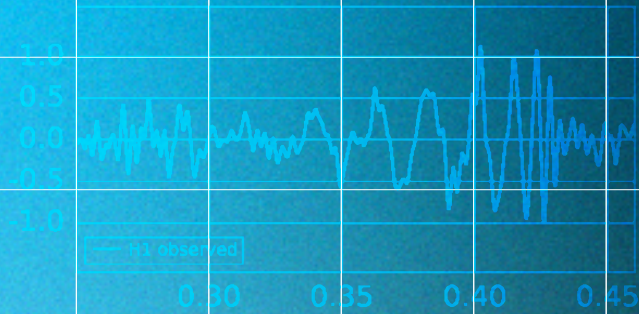


supply chain stability



PINC AI



stabilized demand

record breaking inflation

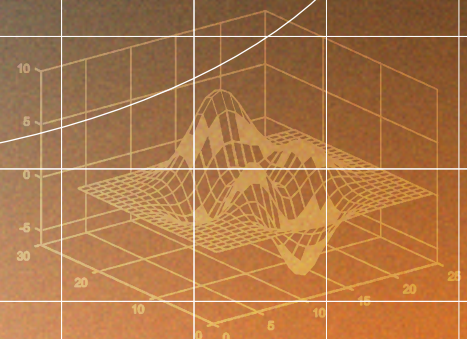
building healthier markets

Economic Outlook

SPRING 2023



workforce challenges



med-surg calculator

disruptions

empty shelves

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A Message From David Hargraves

Members of the Premier® alliance,

Empty shelves, longer lead times, workforce issues and higher prices characterized the global supply chain in 2021-2022, where large-scale disruptions and record-breaking inflation affected every sector of the economy – including healthcare.

In some welcome news for the supply chain, global transportation and freight indexes are showing downward trends towards pre-COVID-19 pandemic rates, reacting to the current environment of stabilized demand for supplies and ample inventory. Yet even with these bright spots, the supply chain worldwide remains fragile alongside ongoing disruptions, workforce challenges and elevated inventory levels, of which product must be utilized to support a broad-based recovery to “normal” pricing.

Amid this dynamic environment, Premier vows to continue to implement innovative solutions to address resiliency, product availability and cost reduction via greater diversity of manufacturing and suppliers, actionable data and technology enablement, and leading advocacy efforts. Maintaining focus and preparedness efforts for disasters and disruptions will be vital to managing supply chain stability in 2023 and beyond.

Alongside our committee members and your supply chain executives, Premier’s sourcing teams are actively working to re-negotiate the small number of agreements affected by inflation as market conditions improve. In addition to information provided on clinically equivalent products, conservation strategies and financial recovery options, our committees are examining the latest market intelligence and revising sourcing strategies as needed to ensure that upcoming requests for proposals (RFPs) and contracts are executed at the best possible time.

Some recent and notable highlights of our efforts include:

- With supply chain teams asked to do more with less, Premier solutions are allowing providers to mitigate product shortage risks while enabling cost reduction opportunities and the efficiency of scarce workforce resources. The PINC AI™ Supply Disruption Manager is aiding members in identifying at-risk supplies and clinically appropriate substitution options – affording supply chain and clinical staff reduced time to manage supply stock issues, reduced cost due to changing alternatives and reduced canceled procedures due to inadequate supplies.



- Prestige Ameritech recently announced their acquisition of Anexa Biomedical – a domestic manufacturer of sterile water and sterile saline products historically prone to shortages. The acquisition is made possible in part by previous investments from Premier and 16 member health systems.
- Premier’s direct sourcing company, S2S Global® offers PremierPro™ branded products, including clinical preference items, and supports meaningful cost savings opportunities and improved supply chain efficiencies. S2S Global® launched a new line of high quality safety IV catheters in its product offerings, and remains committed to completing a comprehensive portfolio of safety IV catheters to meet the clinical needs of members. Premier members who leverage S2S Global see an average of 15-20 percent savings across many product categories.
- Premier released an advocacy roadmap for the 118th Congress with an eye toward shaping this year’s debates on healthcare and the supply chain. Developed with member feedback to ensure appropriate focus, the roadmap lays out Premier’s policy goals to:
 - Bolster pandemic preparedness.
 - Mitigate drug and device shortages.
 - Boost domestic manufacturing.
 - Incent competitive and healthy markets.
 - Advance environmental sustainability.

Together with our members, Premier remains committed to mitigating product shortages, building healthier markets and tackling cost pressures with pioneering strategies and value-driven partnerships. Our focus on solutions that make a difference for providers, their patients and communities will never waiver.

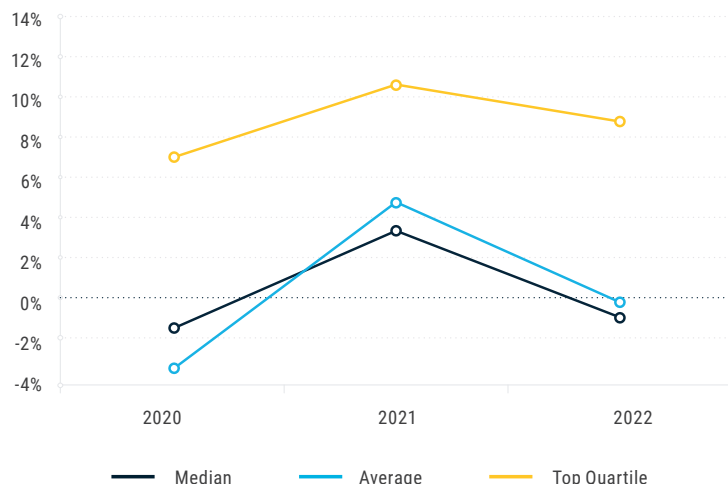
David A. Hargraves

Senior Vice President, Supply Chain

AN UPDATE ON HOSPITAL PERFORMANCE

Fig.1

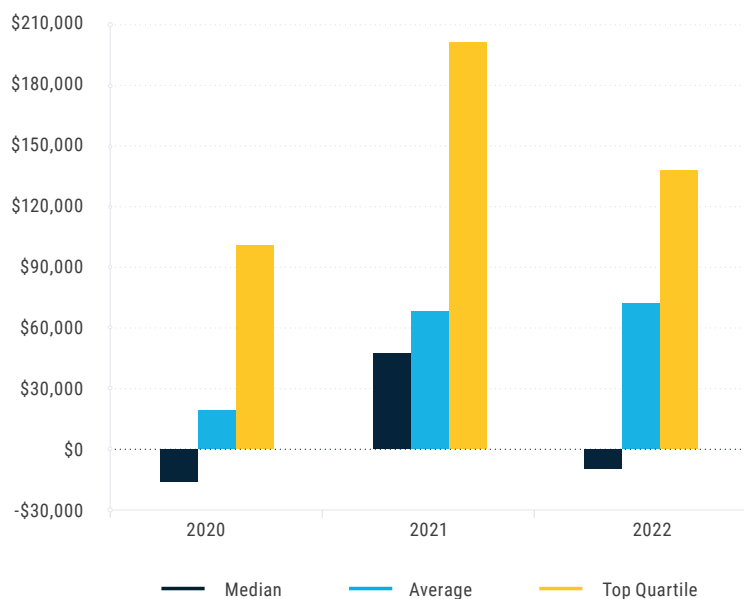
Operating Margin of Acute Care Hospitals



Source: A database maintained by Premier.

Fig.2

Profit Per Acute Bed in Service



Source: A database maintained by Premier.

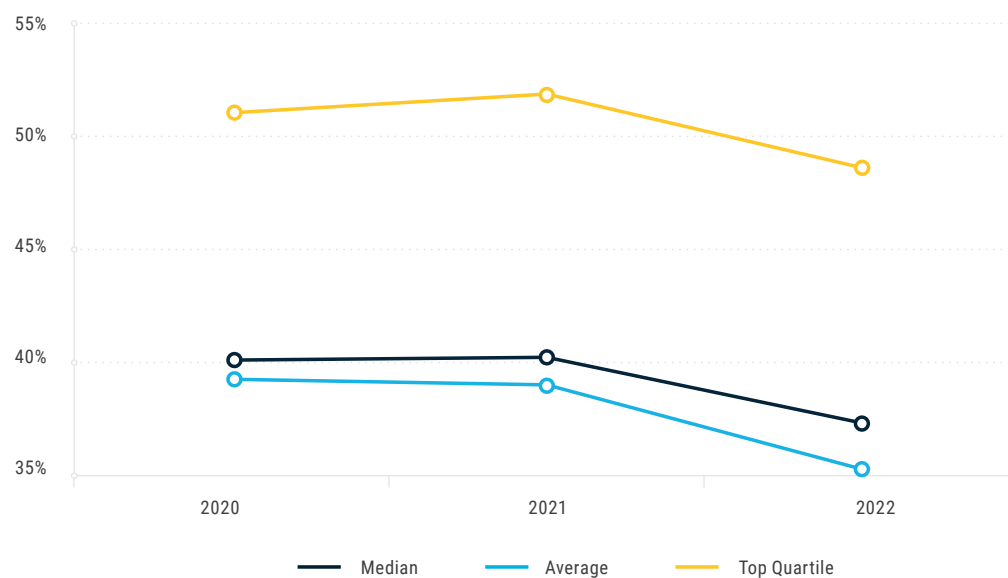
An analysis of acute care facilities within Premier's membership that submitted data from 2020 through September 2022 shows the following trends:

- An overall decrease in operating margins when looking at the average, top quartile and median numbers from 2021 to 2022.
- A decrease in the profit per acute bed in service statistics for the median and top quartile with a slight increase for the average numbers.
- An overall decrease in gross inpatient revenue as a percent of gross patient revenue from 2021 to 2022 when looking at the average, median and top quartile rates.
- A slight decrease in bad debt as a percent of net patient revenue when looking at the median and average rates, with a slight increase when looking at the top quartile rates.

If comparing to previous editions of this publication, please note that the cohort is updated to include all facilities with full data within the database for the timeframe evaluated. The data sets include 12 months of data from September 2021 through September 2022.

Fig.3

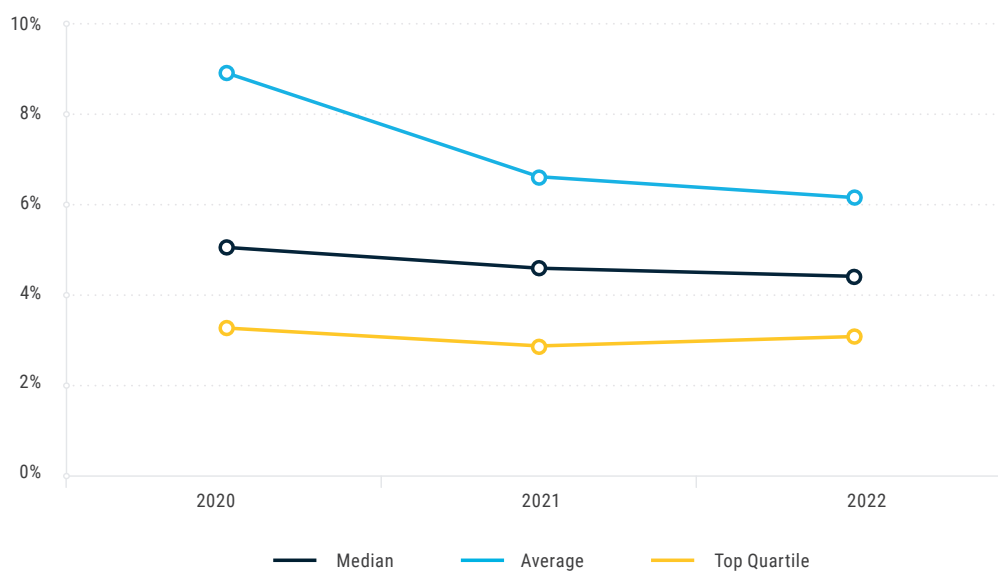
Gross Inpatient Revenue as a Percentage of Gross Patient Revenue



Source: A database maintained by Premier.

Fig.4

Bad Debt Expense as a Percentage of Net Patient Revenue



Source: A database maintained by Premier.

Bad debt calculations were achieved by deducting bad debt from gross patient revenue to arrive at net patient revenue.

Changes of Note

OCT2021 ➔ **SEPT2022**

PATIENT VOLUMES TRENDS ILLUSTRATE A POST-COVID-19 UTILIZATION SPIKE EXPERIENCED BETWEEN APRIL AND SEPTEMBER 2021.

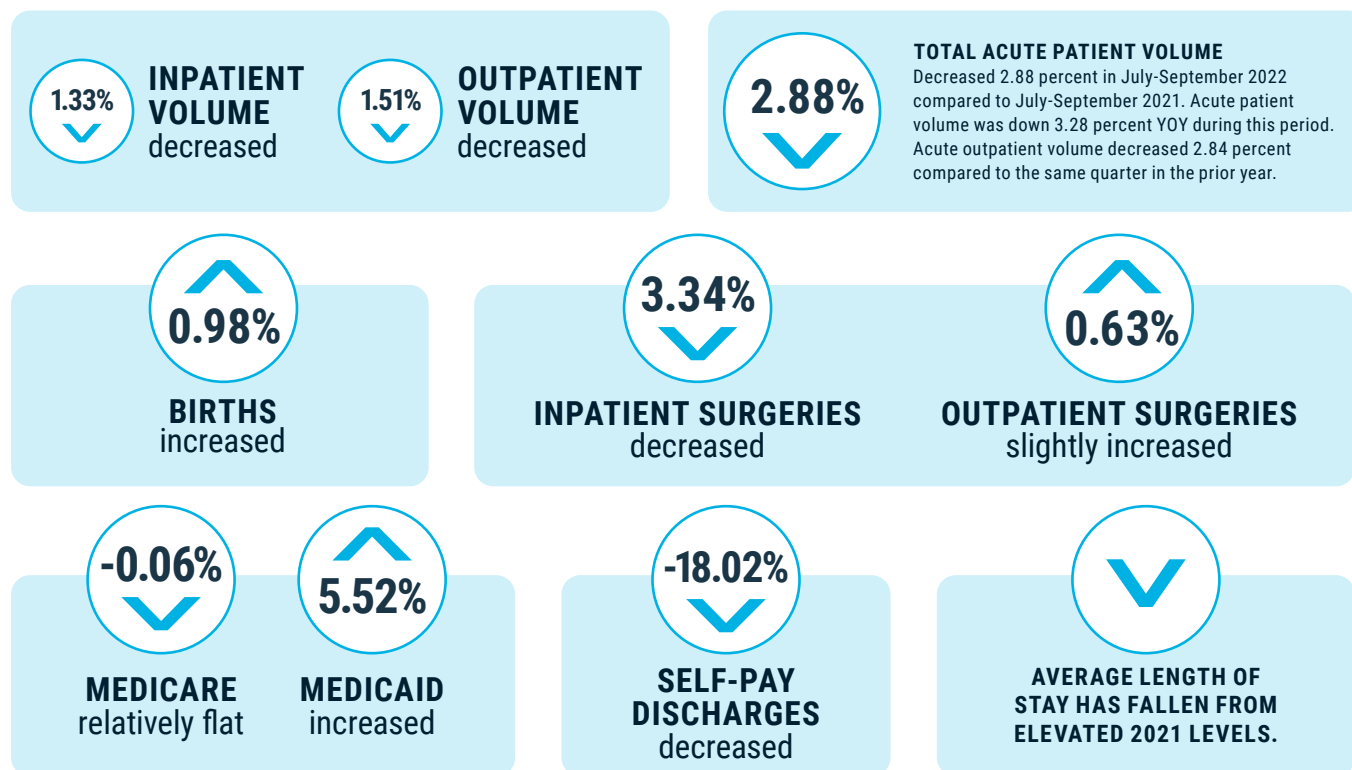


Fig.1 October 2021-September 2022 Quarterly (CY) Trends

	Q4 2021	Q1 2022	Q2 2022	Q3 2022	OCT 21 / SEPT 22
Inpatient Discharges	1.46%	-0.49%	-2.90%	-3.28%	-1.33%
Outpatient Discharges	5.87%	-3.48%	-5.07%	-2.84%	-1.51%
Total Discharges	5.48%	-3.23%	-4.89%	-2.88%	-1.50%
Inpatient Surgeries	-3.24%	-1.60%	-4.37%	-4.08%	-3.34%
Outpatient Surgeries	1.24%	2.18%	-1.79%	1.13%	0.63%
Births	5.53%	3.22%	-1.86%	-2.42%	0.98%
Medicare Discharges	3.64%	-4.39%	-0.74%	1.44%	-0.06%
Medicaid Discharges	15.26%	10.07%	1.53%	-2.72%	5.52%
Self-pay Discharges	-3.84%	-27.38%	-27.26%	-9.36%	-18.02%
Managed Care and Other Payer Discharges	3.29%	-5.47%	-9.20%	-6.32%	-4.51%

Notes: Quarterly numbers show the percentage of change from the same quarter in the previous calendar year. Annual totals represent the percentage of change overall in April 2021-March 2022 from April 2020-March 2021. COVID-19 has significantly impacted the patient volume trend since Q1 2020.

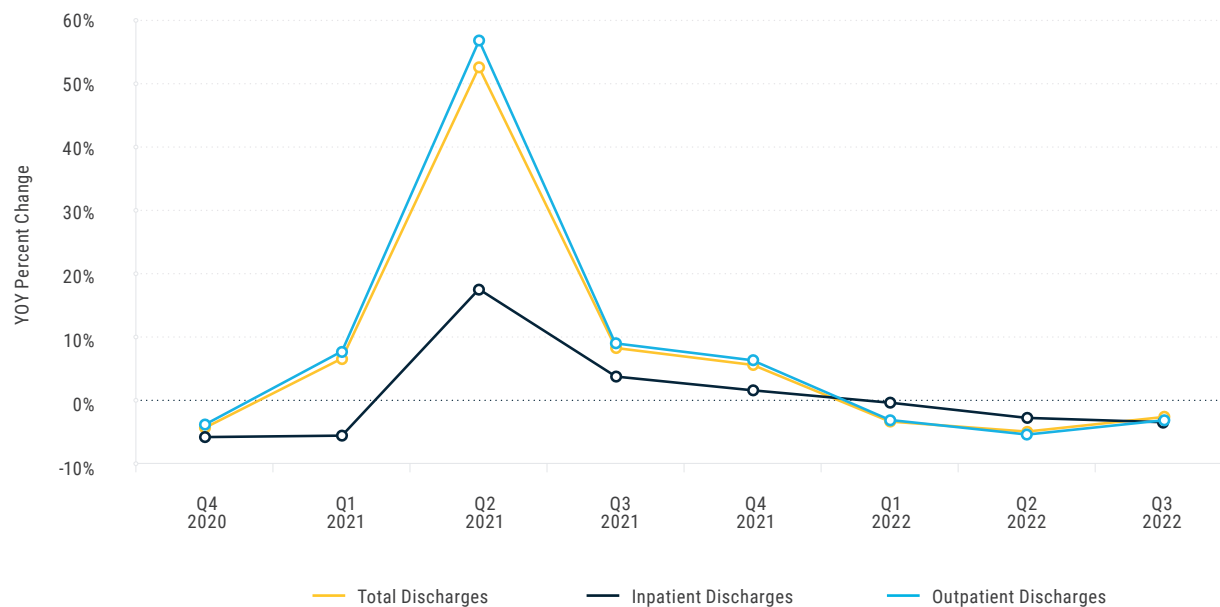
Source: A database maintained by Premier.

The metrics reported below are based on a sample of 833 acute care healthcare facilities that submitted three years of acute inpatient and outpatient data to a database maintained by Premier. The sample, which accounts for over 283 million patient discharges, represents a cross section of our membership that includes variations in geographic area as well as in organizational size and type.

This report identifies year-over-year (YOY) percentage changes in volume for key data elements, such as inpatient and outpatient discharges, surgery growth and payer mix for the twelve months of October 2021 through September 2022.

Fig.2 Discharge Trends

Source: A database maintained by Premier.

**Fig.3** Discharges by Payer Type

Source: A database maintained by Premier.

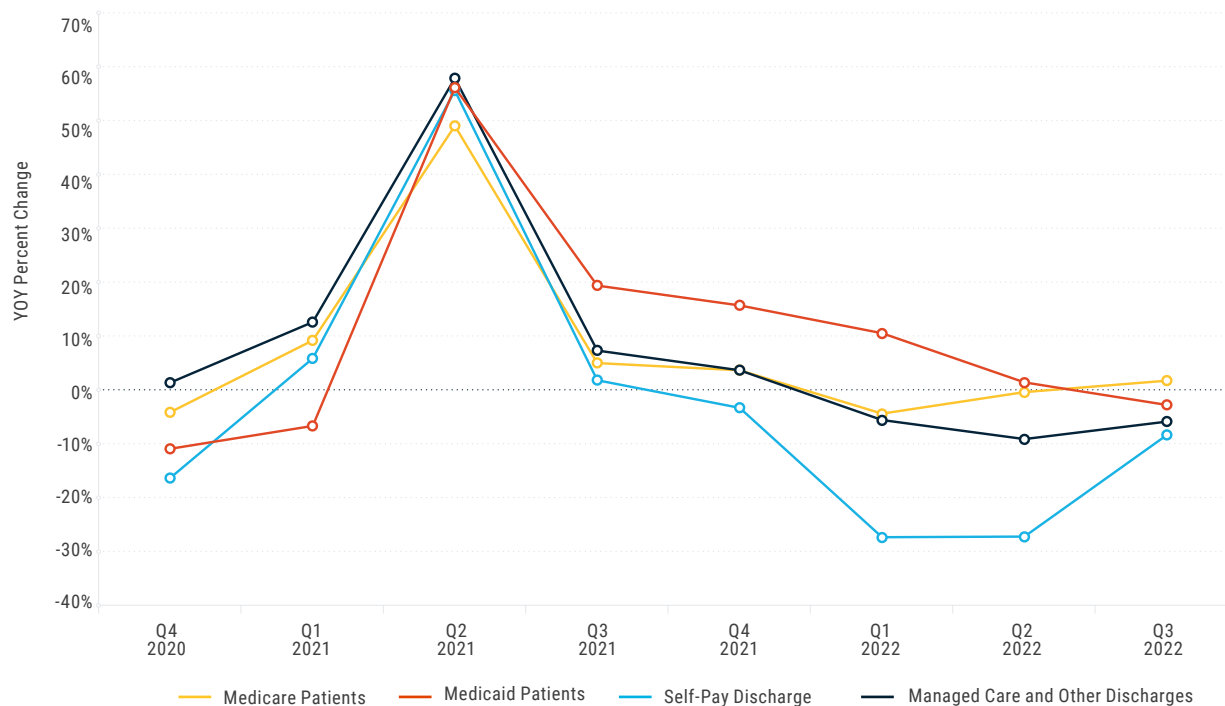
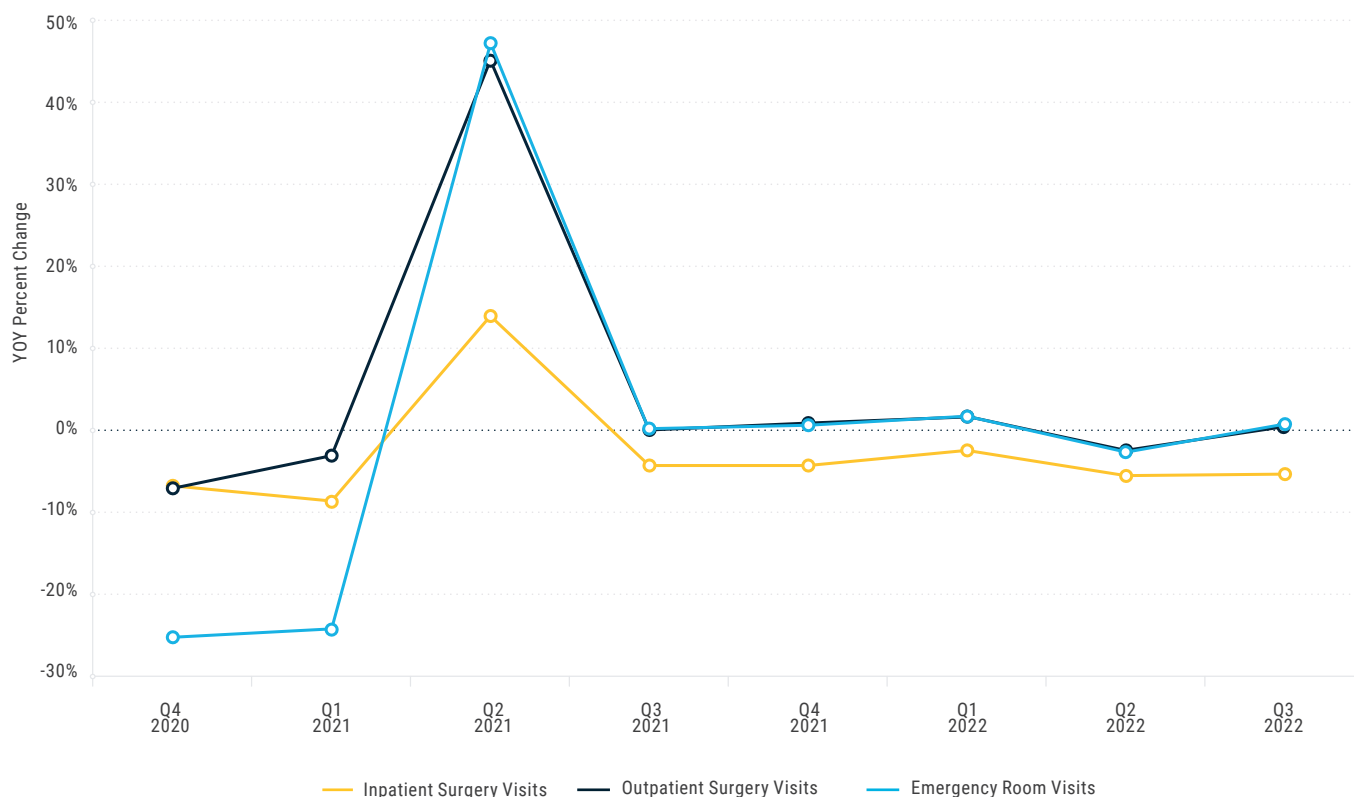
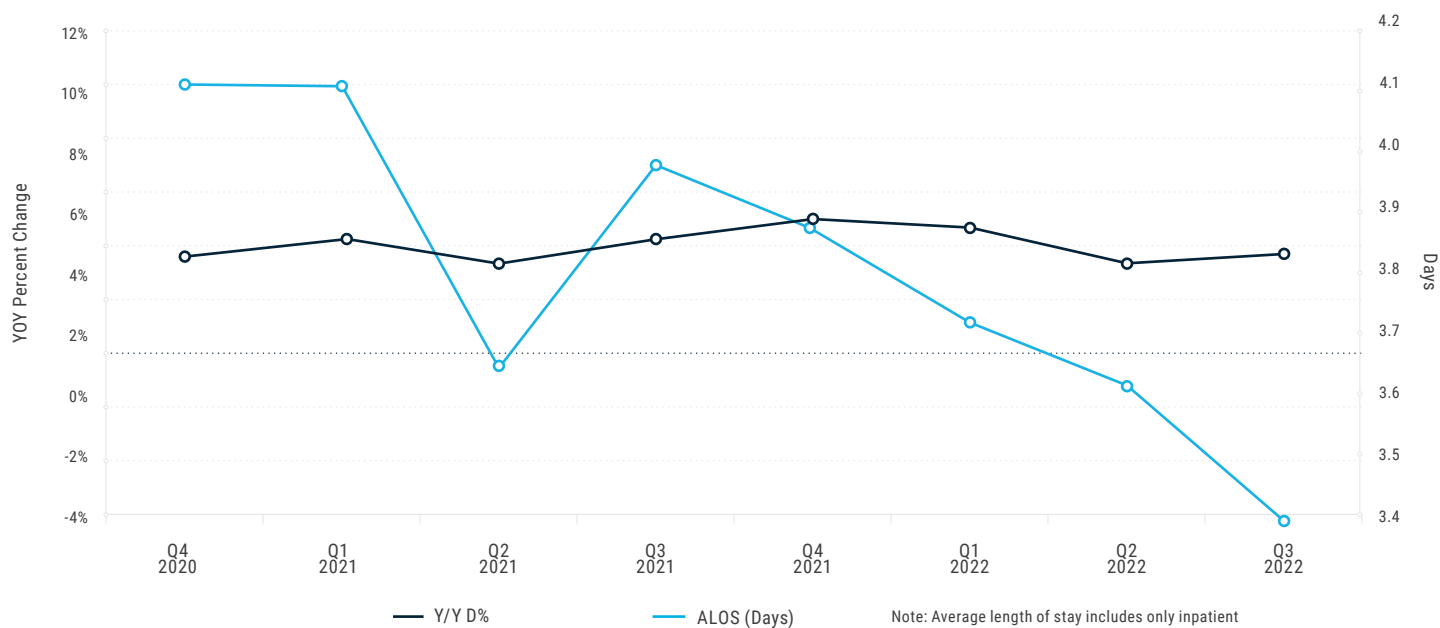


Fig.4 Surgery and Emergency Department Visits

Source: A database maintained by Premier.

**Fig.5** Average Inpatient Length of Stay (ALOS)

Source: A database maintained by Premier.



Premier's Drug Budget Tool

A resource for drug expense management

Pharmaceutical price inflation figures are derived from Premier's Automated Drug Budget Development Tool. This tool analyzes the top 93 percent of drug purchases, both on-contract and non-contract items, based on July 2022 through December 2022 member purchases at acute care facilities. Estimates of inflation indices for each line item are based on January 2022 to January 2023 prices corrected for recent changes in contract prices. Inflation figures are updated monthly, and the tool is totally recalculated semiannually. For FY24, Premier forecasts a 2.8 percent increase in inpatient pharmaceutical prices. The overall drug budget impact for acute care hospitals, including estimated changes¹ in mix/volume (-1.0 percent) and the impact of newly released agents (3.0 percent), is predicted to be 4.8 percent for non-DSH hospitals and 4.5 percent for DSH-eligible hospitals. The American Journal of Health-System Pharmacy (AJHP) predicts an increase in pharmaceutical expenditures for hospitals of 3 to 5 percent.¹

The Automated Drug Budget Development Tool and instructions for its use are available on the PremierConnect® website under Financial & Budget Tools on the Pharmacy Member Resources page. The total time to run the automated tool is generally less than five minutes.

- To learn more, contact Jerry Frazier, director of Premier's Center for Evidence-based Pharmacy Practice, at jerry.frazier@premierinc.com.

Premier's Supply Mix Index™

A methodology for calculating supply cost indexes for each Medicare Severity-Diagnosis Related Group (MS-DRG).

Premier's Supply Mix Index calculates supply expense per patient procedure. The index can also compare the cost with other hospitals nationwide to ensure appropriate resource use, improve supply efficiency and identify waste-reduction opportunities.

The Supply Mix Index combines clinical and supply cost data from 230 hospitals to:

- Calculate a hospital's supply mix based on services provided across systems, within service lines and at other levels within a system.
- Provide accurate statistics, determining weights using four million patient-level records from Premier's QualityAdvisor™ database.
- Demonstrate a more direct correlation to supply expense-per-patient case than the Case Mix Index by focusing on supply cost within a case (without incorporating non-supply expenses).
- Allow cross-hospital comparisons of supply efficiency.

Premier's new methodology is available in the executive-level reporting application of SupplyFocus®, which is used by acute care facilities.

- To learn more, contact Richard Westbay, director of Supply Chain Research and Analytics, at richard.westbay@premierinc.com.

Premier's Medical-Surgical Inflationary Calculator

A resource for managing med-surg supply spend.

The Medical-Surgical Inflationary Calculator is an easy-to-use application designed to estimate applicable supply spend. The calculator:

- Includes Premier's contractual price protection information to produce a detailed projection of supply costs.
- Pre-populates the spend profile from one Supply Analytics report and allows users to manually adjust for anticipated spend.
- Compensates for off-contract purchases using an optional Supply Analytics reports.
- Alerts members to contract categories that will be renegotiated in the current year.
- Provides aggregate inflation estimates by line of business.
- Analyzes spend by individual facility or integrated delivery network (IDN).

- The calculator is available to member health systems and can be found on PremierConnect. For more information, contact the Premier Solution Center at solutioncenter@premierinc.com.

SERVICE LINE	PROJECTED PREMIER CONTRACT INFLATION ESTIMATES
Cardiovascular Services	0.34%
Clinical Laboratory Services	1.80%
Facilities	3.14%
Foodservice	Reference Food Market Overview
Imaging	1.07%
IT / Telecommunications	0.23%
Nursing	1.83%
Pharmacy	2.78%
Purchased Services	0.23%
Surgical Services	0.79%

Note: Estimated inflationary changes are subject to change.

The service line projections are based on a review by contract of the price protection language, applicable price increase caps and temporary price increases due to market dynamics. For contract-specific estimates, please reference the Inflation Table file posted in Supply Chain News as well as the Med/Surg Calculator, which is also posted in Supply Chain News.

In our approach to the current economic and supply chain landscape, Premier is continuously analyzing our contracts launching over the next year to identify which indices might influence contract pricing in the short and long term. While we are seeing inflation in certain raw materials, the majority of Premier agreements contain firm, fixed pricing for the terms of the agreement. With the dynamic economic environment that we're currently in, Premier continues to monitor the markets as well as publicly reported financial results and proactively seeks price decreases where we believe the opportunity exists.

In addition, Premier will continue to keep members abreast of the most recent inflation estimates to assist with their budgeting and strategic planning. While it may be difficult to identify what major U.S. or global events will impact the world's economies and supply chain, Premier aims to arm our members with the information, tools and support needed to tackle cost imperatives.

Projected Premier contract inflation estimates are calculated as follows:

Pharmacy – Projections are derived from the Premier Drug Budget Development Tool and reflect only inpatient pharmaceutical prices for both on-contract and non-contract items.

All Others (Except Foodservice) – Projections reflect the expected weighted average percent change in contract pricing for the existing contract portfolio as of March 1, 2023, through Feb. 29, 2024.

PRODUCT CATEGORY	AHFS CATEGORY	INFLATION
Antihistamine Drugs	04:00	-5.37%
Anti-infective Agents	08:00	1.52%
Antineoplastic Agents**	10:00	3.29%
Autonomic Drugs	12:00	1.98%
Blood Derivatives	16:00	0.00%
Blood Formation, Coagulation, Thrombosis	20:00	2.82%
Cardiovascular Drugs	24:00	0.05%
Central Nervous System Agents	28:00	0.69%
Diagnostic Agents	36:00	0.43%
Electrolytic, Caloric and Water Balance	40:00	4.74%
Enzymes	44:00	3.83%
Respiratory Tract Agents	48:00	4.04%
Eye, Ear, Nose and Throat (EENT) Preps	52:00	0.61%
Gastrointestinal Drugs	56:00	0.83%
Heavy Metal Antagonists	64:00	6.04%
Hormones and Synthetic Substitutes	68:00	0.49%
Local Anesthetics (parenteral)	72:00	2.41%
Oxytocics	76:00	3.47%
Antitoxins, Immune Glob, Toxoids, Vaccines	80:00	4.80%
Skin and Mucous Membrane Agents	84:00	3.01%
Smooth Muscle Relaxants	86:00	3.72%
Vitamins	88:00	-1.76%
Miscellaneous Therapeutic Agents	92:00	5.15%
Devices	94:00	-5.96%
PHARMACEUTICAL PRICE INFLATION RATE		2.78%

SERVICE LINE	RANGE OF INFLATION ESTIMATES	AVERAGE OF INFLATION ESTIMATES
Pharmacy #	-5.96% to 5.26%	2.78%

* Inflation rates derived from Automated Drug Budget Development Tool report on Feb. 10, 2023. Rates based on price changes between January 2022 and January 2023.

** Inflation rate for antineoplastic agents includes only those agents purchased via normal distribution channels. Items purchased through specialty distribution are NOT included.

Pharmacy data derived from Premier's Automated Drug Budget Development Tool – Feb. 10, 2023.

Pharmaceutical price inflation figures are derived from Premier's Automated Drug Budget Development Tool. This tool analyzes the top 93 percent of drug purchases, both on-contract and non-contract items, based on July 2022 through December 2022 member purchases at acute care facilities. Estimates of inflation indices for each line item are based on January 2022 to January 2023 prices corrected for recent changes in contract prices. Inflation figures are updated monthly, and the tool is totally recalculated semiannually. For FY24, Premier forecasts a 2.8 percent increase in inpatient pharmaceutical prices. The overall drug budget impact for acute care hospitals, including estimated changes¹ in mix/volume (-1.0 percent) and the impact of newly released agents (3.0 percent), is predicted to be 4.8 percent for non-DSH hospitals and 4.5 percent for DSH-eligible hospitals. The American Journal of Health-System Pharmacy (AJHP) predicts an increase in pharmaceutical expenditures for hospitals of 3 to 5 percent.²

The Automated Drug Budget Development Tool and instructions for its use are available on the PremierConnect website under [Financial & Budget Tools on the Pharmacy Member Resources page](#). The total time to run the automated tool is generally less than 5 minutes.

ECONOMIC OVERVIEW

Consumer Price Index (CPI)

Producer Price Index (PPI)

Two key price indicators are often used when examining inflationary pressures in the marketplace. They include the Consumer Price Index (CPI) and the Producer Price Index (PPI). Both indexes measure the average change over time in the prices of fixed goods and services.

CPI

The CPI measures price change from the consumer's perspective and encompasses goods and services purchased for personal consumption by U.S. urban households. The CPI is primarily used to compare a household's cost for a specific basket of finished goods and services with the cost of the same basket during an earlier benchmark period. The weight given to each basket item is fixed. While there are many categories within the CPI, the two most commonly used for healthcare are the Consumer Price Index for All Urban Consumers (CPI-U) and the CPI for medical care. Medical care is one of eight major CPI categories, and it has two classifications – commodities and services – each containing several item categories (strata).

The CPI-U declined 0.1 percent in December on a seasonally adjusted basis after rising 0.1 percent in November. Over the last 12 months, all items index increased 6.5 percent before seasonal adjustment.³

The index for gasoline was by far the largest contributor to the monthly all items decrease, more than offsetting increases in shelter indexes. The food index increased 0.3 percent over the month with the food-at-home index rising 0.2 percent. The energy index decreased 4.5 percent over the month as the gasoline index declined; other major energy component indexes increased over the month.⁴

The medical care index rose 0.1 percent in December after declining in the previous two months. The index for hospital services increased 1.7 percent over the month. The physicians' services index and the prescription drugs index both rose 0.1 percent in December.⁵

PPI

The PPI measures price changes from the perspective of the seller and includes the entire output of U.S. producers. Since the PPI captures price movement prior to the retail level, it may foreshadow subsequent price changes for businesses and consumers.

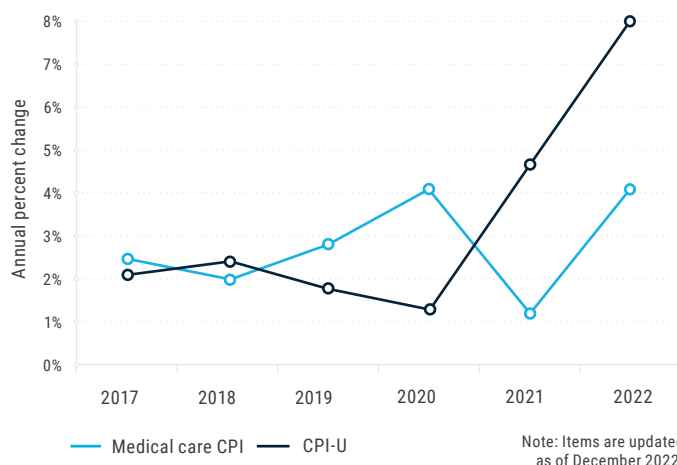
The PPI for final demand fell 0.5 percent in December on a seasonally adjusted basis. On an unadjusted basis, the index for final demand increased 6.2 percent in 2022 after rising 10.0 percent in 2021. In December, the decrease in the index for final demand is attributable to a 1.6 percent decline in prices for final demand goods. In contrast, the index for final demand services advanced 0.1 percent.⁶

Prices for final demand less foods, energy and trade services moved up 0.1 percent in December following a 0.3 percent rise in November. The index for final demand less foods, energy and trade services advanced 4.6 percent in 2022 following a 7.0 percent rise in 2021.⁷

The 12-month net outputs of selected industries (unadjusted) are:⁸

- Hospital outpatient care: 2.3 percent
- Hospital inpatient care: 4.3 percent
- Home health and hospice care: 2.2 percent
- Nursing home care: 4.6 percent
- Physician care: 0.6 percent
- Medical laboratory and diagnostic imaging care: - 0.7 percent

Fig.1 CPI-U and Medical Care CPI



Source: A database maintained by Premier.

Copper Market Update

The International Copper Study Group (ICSG) released preliminary data that indicates world copper mine production has increased by about 3.2 percent in the first 11 months of 2022. Government-imposed restrictions related to COVID-19 and sustained rates of infection due to the Omicron variant continued to constrain mine output in many countries at the beginning of 2022. However, global mine output did benefit from additional production at new or expanded mines and saw recovery from reduced output in the first months of 2021. Production in Chile, the world's largest copper mine producing country, was down by 6 percent in the first 11 months of 2022. Several mines in Chile have been negatively impacted by absenteeism related to COVID-19 infections, operational issues, lower grades and reduced water supply due to a drought. Production remained lower by 8 percent compared to pre-COVID-19 levels (January-November 2019). Output from Peru was limited to 3 percent growth as a result of stoppage at two major copper mines, while growth in Indonesia and the D.R. Congo increased about 28 percent due to increased and new production.⁹

Preliminary data indicates that world refined copper production increased by about 3.4 percent in the first 11 months of 2022 with primary production (electrolytic and electrowinning from ores) up 4 percent and secondary production (from scrap) up by 1 percent. Preliminary data also indicates that world apparent refined copper usage grew by 3.3 percent in the first 11 months of 2022.¹⁰

COVID-19-related lockdowns had a notable negative impact on the world economy and subsequently on key copper end-use sectors in all regions outside of China. Although global demand recovered in 2021 from the sharp fall seen in 2020, it still remains below pre-pandemic levels in some countries.¹¹

In the first 11 months of 2022, the world refined copper balance, based on Chinese apparent usage (excluding changes in unreported stocks), indicates a deficit of about 307,000t.¹²

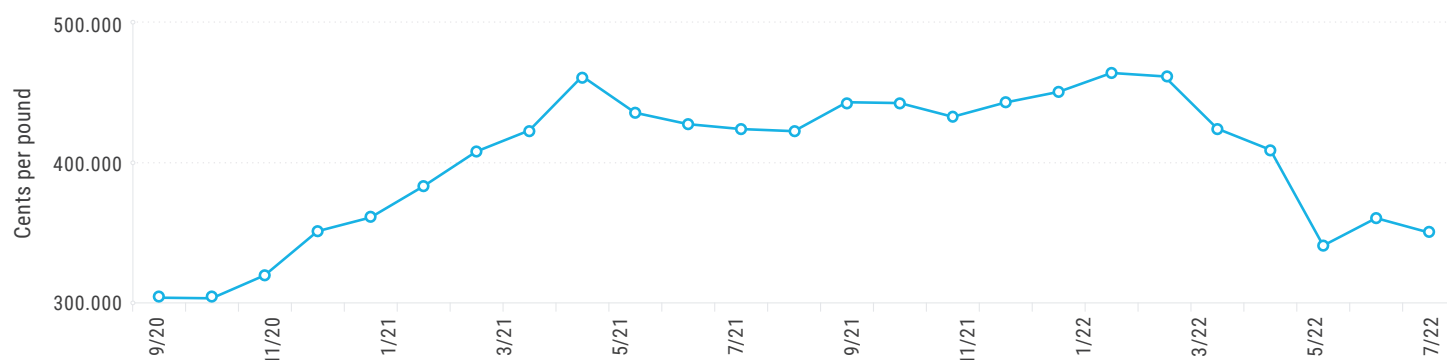
Over the past three years, the pandemic, the war in Ukraine and concerns about an impending global recession caused large swings in prices of aluminum and copper. Record price rebounds from pandemic lows in April 2020 were followed by renewed steep declines starting in March 2022. The price rebound after the pandemic was mainly driven by the economic recovery but, in contrast to the increase in prices after the global financial crisis, supply factors also contributed about one quarter to the rebound. Since March 2022, a steep global growth slowdown, an unwinding of supply constraints and concerns about an imminent global recession (especially for copper) contributed to the plunge in prices.¹³

Prices will likely remain volatile as the energy transition unfolds and as global commodity demand shifts from fossil fuels to renewables, which are metals intensive. For metal-exporting countries, the energy transition may bring windfalls, but it could also increase their exposure to price volatility. In this regard, policymakers need to design strong fiscal and monetary frameworks now—and foster an environment for diversification—to make the most of the resulting opportunities for growth while limiting the impact of price volatility.¹⁴

Medical copper tubing is used to transport the supply of carbon dioxide, medical air, nitrous oxide, medical vacuum, oxygen and other gases. There are different kinds of medical copper tubing such as Type L, DMW and Type K. These medical copper tubing are developed as per the standards launched by the American Society for Testing and Materials (ASTM). Copper tubes are preferred in the medical industry because it provides significant benefits over conventional gas delivery systems in terms of uninterrupted gas supply. Complying with such manufacturing standards and marketing specifications for copper tubes is predicted to power the market growth.¹⁵

According to the World Bank, the Copper Index is forecast to decrease 11.1 percent in 2023 to \$7,300/mt and remain at relatively the same price in 2024.¹⁶

Fig.1 Copper Prices



Sources: USGS; Average Price of Copper in the United States and on the London Metal Exchange, Table 11, through August 2022.

Cotton Market Update

Despite the Russia-Ukraine war and COVID-19, the world economy is expected to recover, and the global medical absorbent cotton market size will increase with a CAGR estimated to generate revenue through 2029. Surgical cotton or cotton wool is mainly used for medical purposes in hospitals, nursing homes and at home for first aid. Because of its property of high fluid absorbency, it is used to remove inclusions from the raw cotton, degreasing, bleaching, washing, drying, finishing and is mainly used for making medical cotton swabs, cotton balls and sanitary cotton swabs.¹⁷

According to the latest release from the U.S. Department of Agriculture (USDA), estimates indicate that world cotton mill use in August 2022-July 2023 will total 111.7 million bales, a 4.9 percent decrease from 2021/22. India, Pakistan and Turkey are primarily responsible for the global decline, offset slightly by China's increase. China and India remain the leading cotton-spinning countries, with the top five countries projected to account for 75 percent of world cotton mill use in 2022/23.¹⁸

Global cotton production is forecast at 115.7 million bales in 2022/23, equal to the 2021/22 estimate. Among the top six producing countries, declines are expected for the U.S., Pakistan and Australia, while larger crops are projected for China, India and Brazil. World

cotton trade is forecast at 42.3 million bales this season, a 1.4 percent decrease from 2021/22. With world production expected to exceed mill use in 2022/23, global ending stocks and the stocks-to-use ratio are forecast to increase to their highest level since 2019/20.¹⁹

U.S. cotton demand for 2022/23 is projected at 14.45 million bales, which is 16 percent lower than the 2021/22 and the lowest since 2015/16. Uncertainties regarding world cotton mill use prospects amid current global economic conditions have reduced cotton trade expectations for 2022/23. In addition, increased foreign competition and the smallest U.S. cotton supply in seven years is expected to limit U.S. exports this season. Based on the December projections, the 2022/23 U.S. share of global trade is forecast at 29 percent—five percentage points below last season and the smallest in seven years.²⁰

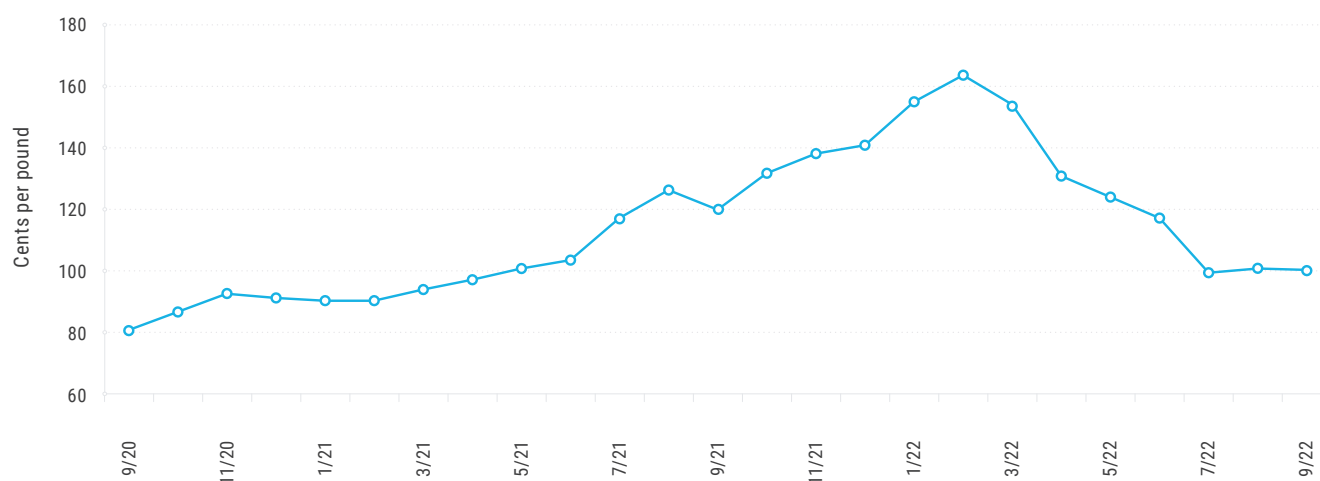
Although volatility has eased some, cotton prices continue to be disrupted. Due to these pricing challenges along with issues associated with macroeconomic conditions, there are still uncertainties for the cotton market.²¹

According to the World Bank, the Cotton "A" Index is forecast to drop 1.7 percent in 2023 to \$2.90/kg and remain relatively the same in 2024.²²

Fig.1

The Cotton "A" Index

The Cotton "A" Index is an estimate of the world price of cotton. It is an average of the five lowest quotations for a sample of 19 cottons traded internationally.



Source: National Cotton Council of America

Global Food Prices

The FAO Food Price Index* (FFPI) averaged 132.4 points in December 2022, down 2.6 points (1.9 percent) from November, marking the ninth consecutive monthly decline, and 1.3 points (1.0 percent) below its value a year ago. The decline in the index in December was driven by a steep drop in the international prices of vegetable oils, together with some declines in cereal and meat prices, but partially counterbalanced by moderate increases in those of sugar and dairy. For 2022, however, the FFPI averaged 143.7 points, up from 2021 by 18 points (14.3 percent).²³

The FAO Cereal Price Index fell 1.9 percent from November, but still 4.8 percent above its December 2021 value. The FAO Vegetable Oil Price Index was down 6.7 percent from November and hitting its lowest level since February 2021. The FAO Dairy Price Index was up 1.1 percent from November, registering an increase after five months of consecutive declines and surpassing its value a year ago by 7.9 percent. The FAO Meat Price Index decreased 1.2 percent from last month, marking its sixth consecutive monthly decline. Lastly, the FAO Sugar Price Index saw an increase of 32.4 percent reaching its highest level in the past six months.²⁴

U.S. Food Prices

The Consumer Price Index (CPI) food index increased 0.3 percent in December following a 0.5 percent increase in November. The food-at-home index rose 0.2 percent in December. Three of the six major grocery store food group indexes increased over the month. The index for meats, poultry, fish and eggs increased 1.0 percent in December as the index for eggs rose 11.1 percent. The index for other food at home rose 0.4 percent over the month, while the index for nonalcoholic beverages increased 0.1 percent in December.²⁵

Premier Food Outlook Inflation Report

In order to assist our members navigating the everchanging foodservice marketplace, Premier has created material to provide guidance as to inflation's overall impact(s) to pricing trends. The Food Outlook Inflation Report leads to a quarterly market summary which will provide information and commentary on commodity market impact effecting pricing today.

- 1 The dairy market is expected to take more of a deflationary tone in the first part of 2023 as the market continues to correct from extremely tight conditions this summer/fall. Milk production continues to increase across most of the country and seasonal increases in butter and cheese output will help recharge depleted supplies as holiday stockpiling slows. Inflationary pressures are limiting domestic demand, while labor and supply chain issues remain impactful to the bottom line for most processors.
- 2 Beef price inflation will gradually increase going into 2023 as the market transitions from a period of strong domestic production to an environment of tighter cattle supplies; the expected drop in beef production in 2023 is the largest year-to-year decrease since 1978. Pork prices will remain

moderate as softer demand from domestic and export sales channels will dampen the impact of tighter supplies of market hogs available for slaughter.

- 3 Shortening and oil prices have corrected from the recent extreme highs but ongoing expansion in the renewable diesel sector and increased use for food demand should keep a floor under prices near current levels. All eyes are on the South American soybean crops at this point as Argentina remains exceptionally dry.
- 4 Bakery inflation has slowed as wheat prices have come down 20 percent from their early October highs. Prices are expected to stabilize now; however, as there is no end in sight to the Russia/Ukraine war, weather conditions in the U.S. Southern Plains remain extremely dry and domestic winter wheat stocks are already at 15-year lows.
- 5 Domestic sugar prices are expected to remain firm through the fall of 2023. Domestic cane and beet supplies are tight and refining capacity remains limited. The recent force majeure declared by a major U.S. sugar beet processor has added to the tightness.²⁶

The index for food away from home rose 8.3 percent over the last year. The index for full-service meals rose 8.2 percent over the last 12 months and the index for limited-service meals rose 6.6 percent over the same period.²⁷

In 2022, all food prices are predicted to increase between 9.5 and 10.5 percent, food-at-home prices are predicted to increase between 11.0 and 12.0 percent, and food-away-from-home prices are predicted to increase between 7.0 and 8.0 percent. In 2023, all food prices are predicted to increase between 3.5 and 4.5 percent, food-at-home prices are predicted to increase between 3.0 and 4.0 percent, and food-away-from-home prices are predicted to increase between 4.0 and 5.0 percent.²⁸

Fig.1

Price Change by Commodity

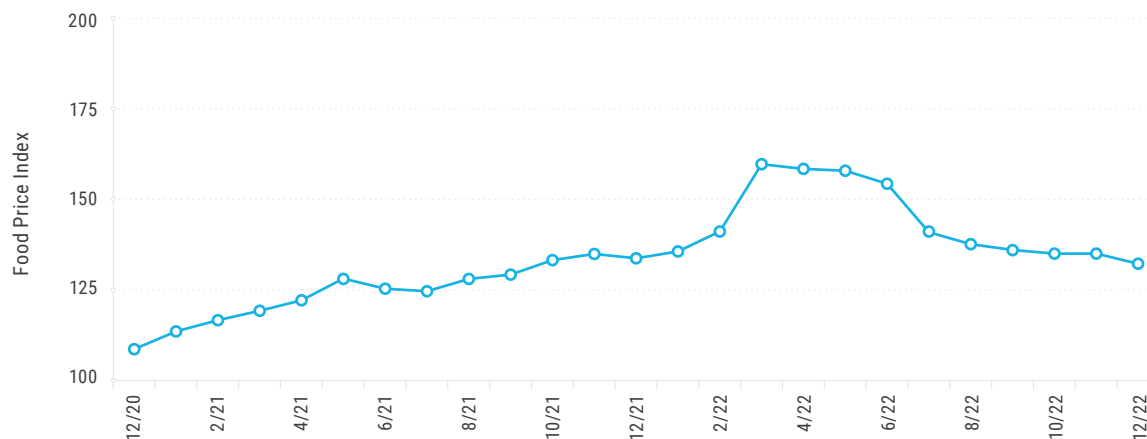
COMMODITY	CHANGE IN THE LAST 12 MONTHS
Corn	0.22%
Soy Beans	-0.08%
Wheat	-0.17%
Lean Hogs	-1.28%
Live Cattle	-0.67%

Source: <http://money.cnn.com/data/commodities/> Price change shown is from February 2022 to January 2023

Fig.2

Monthly Food Price Indexes

The Food Price Index from the United Nations' Food and Agriculture Organization (FAO) is an average of five commodity groups: meat, dairy, cereals, oils and fats and sugar.



Source: FAO.org

Fig.3

Annual Percentage Change in Food Prices by Category, 2015-2021*

FOOD CATEGORY	ANNUAL 2015	ANNUAL 2016	ANNUAL 2017	ANNUAL 2018	ANNUAL 2019	ANNUAL 2020	ANNUAL 2021
Other Foods	1.6	0.3	0.1	0.1	0.3	3.1	2.2
Nonalcoholic beverages	1.1	-0.4	0.2	0	1.9	3.6	2.8
Cereals and bakery products	1.1	-0.3	-0.5	0.4	1.4	2.2	2.3
Sugar and sweets	3.2	-0.4	-0.1	0.4	2	3.3	3
Fresh vegetables	1.6	0.0	-0.1	1.1	3.8	2.6	1.1
Fresh fruits	-2.2	2.2	0.5	1.0	-1.4	-0.8	5.5
Fats and oils	-1.0	-0.6	0.8	0.1	-0.7	1.3	4.6
Dairy products	-1.3	-2.3	0.1	-0.5	1.0	4.4	1.4
Eggs	17.8	-21.1	-9.5	10.8	-10.0	4.3	4.5
Fish and seafood	-0.9	-0.7	1.2	2.1	1.6	3.3	5.4
Poultry	0.4	-2.7	0.2	0.3	-0.3	5.6	5.1
Pork	-3.9	-4.1	0.6	-0.4	1.2	6.3	8.6
Beef and veal	7.2	-6.3	-1.2	1.4	1.6	9.6	9.3

Source: Calculated by ERS, USDA, using Bureau of Labor Statistics (BLS) data.
Note: Data represent 12-month percentage changes.

Fig.4 Changes in Food Price Indexes, 2019 through 2022

CONSUMER PRICE INDEXES BY ITEM	RELATIVE IMPORTANCE ¹	MONTH-TO-MONTH OCT. 2022 TO NOV. 2022	YEAR-OVER-YEAR NOV. 2021 TO NOV. 2022	YEAR-TO-DATE AVG. 2021 TO AVG. 2022	ANNUAL 2020	ANNUAL 2021	20-YEAR HISTORICAL AVERAGE	FORECAST RANGE ² 2022	FORECAST RANGE ³ 2023
ALL FOOD	100	0.2	10.6	9.6	3.4	3.9	2.4	9.5 to 10.5	3.5 to 4.5 (+)
Food away from home	37.9	0.5	8.5	7.3	3.4	4.5	2.9	7.0 to 8.0	4.0 to 5.0
Food at home	62.1	0	12	11	3.5	3.5	2	11.0 to 12.0	3.0 to 4.0 (+)
Meats, poultry, and fish	12.9	-0.8	4.3	9.6	6.3	6.8	2.9	9.5 to 10.5	2.0 to 3.0
Meats	8.1	-1	1.1	8.2	7.4	7.7	3.2	8.0 to 9.0	1.5 to 2.5
Beef and veal	3.7	-1.1	-5.2	5.5	9.6	9.3	4.4	5.0 to 6.0	1.0 to 2.0
Pork	2.6	-2	1.2	8.9	6.3	8.6	2.2	8.5 to 9.5	1.0 to 2.0
Other meats	1.8	0.6	16.2	13.6	4.4	2.9	2.2	13.5 to 14.5	3.0 to 4.0 (+)
Poultry	2.7	-0.8	13.1	14.4	5.6	5.1	2.3	14.0 to 15.0 (-)	4.0 to 5.0
Fish and seafood	2.1	0.2	6.5	9.1	3.3	5.4	2.7	9.0 to 10.0	2.0 to 3.0
Eggs	1	2.3	49.1	29	4.3	4.5	3.2	30.5 to 31.5 (+)	4.0 to 5.0 (+)
Dairy products	5.9	0.7	16.4	11.5	4.4	1.4	1.7	11.5 to 12.5	4.0 to 5.0 (+)
Fats and oils	1.9	-1.5	21.8	17.7	1.3	4.6	2.3	18.0 to 19.0 (-)	5.0 to 6.0 (+)
Fruits and vegetables	10.4	0.4	9.7	8.3	1.4	3.3	2	8.0 to 9.0	1.0 to 2.0 (+)
Fresh fruits and vegetables	7.9	0.8	8	7.4	0.8	3.3	2	7.0 to 8.0 (+)	0.5 to 1.5 (+)
Fresh fruits	4.2	0.8	6.6	8.1	-0.8	5.5	1.8	7.5 to 8.5	-0.5 to 0.5
Fresh vegetables	3.7	0.8	9.6	6.5	2.6	1.1	2.1	6.5 to 7.5 (+)	1.5 to 2.5 (+)
Processed fruits and vegetables	2.5	-0.8	15.8	11.5	3.5	2.9	2.2	11.5 to 12.5	3.0 to 4.0
Sugar and sweets	2.1	-0.3	13.1	9.9	3.3	3	2.1	10.0 to 11.0	3.0 to 4.0
Cereals and bakery products	8.1	0.8	16.4	12.4	2.2	2.3	2.1	12.5 to 13.5 (-)	5.0 to 6.0
Nonalcoholic beverages	7.1	-0.3	13.2	10.6	3.6	2.8	1.4	10.5 to 11.5	3.0 to 4.0
Other foods	12.6	-0.3	12.9	12.2	3.1	2.2	1.5	12.0 to 13.0 (-)	3.0 to 4.0

¹ Bureau of Labor Statistics estimated expenditure shares, September 2022. Food prices represent 13.7 percent of the total CPI.

² A negative sign indicates an adjustment downward and a plus sign indicates an adjustment upward.

Note: The most recent forecast was published on December 22, 2022. The next forecast will be published on January 25, 2023.

Source: U.S. Bureau of Labor Statistics Consumer Price Indexes (not seasonally adjusted) and forecasts by USDA, Economic Research Service.

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Plastic Resins Market Update

Prices and margins narrowed in 2022 from the record high points seen in 2021, especially in the second half of the year as weaker economic growth slowed overall consumption. The 2022 Atlantic hurricane season was relatively mild, with no major storms making landfall in Texas or Louisiana, home to the bulk of U.S. polypropylene (PP) and polyethylene (PE) production.²⁹

The U.S. is the second largest region in the world for polyethylene industry capacity additions. It is projected to reach 33.82 million tons/year in 2023, with an average annual growth rate of 7.6 percent in recent years.³⁰

The global plastic resin market size was worth USD 745 billion in 2021. It is expected to reach USD 1,104 billion in 2030, growing at a CAGR of 4.5 percent during the forecast period (2022–2030). Plastic resins are manufactured materials typically derived from natural gas and oil. They are widely used in many end-use industries, including medical devices. Plastics are expected to drive the global plastics resin market by replacing glass, metals, wood, natural rubber and other manufactured materials such as concrete. Various products, including olefins, polystyrene, PVC and other plastics, are rapidly replacing most materials in automotive, construction and infrastructure, medical and healthcare, and consumer goods.³¹

Epoxy is the fastest-growing subsegment. It is estimated to reach a value of USD 250 billion by 2030 at a CAGR of 5.6 percent. In the healthcare industry, epoxy resins are used in the manufacturing of disposable and non-disposable medical devices such as catheters and surgical instruments.³²

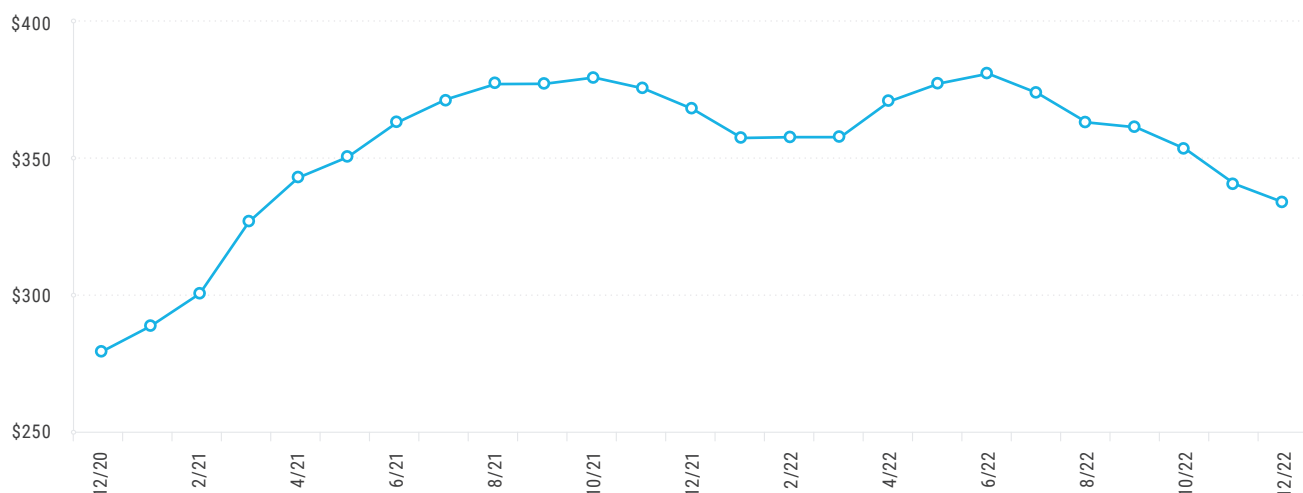
Polypropylene is the third-largest subsegment. It is estimated to reach a value of USD 172 billion by 2030 at a CAGR of 4.3 percent. Its chemical and mechanical properties are extensively used in manufacturing medical devices, which include disposable syringes, non-absorbable sutures, clear bags and prescription bottles. It is resistant to many chemical solvents, bases and acids and has excellent mechanical strength. It is also among the most highly formulated plastics across the globe.³³

North America's plastic resin suppliers are bringing new capacities online. It is rapidly expanding and currently at the tail end of a second wave of new capacity expansions. A new PE plant near Corpus Christi, TX, operated by Gulf Coast Growth Ventures has recently opened, as well as a joint venture between ExxonMobil and Sabic, to Shell's Monaca, PA. In early 2023, Bayport Polymers is expected to begin operations at its new plant in Bayport, TX. Also, there is an expected startup of Nova's Advanced Sclairtech 2 unit in Sarnia, ON, rounding out the second wave of new capacity.³⁴

In summary the plastic market is expected to register fluctuating growth trends in the long term, while inflation and supply chain concerns are expected to continue in 2023.³⁵

Fig.1 Plastic Resin Prices

Source: FRED – Producer Price Index – Plastics Material and Resins Manufacturing
Note: All indexes are subject to revision for four months after publication.



Rubber Market Update

According to the Future Market Insights report, demand for natural rubber is projected to be valued at \$18M in 2023 and is anticipated to grow at a CAGR of 5.4 percent during 2023-2033. Rising application coverage of natural rubber as an economic and lightweight material are driving the demand across diverse applications in the construction, automotive, textiles, pharmaceuticals and defense sectors.³⁶

The global lockdown from the COVID-19 pandemic caused a decrease in production and consumption levels in the major end users of natural rubbers; however, growth is not expected in the market. Growth in demand is attributed to the growth in various factors like increasing production of automobiles, rising construction activities, high demand for footwear and increase in airplane production. Natural rubber is a key raw material used in the manufacturing of a variety of end-use items such as medical equipment, industrial components, surgical gloves, vehicle tires, garments, pacifiers, toys, etc. that is also leading to the increase in demand.³⁷

Irrespective of the growing demand, the market is expected to face certain challenges, specifically from the use of synthetic rubber. With a rise in the application of synthetic rubber along with availability of various types of synthetic rubber, several end users are increasing their purchase quantity of synthetic rubber instead of natural rubber. This is expected to remain a key challenge for the market.³⁸

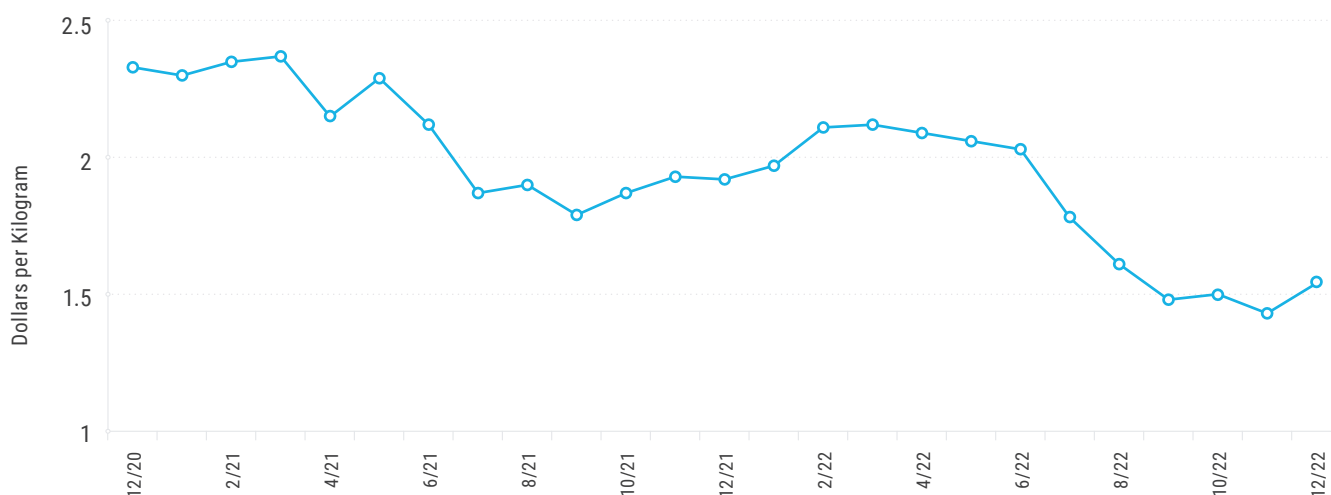
According to the World Bank, prices for Rubber RSS3 are forecast to drop 13.1 percent from 2022 at \$1.90/kg in 2023 and \$1.94/kg in 2024.³⁹

Fig.1

Rubber and Rubber Products Prices

Source: IndexMundi Rubber - Daily Price - Commodity Prices - Price Charts, Data, and News - IndexMundi

Note: All indexes are subject to revision for four months after publication.



Steel Market Overview

World steel production for the 64 countries reporting to worldsteel decreased 2.6 percent in November 2022 when compared to November 2021. These 64 countries accounted for 98 percent of total world crude steel production in 2021.⁴⁰

Looking back, in 2021 world steel demand increased 2.8 percent in 2021 and contracted by 2.3 percent in 2022. In 2023, steel demand will see a recovery of 1 percent. The current forecast represents a reflection of the repercussion of persistently high inflation and rising interest rates globally. High inflation, monetary tightening and China's slowdown contributed to a difficult 2022, but infrastructure demand is expected to lift 2023 steel demand slightly.⁴¹

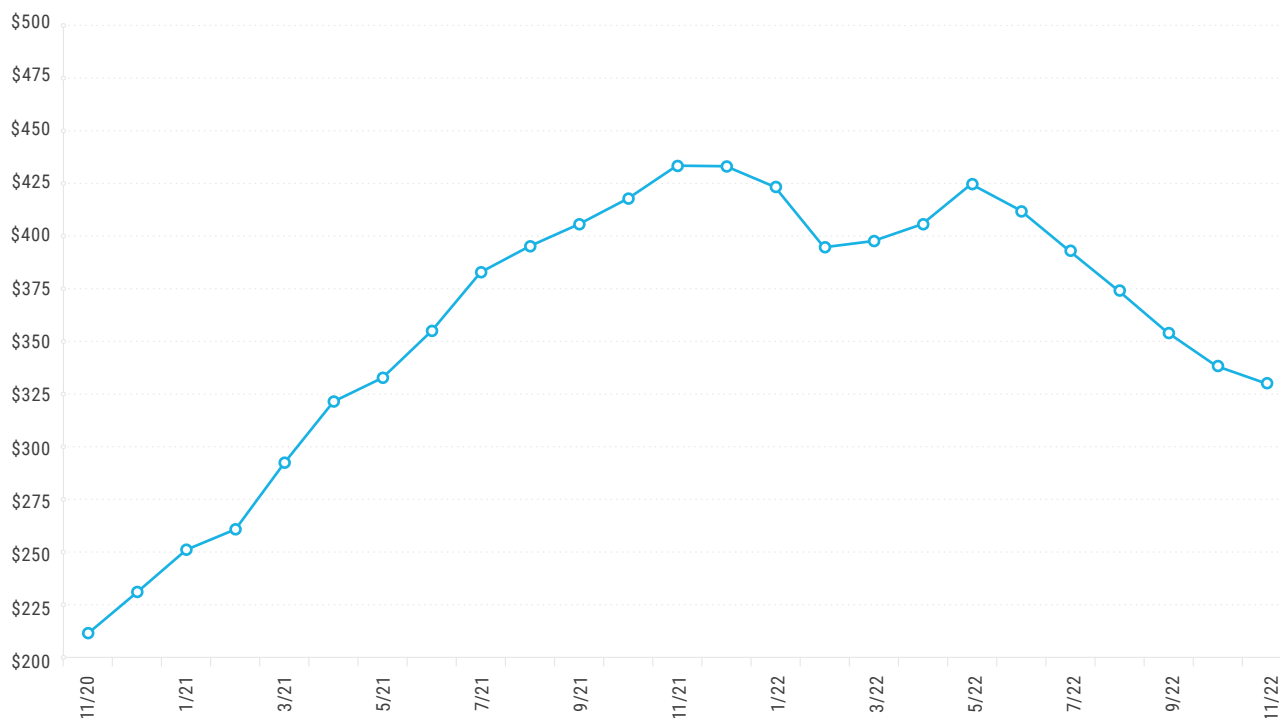
Commenting on the outlook, Mr. Máximo Vedoya, CEO of Ternium and Chairman of the worldsteel Economics Committee, said, "the global economy is affected by persisting inflation, U.S. monetary tightening, China's economic deceleration and the consequences of Russia's invasion of Ukraine. High energy prices, rising interest rates and falling confidence have led to a slowing in steel-using sectors' activities. As a result, our current forecast for global steel demand growth has been revised down compared to the previous one. The prospect for 2023 depends on the impact of tightening monetary policies and central banks' ability to anchor inflation expectations. Particularly, the European Union outlook is subject to further downside risk due to the high inflation and energy crisis that have been exacerbated by the Russia-Ukraine war."⁴²

Steel rebar futures are the highest they have been in five months signaling signs of strengthening demand while investors shake off further warnings that the government will crack down on speculative pricing. China's industrial production expanded more than markets expected, signaling some resilience to the country's strict lockdowns. The end of the zero COVID-19 policy and large initiatives to spur construction activity, such as liquidity injections by the central bank and new credit lines for developers, are set to reinforce the property sector's credit health and stimulate housing demand. On the supply side, cargo surveyors noted a sharp decrease in shipment volumes from major producer Brazil, leaving blast furnaces scrapping for the steel-making ingredient. In addition, cyclones and first-quarter maintenance programs threatened steady exports from top producer Australia.⁴³

In summary, uncertainty remains elevated for the global economy and the balance of risks is largely skewed to the downside. Among those are the effect of monetary tightening, continuation of inflation, the direction of the Chinese economy and its COVID-19 policy, the potential crisis of gas supply in Europe and the aggravation of the Russian-Ukraine war with unexpected consequences.⁴⁴

Fig.1 Iron and Steel Prices

Source: Bureau of Labor Statistics – Producer Price Index – Commodity – Iron and Steel
All indexes are subject to revision four months after original publication.



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About Premier Inc.

Premier Inc. (NASDAQ: PINC) is a leading healthcare improvement company, uniting an alliance of more than 4,400 U.S. hospitals and health systems and approximately 250,000 other providers and organizations to transform healthcare. With integrated data and analytics, collaboratives, supply chain solutions, and consulting and other services, Premier enables better care and outcomes at a lower cost. Premier plays a critical role in the rapidly evolving healthcare industry, collaborating with members to co-develop long-term innovations that reinvent and improve the way care is delivered to patients nationwide. Headquartered in Charlotte, ©2021 Premier Inc. N.C., Premier is passionate about transforming American healthcare. Please visit Premier's news and investor sites on www.premierinc.com; as well as Twitter, Facebook, LinkedIn, YouTube, Instagram and Premier's blog for more information about the company.



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