expertise** with respect to budgeting, scheduling, procurement strategies, suppliers and effective design scope.
- Provide **procurement leverage advantage** with contractors, subcontractors and suppliers based on their buying activity within a market and/or larger geographic area.

## PREPARE FOR ALTERNATIVE SOLUTIONS & EXTENDED SCHEDULES

**Starting early on the project** will allow the Project Team to develop and vet all possible project solutions including developing an accurate customized Master Project Budget and Master Schedule, and conduct value engineering studies.

- Consider **alternatives to traditional in-demand building materials** such as precast concrete panels, PEX plumbing, lumber, CMU, concrete, or steel depending on the material availability, cost and local construction capabilities/techniques.
- Specify **locally produced materials and suppliers** with optimal inventory, location and transportation cost.
- **Pre-purchase materials** such as steel joists for industrial buildings and steel studs for interior tenant improvement buildouts.
- Evaluate the use of **prefabrication and/or modular construction** to expedite the off-site construction, reduce waste and improve field labor productivity.

# COMMODITY RISK MITIGATION EXAMPLES *BY PROPERTY TYPE*



## OFFICE

- For high-rise office construction, owners should consider a concrete structure in lieu of a steel structure.
- Low- and mid-rise construction may benefit from modular construction to reduce waste and improve labor efficiency.
- Procurement process for interior materials will need to start as early as possible to mitigate supply chain disruptions / delays.



## INDUSTRIAL

- Design to maximize bay width to minimize steel joist infrastructure.
- Maximize tilt-up and/or precast construction to reduce structural steel.
- Consider prefabrication wherever possible.
- Start the procurement of steel joists as early as possible to mitigate supply chain disruptions or delays.



## RETAIL

- Embrace prefabrication wherever possible. Modularize key building elements—up to the entire structure, if possible—via a centralized hub to minimize transportation costs of raw materials.
- Maximize tilt-up and/or precast construction to reduce structural steel.
- Employ “lean construction” principles, particularly just-in-time delivery, to reduce raw materials stored on site.



## MULTIFAMILY

- Low- and mid-rise multifamily may benefit from modular construction.
- Consider alternatives to copper piping, such as PEX plumbing, where permitted by code.
- Consider concrete structure in lieu of a steel structure.
- Fully embrace prefabrication for key building components.
- Source locally produced finishes to minimize transportation costs.

# IMPACT ON COMMERCIAL REAL ESTATE MARKET DYNAMICS

- Increased material costs drive replacement costs higher, which supports the value of existing assets.
- The faster rents are growing now, the greater the margin of safety developers have to absorb the cost of higher materials prices and supply chain uncertainty.
- From the occupier developer / build-to-suit perspective, the question is how confident one can be that functional space can be secured in the right locations in order to meet projected needs. The greater level of product specificity will tend to mean greater ability to absorb development cost increases because existing assets are less substitutable.
- Supply-demand imbalances will likely keep cost growth rates high, but improvements in supply chains should moderate increases.



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