CHEMICALS

CURRENT TRENDS

- The American Chemical Council expects the chemical industry to grow by 1.4% in 2021 and 3.2% in 2022 as vaccine rates increase and the economy continues to recover.
- Chemical industry inventories are increasing, but remain down from pre-pandemic levels.
- Experts predict high demand for lithium, a key input for ion battery manufacturing, through 2026.
- Supply chain challenges like product shortages and shipping delays continue to strain the industry.
- Appraisal values for inventory on a mark-to-market basis should be firm to improving given the inflationary pricing environment.

PROJECTED VALUES
(12-MONTH OUTLOOK)

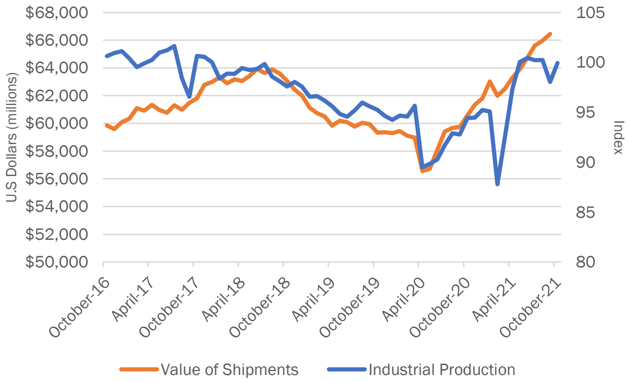
APPROXIMATE NET RECOVERY ON COST

45%-60%
distributors

45%-60%
oils & lubricants

35%-50%
raw materials

U.S. CHEMICAL MANUFACTURING



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CHEMICAL INDUSTRY FORECAST: The global COVID-19 pandemic drove a 13.5% decline in U.S. chemical industry shipments in 2020. The American Chemical Council (ACC) expects the chemical industry to grow by 1.4% in 2021 and 3.2% in 2022 as vaccine rates increase and the economy continues to recover. Despite the positive outlook, the global supply chain crisis continues to exacerbate the production issues most manufacturers experienced following production shutdowns in early 2020. Additionally, new cases of COVID-19 caused by the Delta variant continue to affect labor markets and stymie the economic rebound.

Pandemic headwinds notwithstanding, the ACC reports key U.S. chemical industry metrics to increase in 2021 as important downstream markets and export customers recover from the pandemic-related recession. While infection rates have slowed in industrialized countries, pandemic-related economic disruption remains an obstacle for many low-income and developing countries.

The International Monetary Fund's (IMF) October 2021 outlook projected the global economy would grow 5.9% in 2021, 0.1 percentage point lower than its July forecast, and 4.9% in 2022. Supply disruptions in advanced economies and increasing COVID-19 cases in developing countries informed the IMF's revision.

In early October 2021, Goldman Sachs cut its U.S. economic growth estimate to 5.6% from 5.7% for 2021, and to 4.0% from 4.4% for 2022. Declining fiscal support through the end of 2022 and delayed recovery of consumer spending prompted the adjustments.

Despite these downgrades, data suggests the pace of overall growth will reduce unemployment and spur capital investment in the industry.

BATTERY DEMAND AND THE FUTURE OF LITHIUM: Lithium, a key input for ion battery manufacturing, is among chemical elements in the highest demand over the next five years. The Biden administration set an ambitious target in 2021 to make half of all new vehicles sold in the U.S. zero-emissions vehicles by 2030, including battery electric, plug-in hybrid electric or fuel cell electric vehicles. Lithium-ion battery manufacturing is paramount to achieving this target.

Lithium, the first of the alkalis in the periodic table, has a low melting point and reactivity to many organic and inorganic materials, which lends to its effectiveness in battery power. While researchers continue to work to reduce and recycle the metal used to produce them, industry analysts do not anticipate a move away from lithium-ion batteries in the near term.

The Expert: Charles Falkner

Charles Falkner is a senior manager in Gordon Brothers' Valuation practice specializing in Industrial inventory. Throughout his career, he has conducted and reviewed hundreds of inventory appraisals throughout the United States, United Kingdom, European Union and Canada. He specializes in a range of industries including aerospace, agriculture, chemicals, food and beverage processing and wholesaling, and building products. Read his full bio here.

As published by the international, peer-reviewed science and technology research journal Nature in August 2021, one primary reason for lithium-ion battery demand is the "cost has plummeted so dramatically that they are likely to be the dominant technology for the foreseeable future." Further, the research journal says these batteries are "now 30 times cheaper than when they first entered the market as small, portable batteries in the early 1990s, even as their performance has improved."

The current challenge is mining enough lithium to meet global demand. Specialist commodity expert Fastmarkets predicts "the only way is up" for lithium demand. The company's research suggests electronic vehicle (EV) demand is expected to continue to propel the lithium market and projects EV penetration of total auto sales will reach approximately 15% by 2025 and 35% by 2030. Lithium use in energy storage systems, 5G devices and Internet of Things infrastructure is further increasing demand.

Fastmarkets predicts lithium supplies from current and planned projects are expected to meet demand from 2022 through 2025. However, producers will need to identify new supply sources from 2025 to meet rising, sustained demand expected to strain supply through 2030.

SHORTAGES AND SUPPLY CHAIN CONSTRAINTS CONTINUE: Supply shortages in the chemical industry have worsened in 2021. Although industry inventories had increased as of June 2021, they have not returned to pre-pandemic levels, and low inventory levels can strain the industry as a whole and others dependent on its supply.

In general, material shortages lead to limited supplies, high prices and delivery delays. The National Association of Chemical Distributors reported an average increase in travel time for shipments of 11 days or more in 2021. Factors driving these delays include long wait times to enter ports and a shortage of short-distance drivers and warehouse workers. The driver shortage was an issue prior to the pandemic but has worsened in the pandemic.

Efforts to alleviate these challenges are underway, including the Biden administration's push to solve bottlenecks at the ports of Los Angeles and Long Beach, California. The success of these efforts remains unclear.

VALUATION OUTLOOK: Gordon Brothers expects chemical prices and demand will be volatile and subject to swings as the marketplace recovers from the ongoing supply and fulfillment disruptions driven by the COVID-19 pandemic.

However, appraisal values for inventory on a mark-to-market basis should be firm to improving given the inflationary pricing environment we are seeing, as well as positive trends on the demand side related to a rapidly recovering U.S. economy and likely growth in certain key sectors in 2022, including automotive and energy.

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