

The background image shows two construction workers in profile, facing right. They are wearing white hard hats with American flag stickers and high-visibility green safety vests with reflective orange and yellow stripes. The vest on the left worker has 'HITT' printed on the back. They are standing on a construction site with a blue steel frame structure. The lighting is bright, suggesting a sunny day.

HITT

A large, bright yellow curved graphic element on the left side of the page, resembling a stylized 'C' or a partial circle.

# Construction Input Pricing and Market Update

QUARTER 3 // 2022

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# Executive Summary

After a robust 2021, the U.S. economy experienced a deceleration in growth in the first half of 2022. The real gross domestic product (GDP) in the first quarter of 2022 fell 1.6 percent, shifting the economic conversation from inflation to the possibility of a recession. The second quarter of 2022 continued to stoke fears of a recession as the real GDP contracted by 0.9 percent annually due to aggressive monetary policy tightening from the Federal Reserve (Fed) to combat high inflation. A plan was thwarted as the consumer price index (CPI), a gauge for inflation, continued to climb throughout the first six months of 2022 to the highest level since November 1981.

The Fed's ongoing battle with inflation to bring it in line with the target of 2.25 percent to 2.50 percent has resulted in a series of interest rate hikes. Additional rate hikes are expected this year to slow consumer and business spending. The balancing act increases the likelihood of a recession in 2023, which currently sits at 60 percent, according to Bloomberg's September survey.

Betting against the economy isn't a sure thing, with many economic indicators steady and holding strong.

## Here are a few market indicators to watch for year-end.

- Construction spending in the first half of 2022 totaled \$848.2 billion, a 10.7 percent increase from the same period last year.
- Despite fears of a recession, construction spending is predicted to be up 6.3 percent annually.
- The supply chain is demonstrating recovery with the mid-year pressure index dropping 51 percent.
- July and August posted a decrease in the Producer Price Index (PPI), which measures construction input materials—this is the first decrease since the start of the pandemic.

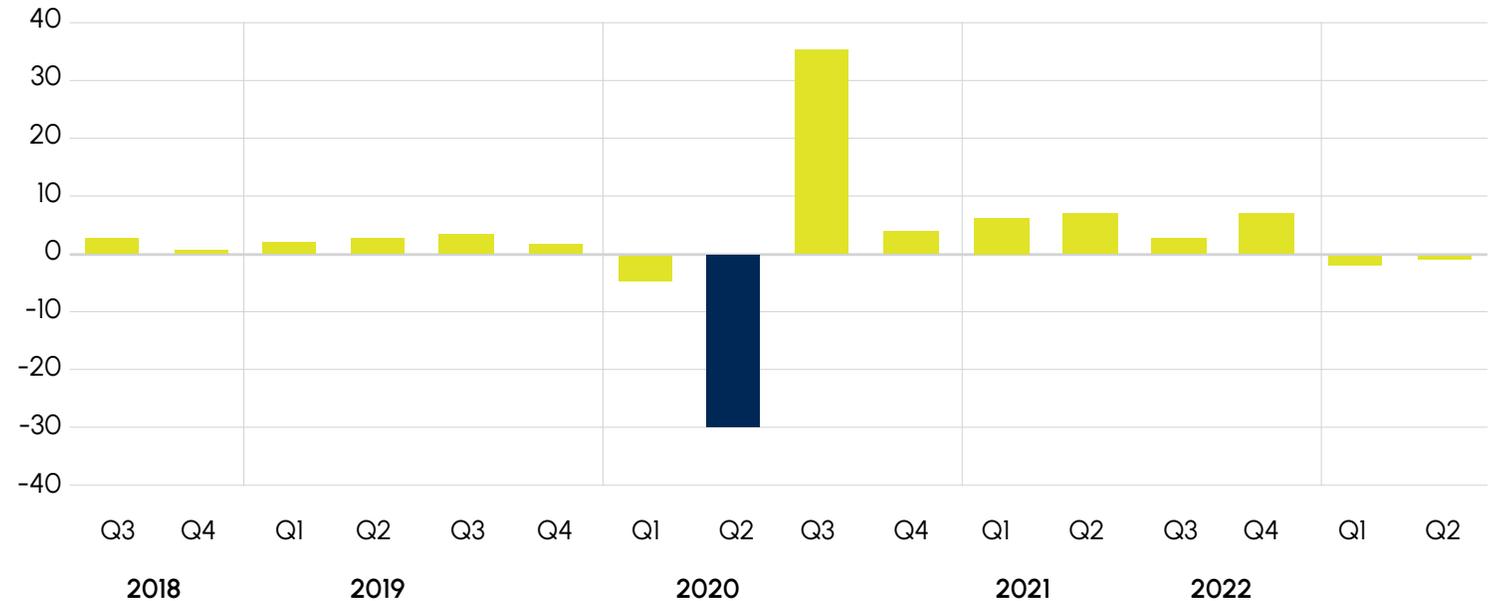


# Market Indicators

# Gross Domestic Product

2020 resulted in a major drop in Gross Domestic Product (GDP). The Fed lowered interest rates, and the government provided stimulus funding that overstimulated the economy. The result was a drive for consumer demand, lack of supply, and inflation at an all-time high. One could argue that we're currently in a recession due to the two consecutive quarters of negative GDP—the definition of a recession. However, the current state of the economy hasn't reached the National Bureau of Economic Research's definition of "persistent and broad decline in economic activity."

Real GDP: Percent Change from Preceding Quarter



Note: Seasonally adjusted annually

Source: U.S. Bureau of Economic Analysis

# Unemployment

In June, the Bureau of Labor Statistics reported the national **unemployment rate held steady for the fourth consecutive month at 3.6 percent**. Employers added 372,000 nonfarm payroll employees for a total of 2.7 million new jobs in the year's first half. Historically, with GDP contractions, we see a gain in unemployment—another indicator of recession. **Despite dampening economic projections, the U.S. labor market has remained resilient, creating an economic dichotomy, making this a critical indicator to watch.**

Businesses' ability to hire workers (albeit not fast enough) and workers' ability to find work at higher wages continue to signal that the economy is faring much better than the two negative quarters the GDP suggested. However, this also fans the flames of additional interest rate hikes in the future, as higher wages and strong labor markets provide a good recipe for consumer spending.

Unemployment Rate



**3.5%**

Unemployment Rate

**5.7M**

Total Unemployed People

**1.6M**

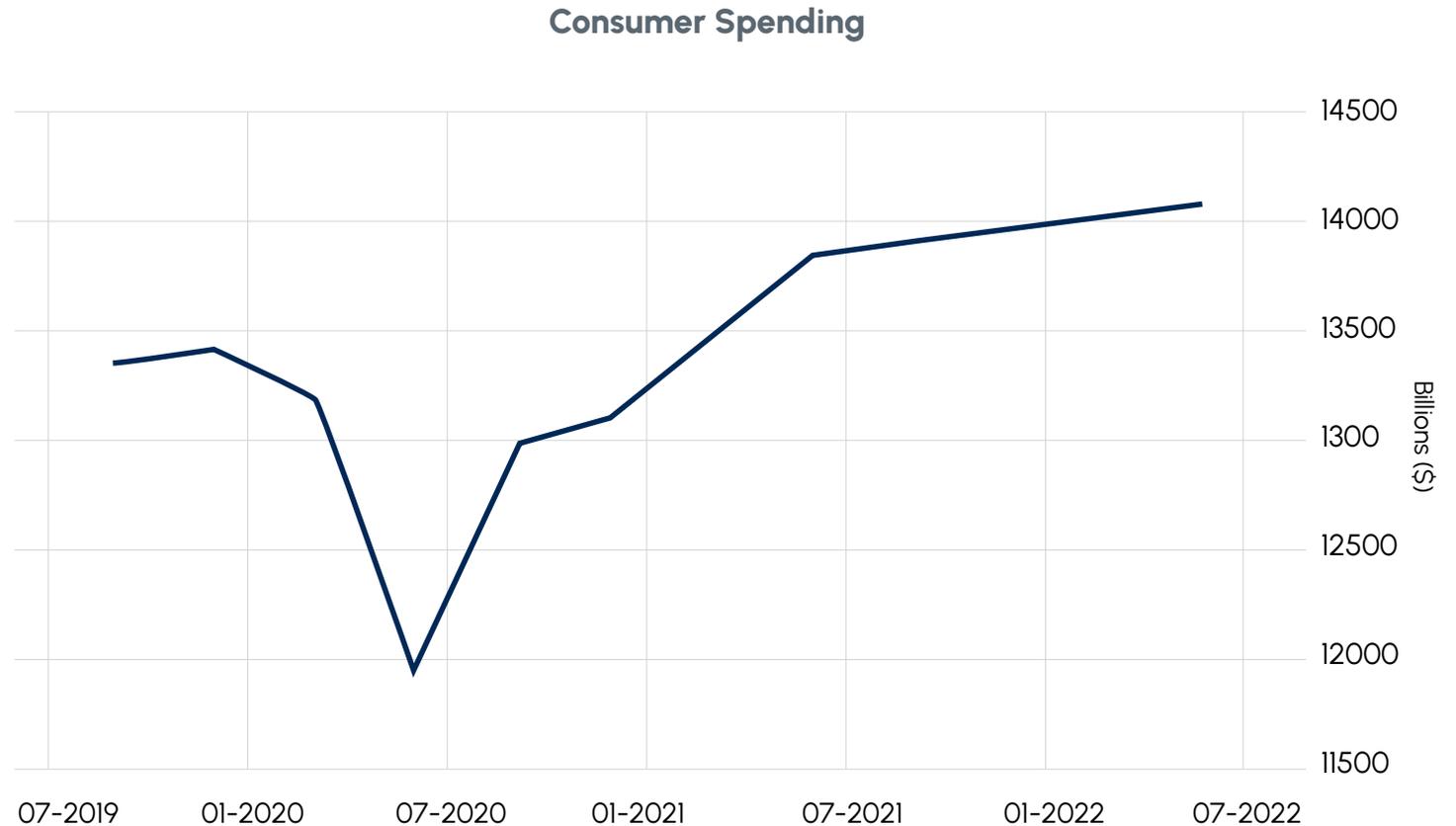
Unemployment Insurance Claims

**Note:** Updated as of July 2022. Unemployment rate is collected once a month, numbers are seasonally adjusted.

**Source:** U.S. Bureau of Labor Statistics

# Consumer Spending

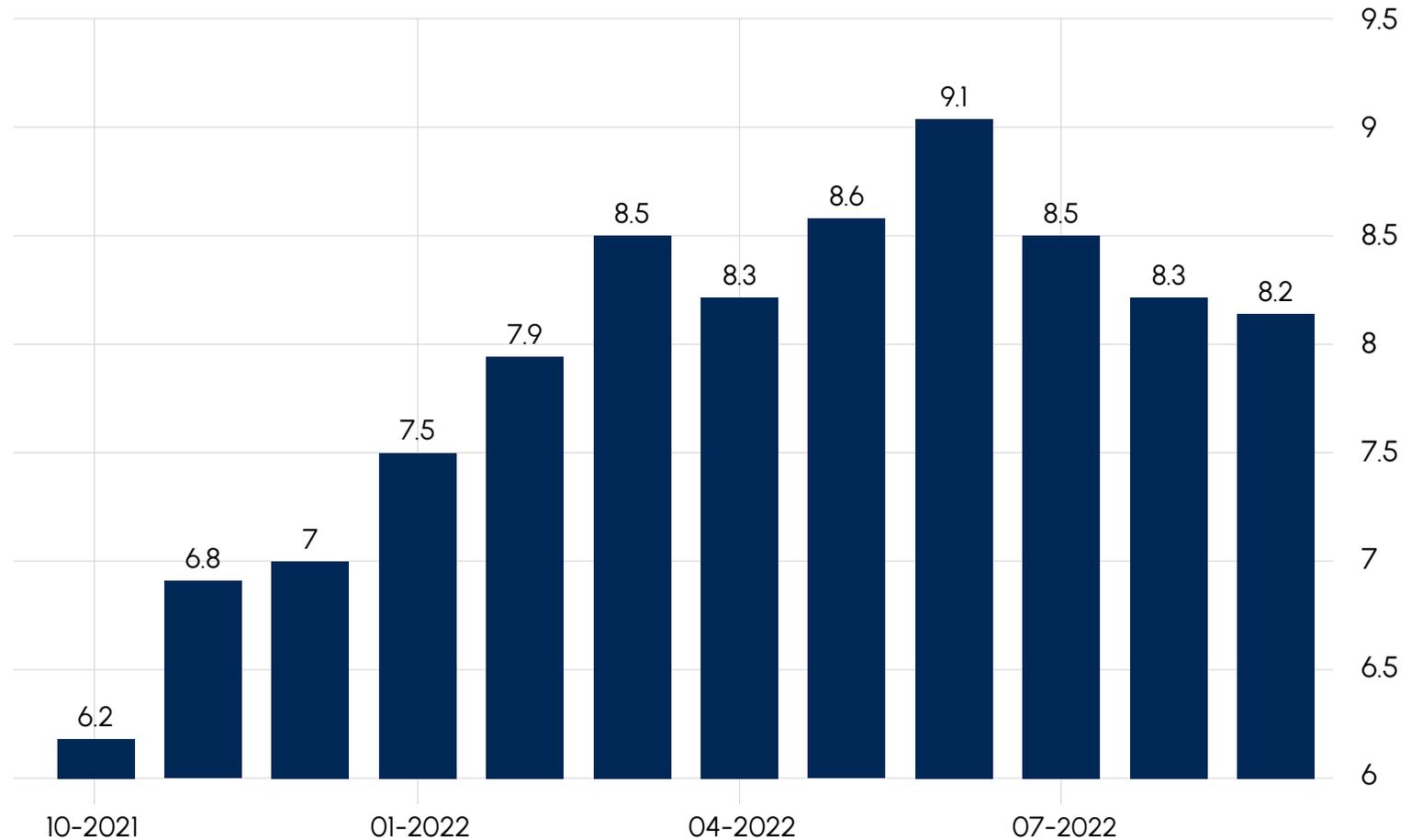
- June's consumer spending surpassed the previous year's stimulus-induced expenditures by 8.4 percent. Powered by a strong labor market, consumer spending remained strong in the year's first half, averaging nearly 1.0 percent month-over-month (MOM).
- The strength of consumer spending will be necessary to watch because continuously high spending will signal higher inflation and more interest rate hikes.
- Reduced consumer spending will have an opposite effect and cool high inflation; however, a significant and prolonged downshift in consumer spending would signal a recession as it is one of the most critical components of GDP.



Source: U.S. Bureau of Economic Analysis

# Inflation

The annual inflation rate in the U.S. slowed for the third month running to 8.2 percent in September 2022—which is the lowest reading in seven months. The volatile energy index posted increased costs in gasoline, fuel oil, and electricity, after decreases in the prior months. However, one silver lining may be the cost of food decreasing marginally over the previous month. The cost of food is the highest since 1979, but a small slowdown in cost occurred in September (11.2 percent vs. 11.4 percent).



Source: U.S. Bureau of Labor Statistics

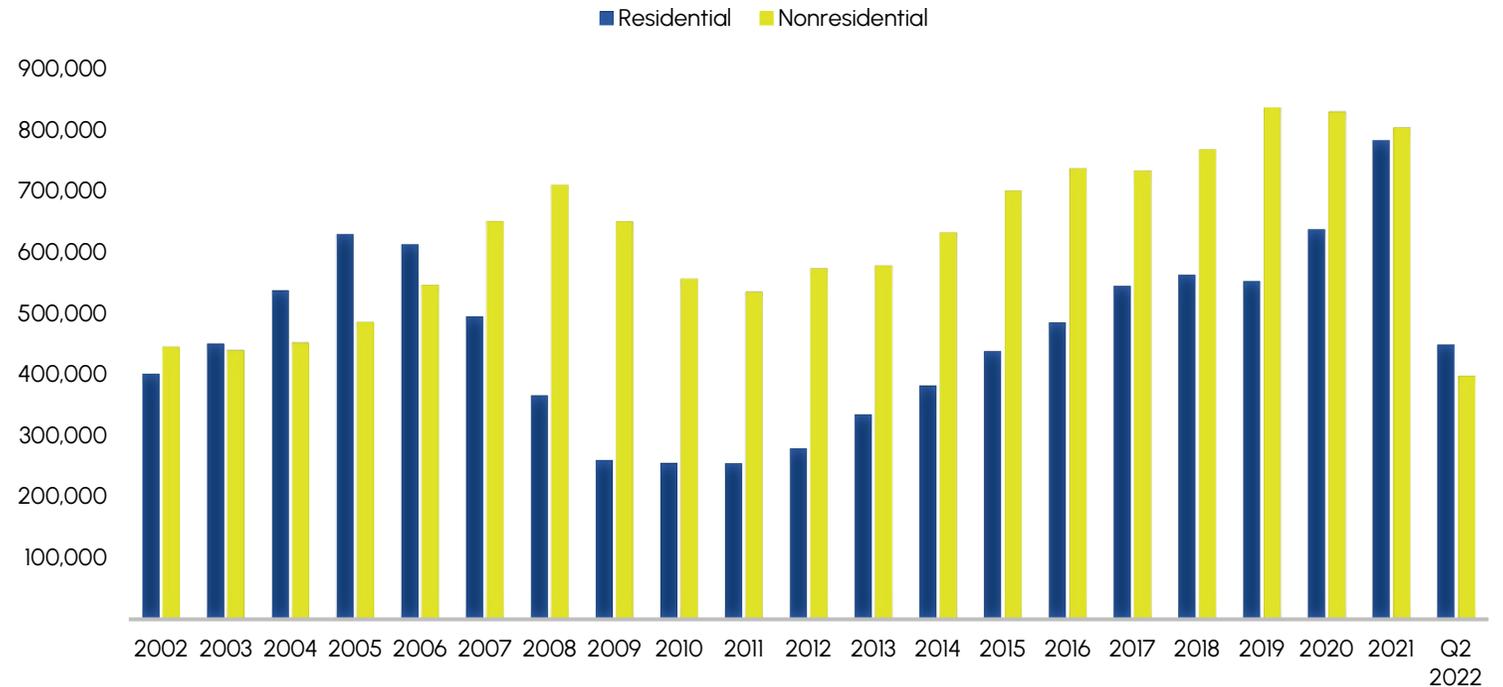


# Construction Indicators

# Construction Spending

- Actual construction spending in the first half of 2022 totaled \$848.2 billion, a 10.7 percent increase from the same period last year.
- Despite the fears of an economic downturn, economists predict total construction spending in 2022 to be up 6.3 percent to \$1.7 trillion.

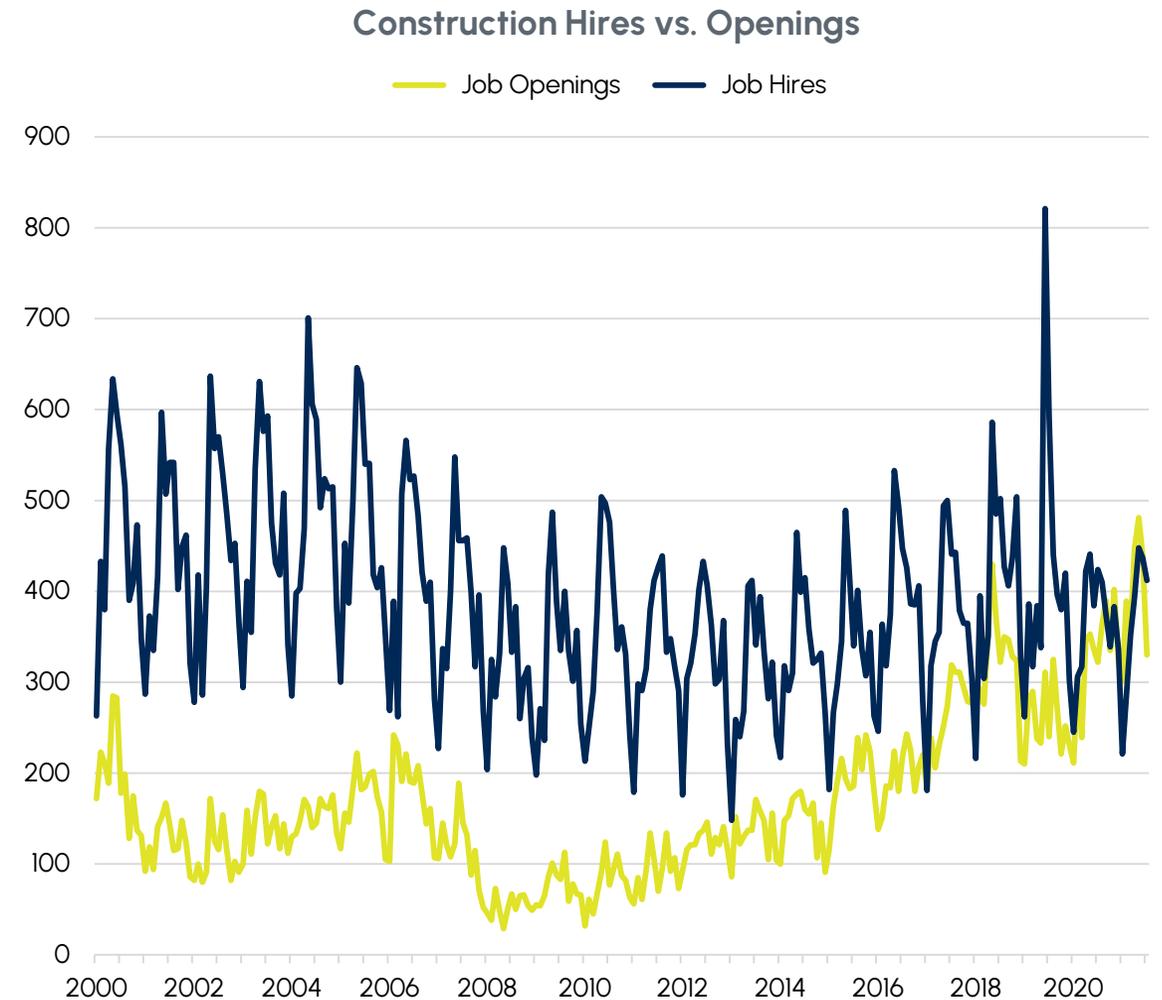
Nonresidential vs. Residential Spending



Source: FMI North American Engineering and Construction Outlook—Q4 2022

# Construction Openings vs. Hires

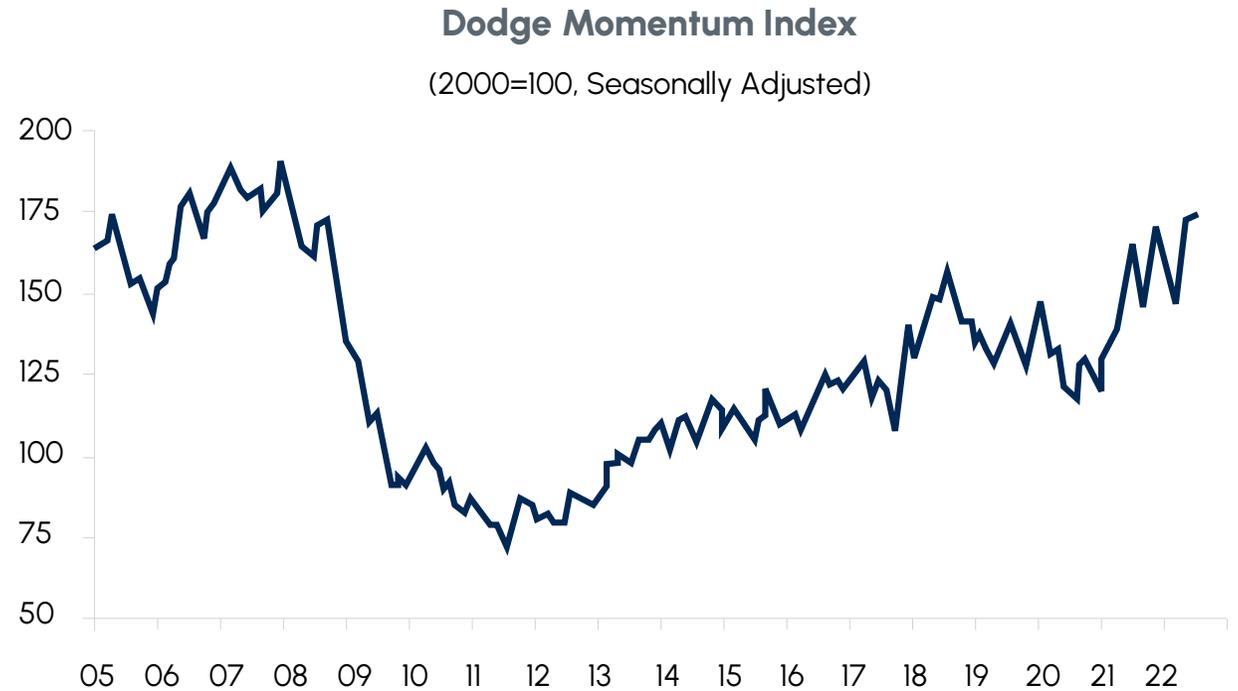
- The construction sector added 45,000 jobs year-to-date (YTD), which keeps the unemployment rate at 3.5 percent in line with the national average.
- Construction's forecasted growth is shrinking, which will impact the number of open positions.



Source: Associated Builders and Contractors (ABC)

# Dodge Momentum Index

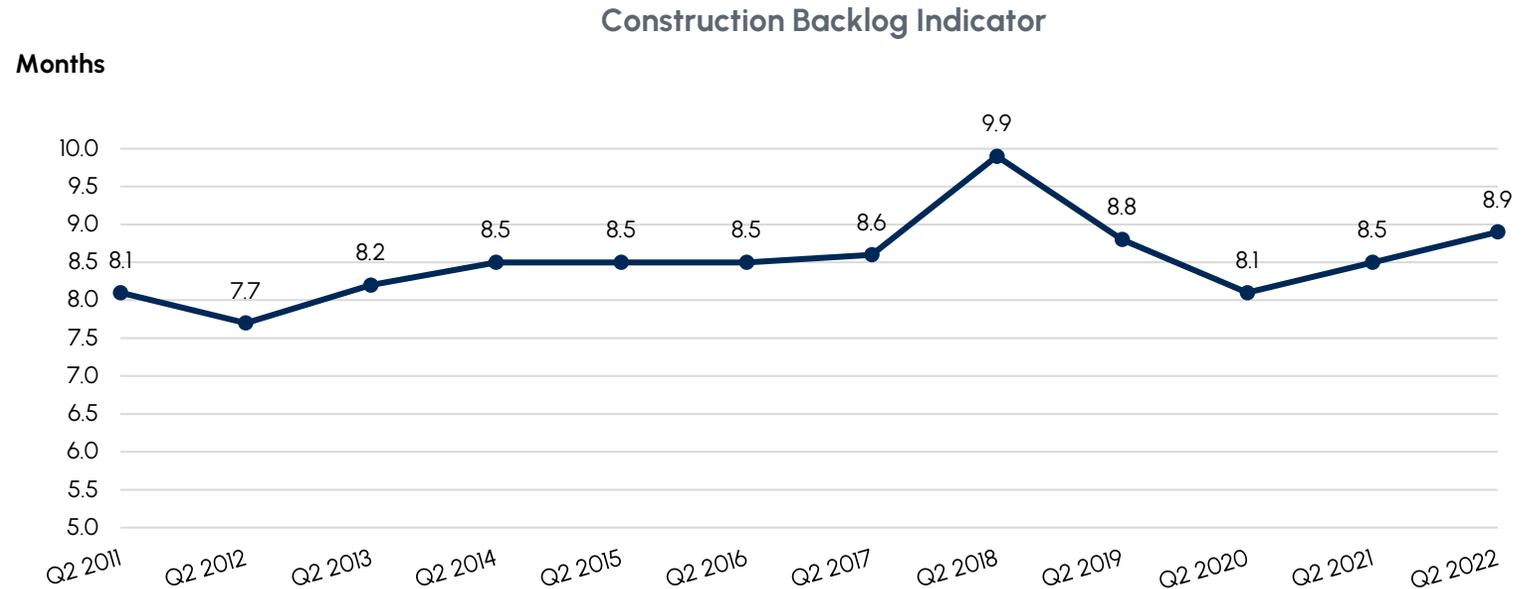
- Despite the rise in the cost of capital, more projects entered the planning phase, pushing the index up 5.3 percent YOY to a 14-year high benchmark of 173.6.
- Warehousing sector bolstered commercial planning, which ticked up 9.0 percent.



Source: Dodge Construction Network

# Construction Backlog

- Demand for construction remained strong, as the Associated Builders and Contractors (ABC) reported 8.9 months of backlog for June 2022, an increase of 0.4 months from the previous year.
- The South posted the most significant backlog increase at 19 percent.

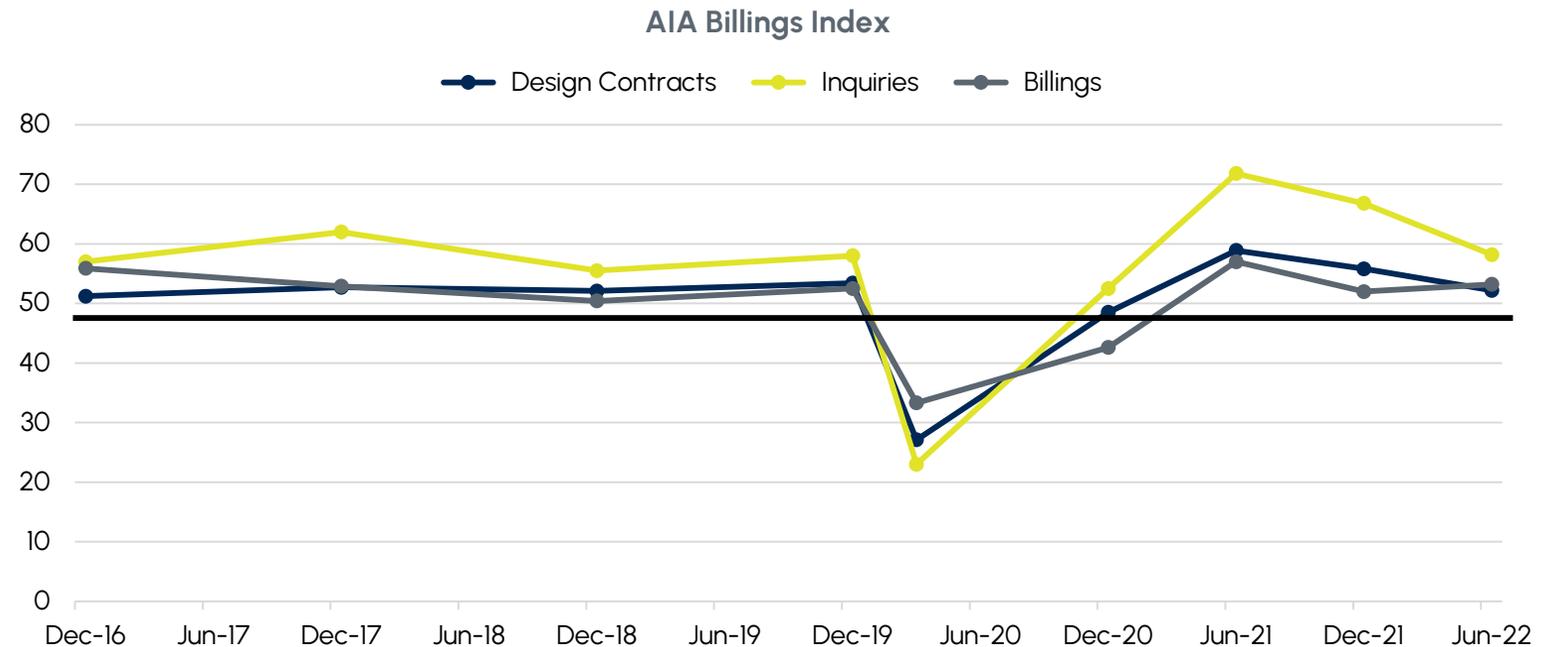


Source: Associated Builders and Contractors (ABC)

# AIA Billings Index

The AIA Billings Index measures “work on the boards” as a leading indicator for construction—because design contracts result in new construction contracts usually nine to twelve months later. The baseline is 50, anything above leads to positive growth and below 50 demonstrates a contraction.

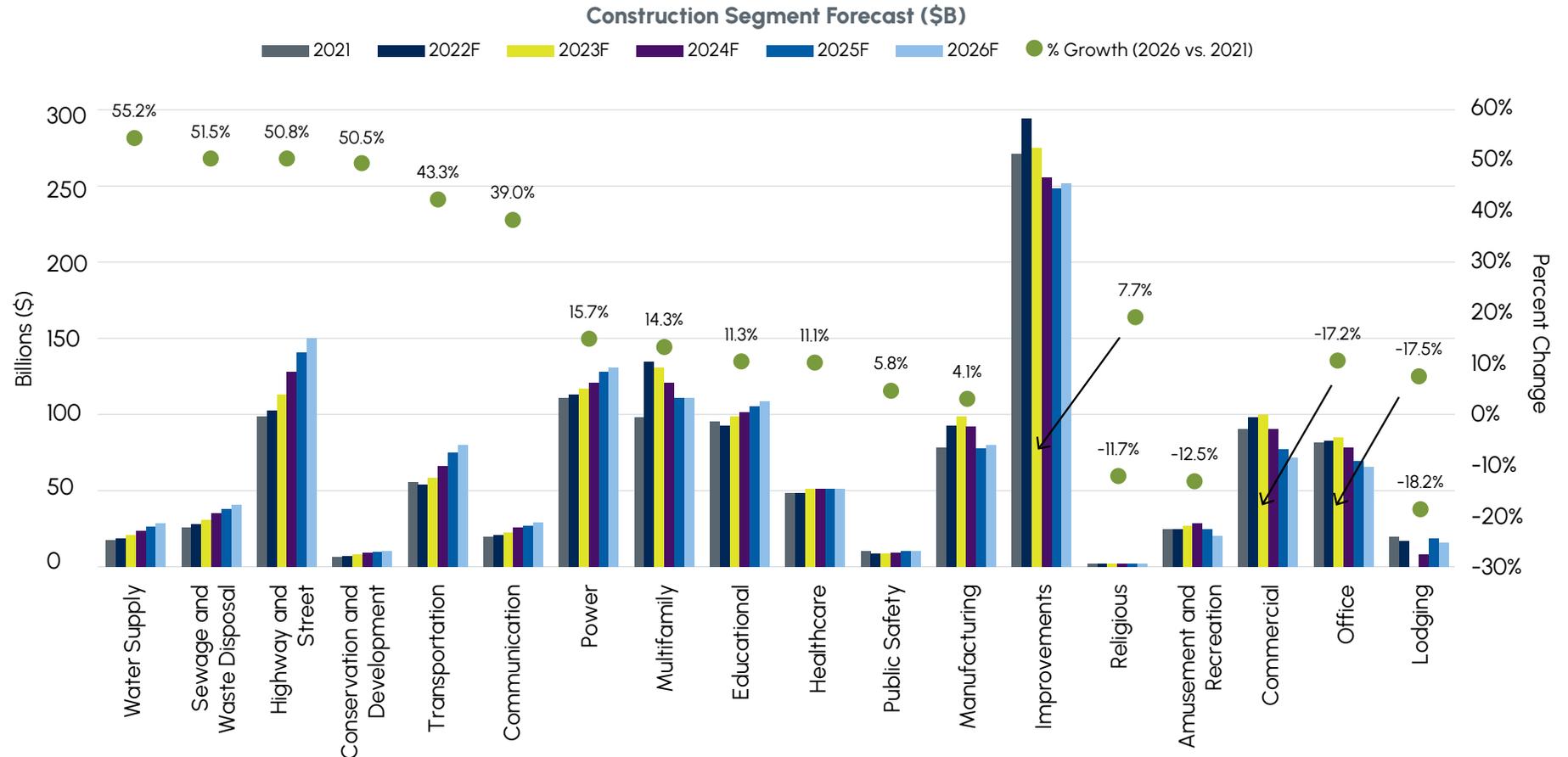
At 53.2 in June, the metric still demonstrates signs of solid business. However the metric has fallen over the last few periods demonstrating a slowdown in new work. This is largely due to high labor costs, rising inflation, and increased interest rates.



Source: The American Institute of Architects (AIA)

# Construction Forecast

In 2022, FMI is forecasting total construction spending to clock in at \$1.73 trillion, an 8.8 percent increase over 2021. The chart illustrates a decline in construction spending year-over-year after 2022 before increasing 0.4 percent from 2025 to 2026. Nonbuilding structures will experience most of the growth over the next five years, with most sectors posting more than 50 percent growth, except Power which will experience 15 percent growth, due to the Infrastructure bill.



Source: Figure I.3, FMI U.S. Engineering and Construction Outlook—Q3 2022



# Supply Chain Update

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# Supply Chain Timeline

## MARCH 2018

### The United States issues tariffs on steel and aluminum

To protect America's steel and aluminum industries, the Trump Administration imposed tariffs of 25 percent on steel and 10 percent on aluminum, effectively placing a tax on every foreign shipment of those metals into the United States.

## MAY 2019

### The United States lifts tariffs on Canada and Mexico

One year after imposing tariffs, the United States announced an agreement with Canada and Mexico to remove the tariffs for steel and aluminum imports from those countries.

## MARCH 2020

### The pandemic shuts down the United States

On March 11, the World Health Organization (WHO) declared the COVID-19 virus a pandemic. The announcement followed a rising sense of alarm in the preceding months resulting in a shortage of personal protective equipment (PPE), businesses shutting down, massive layoffs, and numerous deaths.

## FEBRUARY 2021

### Winter storm shuts down Southeast Texas

The unexpected winter storm wreaked havoc on Texas' power grid. The Texas freeze shut down semiconductor manufacturers, oil and gas refineries, and major transportation hubs.

## AUGUST 2021

### Hurricane Ida strikes Texas and Louisiana

The devastation of Hurricane Ida to Texas and Louisiana added major strains to an already overwhelmed supply chain.

## FALL 2021

### Increased imports

Panic buying wreaked havoc on global supply. Increased imports left cargo ships awaiting berths at record highs.

## JANUARY 2022

### China Zero Covid-19 Shutdown

In order to protect China's war against COVID-19, they have posed strict restrictions on travel and exports. The bans are predicted to be lifted in Q2 2023.

## FEBRUARY 2022

### Russia invaded Ukraine

The escalation of the Russo-Ukrainian war. The disruption has impacted food supply, fuel, and other raw materials. Ukraine and Russia account for nearly one-third of the world's wheat production and Russia dominates the palladium production at forty percent of world production.

## OCTOBER 2022

### Hurricane Ian makes landfall in Florida

Hurricane Ian wreaked havoc among waterfront communities in the southwest. The storm wiped out major infrastructure impacting that region for years to come.

# Supply Chain Index

The Supply Chain Index measures the supply chain constraints across the world. At midyear 2022, the index was down 51 percent over last year, demonstrating a release of pressure on the supply chain. The World Container Index dropped 31 percent, but is still 84 percent higher than the 5-year average.

Overall, the cooling supply chain pressures demonstrate that the demand for goods is beginning to level out. Most analysis also looks to 2023 for the normalization of shipping costs.

The global supply chain pressures index (GSCPI) is a measurement of supply chain conditions, created by the Federal Reserve Bank of New York. The index combines variables from transportation and manufacturing such as those related to delivery times, prices, and inventory.

### Supply Chain Pressures Are Cooling



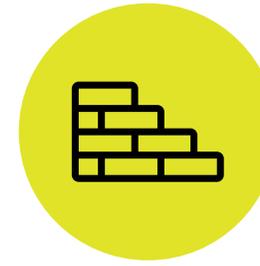
Source: The Federal Reserve Bank of New York

# Supply Chain is a Long-term Problem

While the supply chain has seen some recovery over the last few months due to demand normalizing, it is a long-term problem with challenges that will continue. The pandemic brought light to the antiquated and highly fractured system, which requires a heavy investment in technology and an improved strategy around warehousing and logistics. Additionally, the U.S. infrastructure and transportation issues will take a decade, if not longer, to improve. There are new issues rising to the surface such as the sustainability of supply chains related to fair labor, carbon emissions, transportation, and the overall impact on the environment.



**Infrastructure  
Investment**



**Material  
Shortages**



**Technology  
Investment**



**Warehousing**

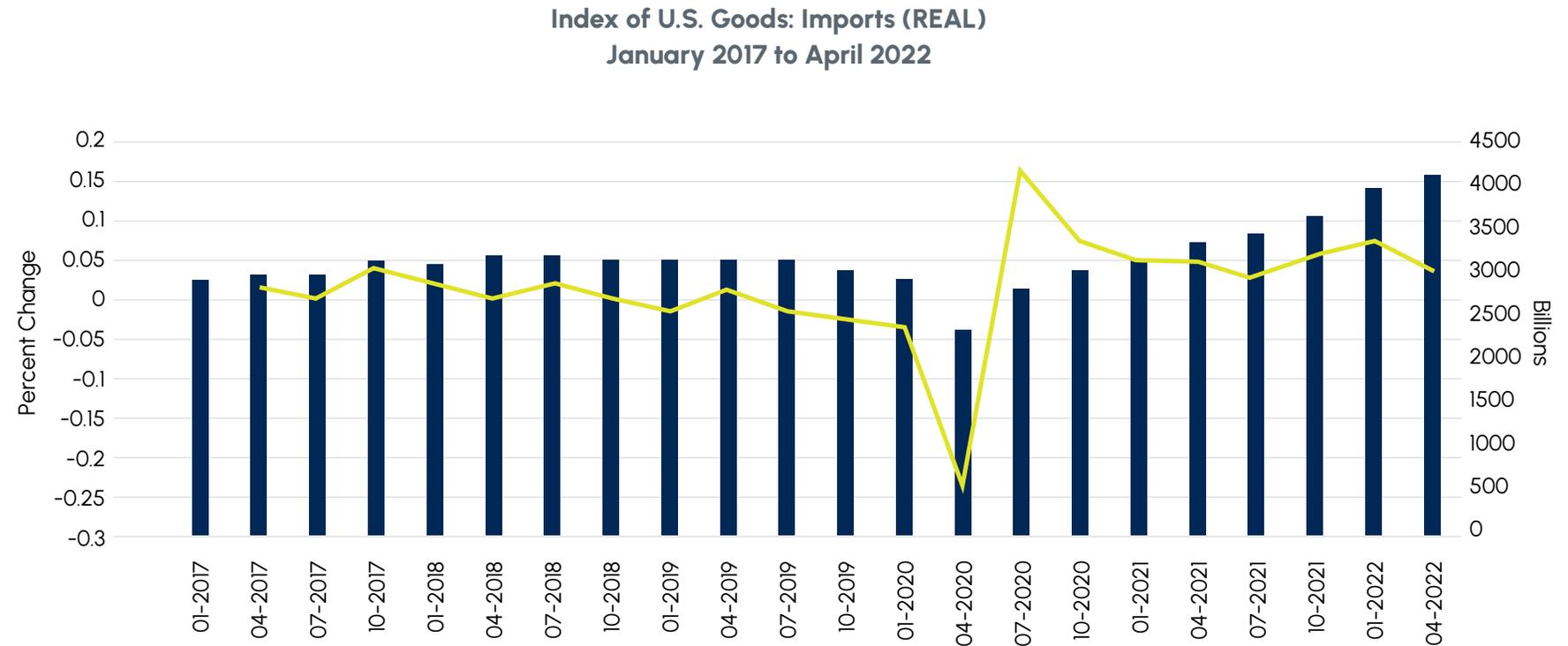


**Labor and  
Equipment**

# Port Activity: Goods and Imports

The beginning of the pandemic saw a sharp decline in the demand for goods—down 24 percent month-over-month. As consumer demands shifted, there was a sharp rebound on imported goods.

The total index growth since the pandemic is 42 percent. In 2022, the index has only grown 4 percent, demonstrating stabilization among the demand for goods.

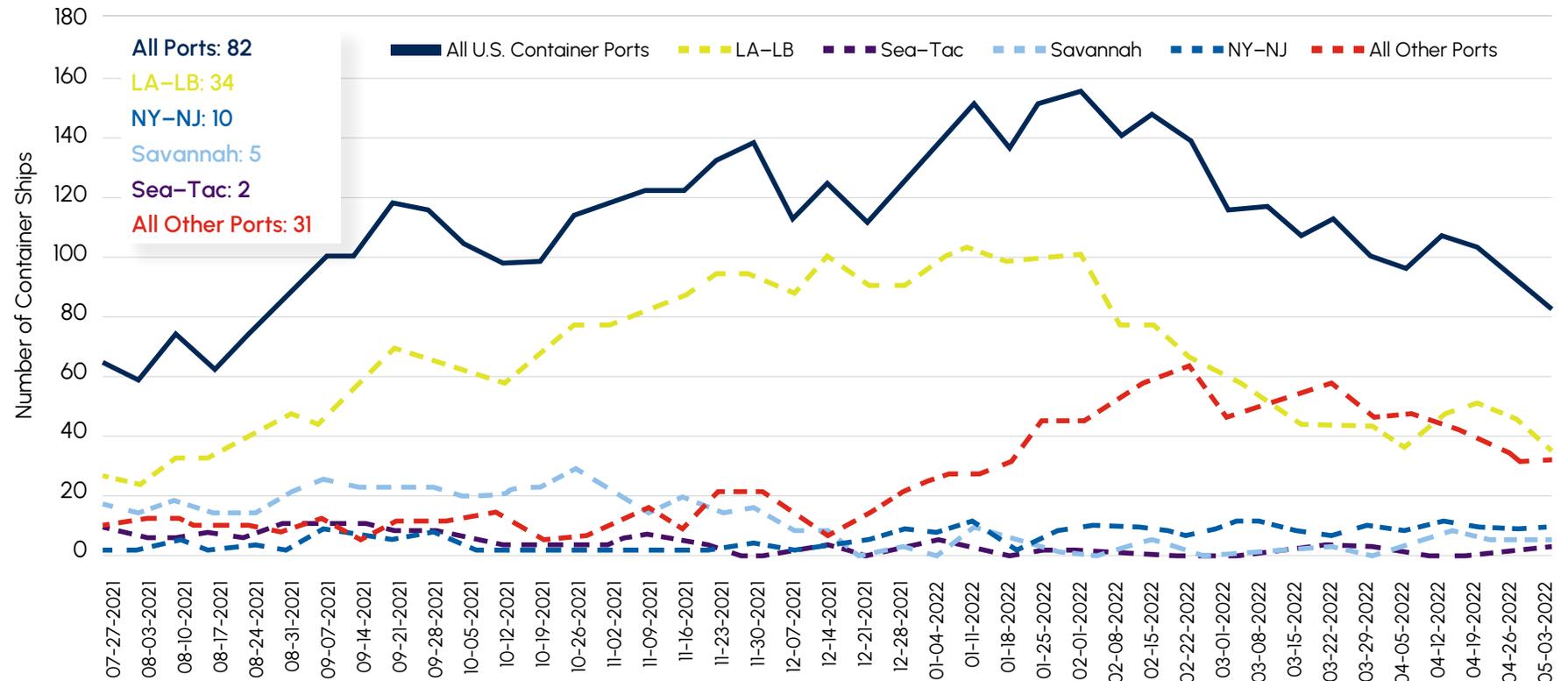


Source: U.S. Bureau of Economic Analysis

# Port Activity: Weekly Containerships Awaiting Berths

The time containerships spend awaiting berths has been a major contributing factor in supply chain disruptions. In January 2022, the berths peaked at 158 vessels; this is more than triple from the previous year. Mid-year data demonstrates 82 vessels await berth, about half from the previous year; however, this is expected to increase due to the pending holiday rush.

Container Ships Awaiting Berths at U.S. Ports (July 2021- May 2022)



**Note:** Datapoints are weekly observations of anchored container ships, typically made each Tuesday.

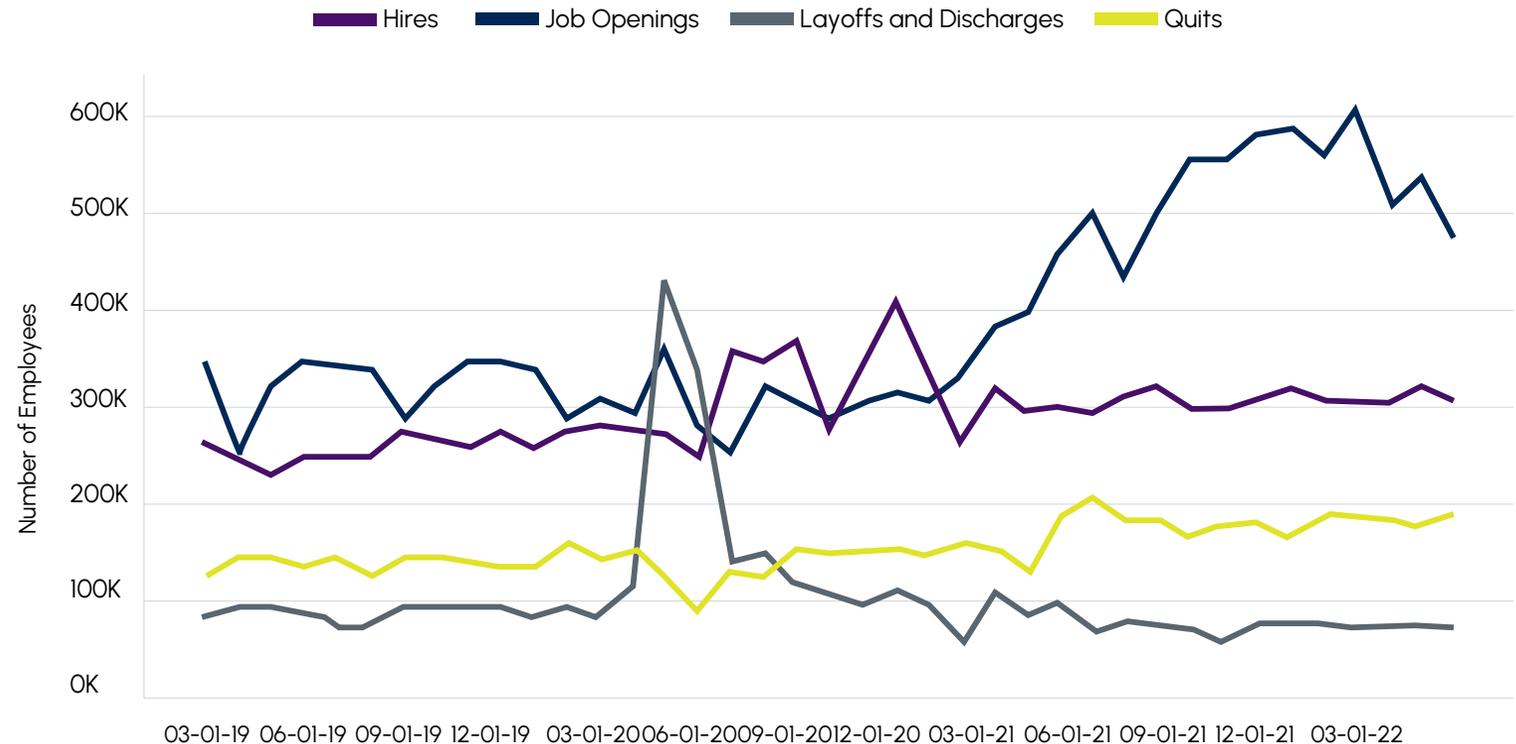
**Source:** MARAD Office of Policy and Plans / Marine Exchange of Southern California

# Labor Force: Trucking and Warehousing

At the start of the pandemic, trucking and warehousing lost nearly six percent of its labor force. The warehouse sector rebounded quickly, recovering all jobs lost in May 2020 at 138,500 employees. The trucking sector hired an average of 300,000 workers each month in 2022. Openings have started to decline in 2022 and are expected to continue. It will be critical to closely watch consumer demand to prove reports of a driver shortage for the holiday season.

**Job Openings and Labor Turnover: Transportation, Warehousing, and Utilities Sector (Seasonally Adjusted)**

Data through March 2022



**Note:** Data in this chart represent wage and salary workers only, and exclude owner operators and independent contractors.

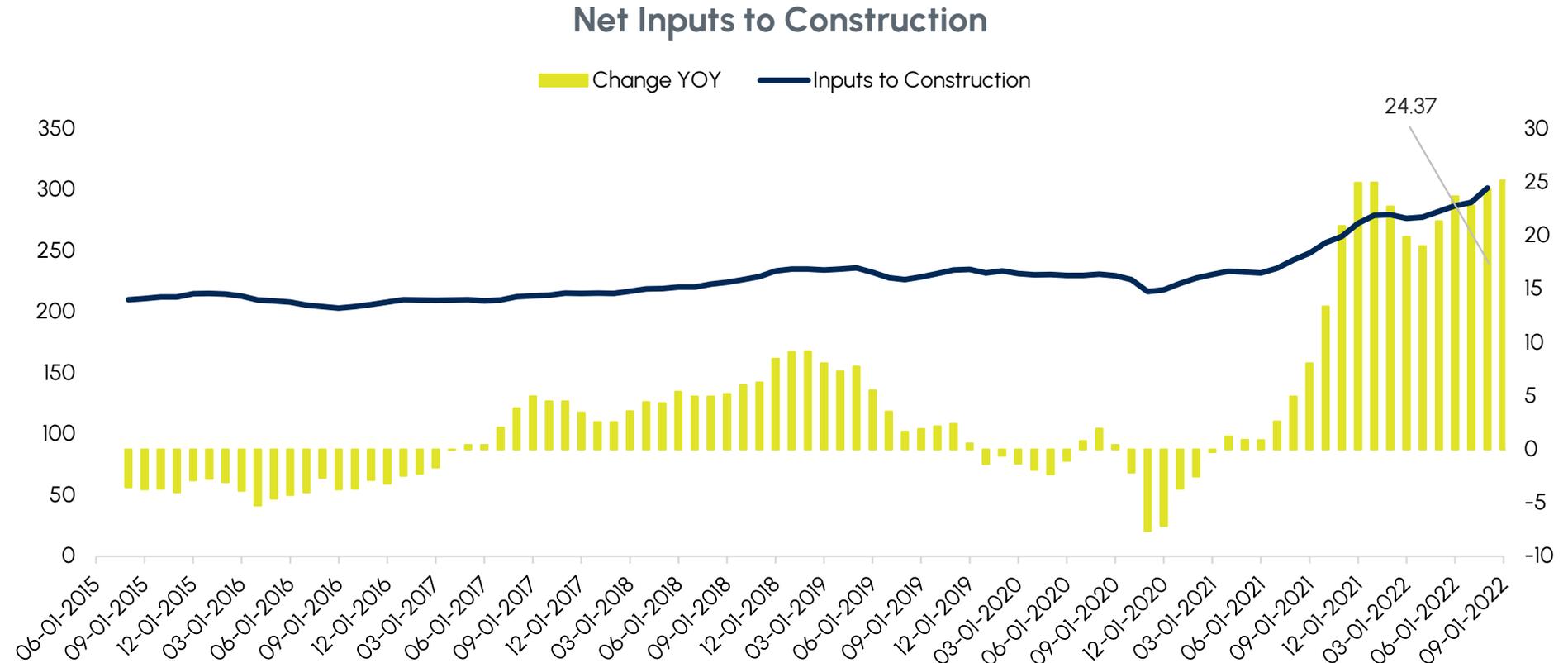
**Source:** U.S. Bureau of Labor Statistics - Job Openings and Labor Turnover Survey (JOLTS)



# Construction Input Pricing

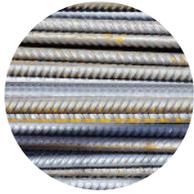
# Producer Price Index (PPI): Net Inputs to Construction

In the first half of 2022, input pricing increased eight percent. In July, inputs to construction decreased at 1.8 percent, the first decrease since before the pandemic. August also posted a slight increase in input pricing—signaling a normalization in pricing may be on the horizon. Regardless of a nominal increase or decrease, as of August the input cost is 24.37 percent over last year and 42.9 percent increase since the beginning of the pandemic.



Source: U.S. Bureau of Labor Statistics

# PPI: Select Material Increases YOY



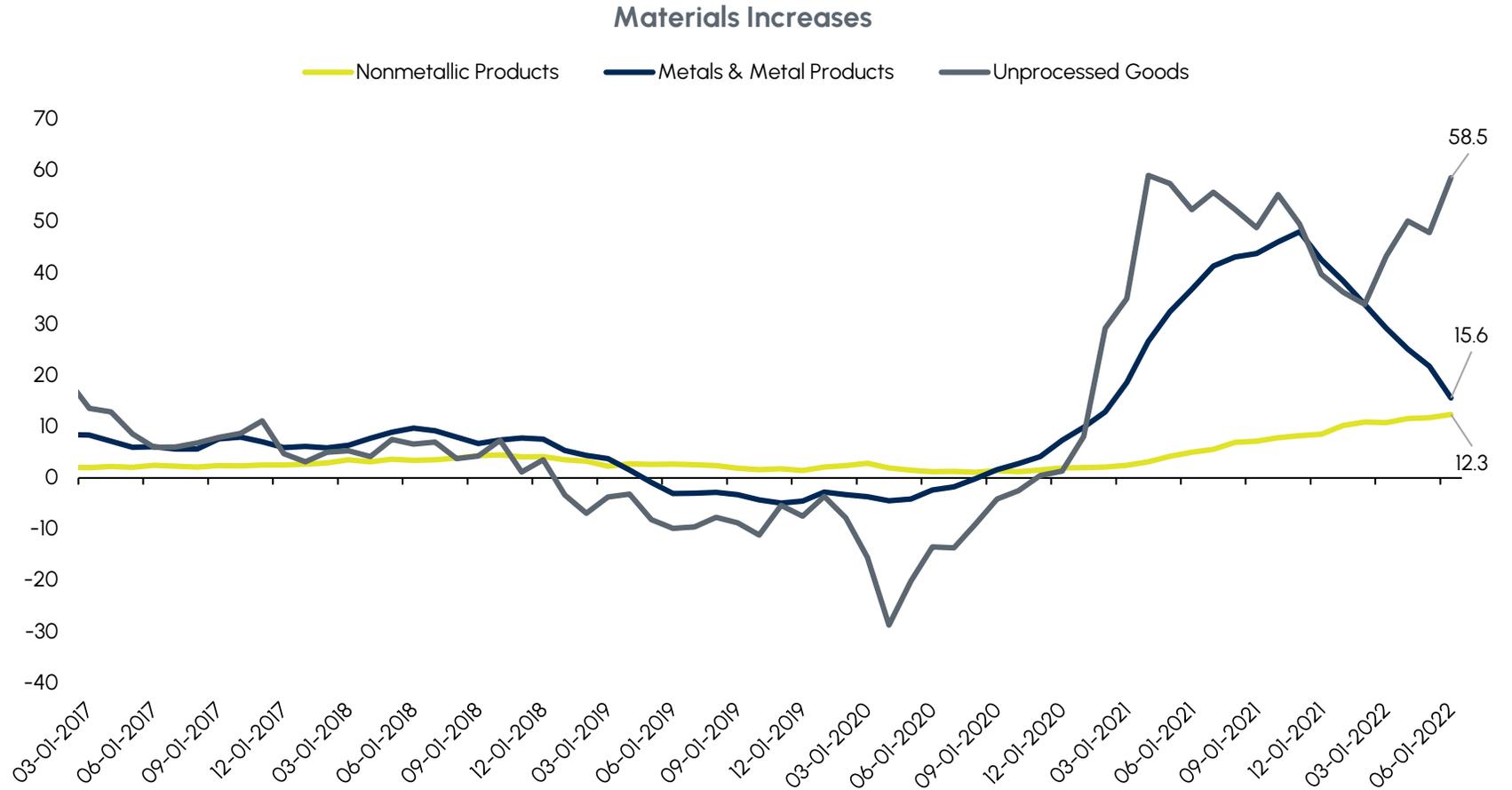
**15.6%**  
Metals & Metal Products



**12.3%**  
Nonmetallic Products

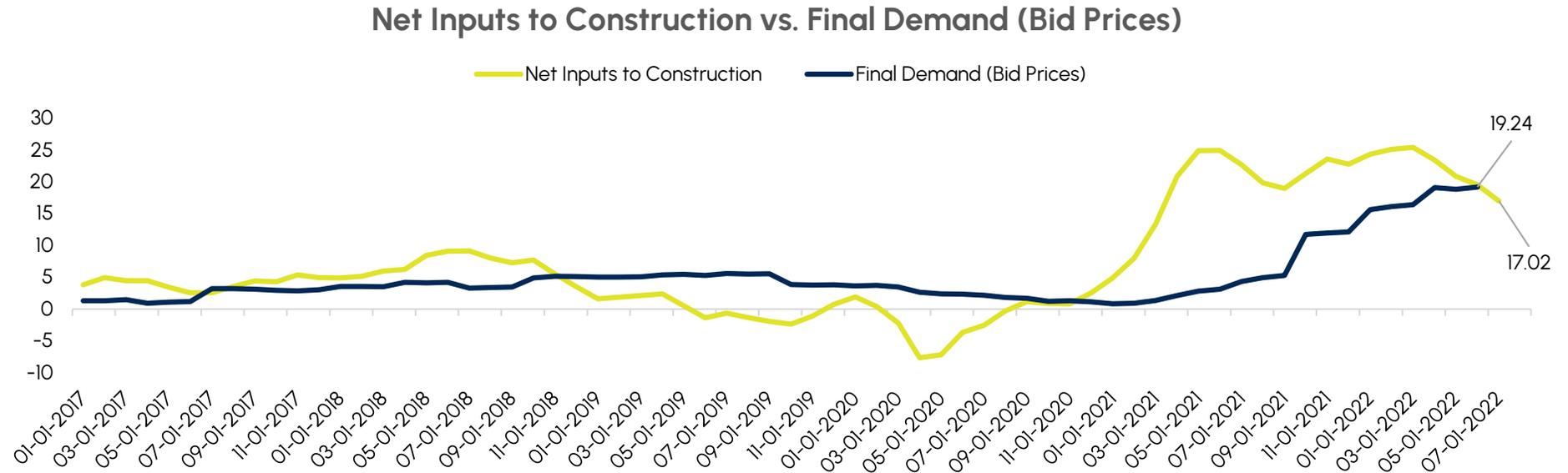


**58.5%**  
Unprocessed Goods



# Construction PPI for Final Demand

- The final demand reflects prices paid by owners for the construction of projects including materials, labor, and markups.
- Increased 10 percent YOY but slowing to four percent from June to July 2022 and again in August.
- The most recent data demonstrates that the bid prices and material costs are normalizing.

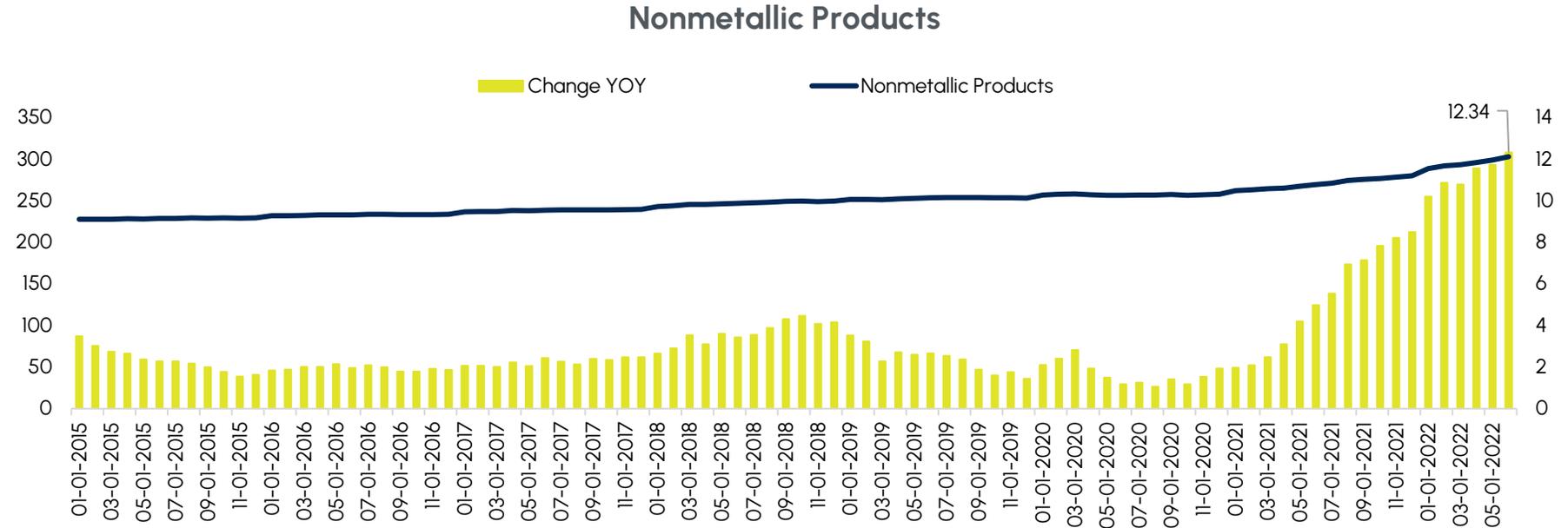


# Nonmetallic Products

Nonmetallic products have had an increase of 12.4 percent over last year. The input pricing mid-year is stable with a small increase month-over-month.

The nonmetallic analysis includes aggregate pricing for:

- Ready-mix concrete
- Precast concrete
- Brick and structural clay tile
- Rubber and plastic
- Flat glass
- Insulation materials
- Gypsum products
- Lumber and plywood

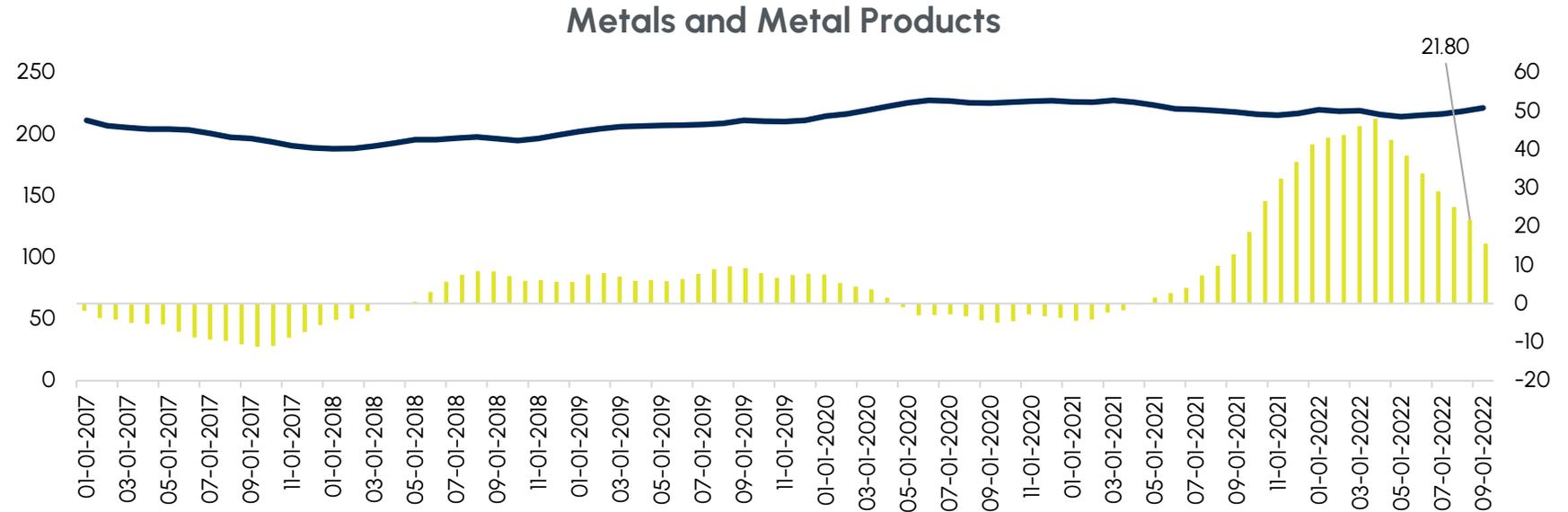


# Metallic Products

Metallic products have seen a considerable increase since the pandemic. Mid-year, the increase was about 15 percent YOY. The number continues to rise producing in Q3 a 20 percent increase over last year.

The metallic analysis includes aggregate pricing for:

- Steel mill products
- Steel pipe and tube
- Sheet metal products
- Fabricated structure metal
- Metal bar joists and concrete bars
- Fabricated iron and steel for noncommercial buildings
- Prefabricated Metal Buildings

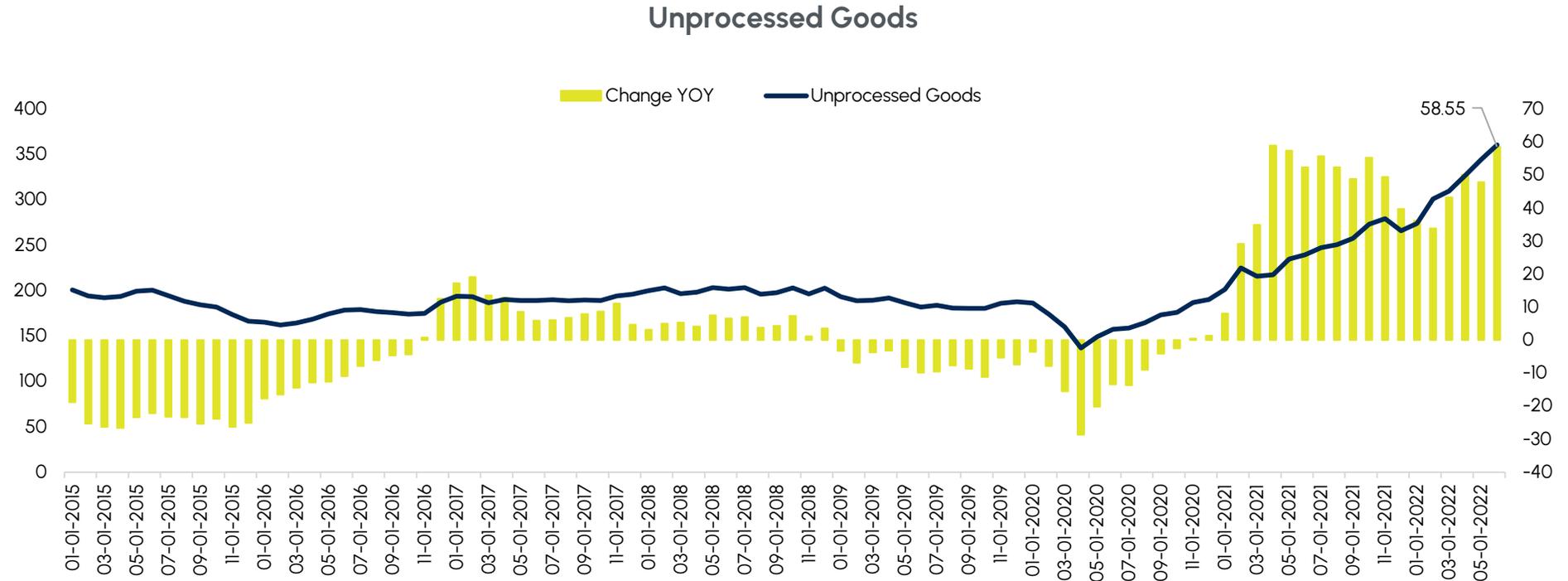


# Unprocessed Goods

Unprocessed goods have had an increase of 58 percent over last year. The input pricing mid-year continues to climb month-over-month.

The unprocessed goods analysis includes aggregate pricing for:

- Unprocessed goods
- Asphalt
- Sand, gravel, and crushed stone
- Iron and steel scrap
- Alloy steel scrap
- Copper base scrap



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